



# Everything is Connected to Everything Else

101 stories about 21st century Geography

by

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## CHAPTER 2

# THE HUMAN WORLD

## CHAPTER 2: THE HUMAN WORLD

### **Living through the great population explosion.**

In October 2011 I reached 49 years of age. In the same month the world population was estimated by the United Nations (UN) to have reached 7 billion. This momentous month produced more than just Danica May Camacho (5.5lb) who, born in an overcrowded state hospital in the Philippines, was nominated by the UN as the world's seven billionth person. It also unleashed a cacophony of opinion as to what awaits mankind as global population continues to rise.<sup>1</sup>

It is entirely understandable to be concerned about population growth. It does not take much to get a sense of perspective, for me just 49 years. On the day I was born I became approximately the 3,171,657,875th human alive, a record at that time.<sup>2</sup> Since then around 200,000 net additional

people have joined me on earth every single day of my life, everyone a record breaker. This is equivalent to a town about the size of Luton. Luton was the nearest large urban area to where I was born, and it seemed to me a mighty metropolis as a child.

My own children may well live through the point at which we reach the peak number of humans ever to live on the earth at one time. This peak population will be a figure that will probably lie between 9 and 10 billion and is likely to occur sometime around 2060. Maybe a little beyond. My children will not be much older than I am at present, and the statistical possibility that they will live to see the start of the 22<sup>nd</sup> century is not unreasonable.

When my grandmother was born in 1913 a mere 1.75 billion global citizens were about to be convulsed by the first world war. I have a photograph taken in 1999 of my grandmother holding my elder daughter soon after she was born. In that one photograph are two humans – who between them – will live through the great population growth boom, and out the other side.

<sup>1</sup> The Guardian 31/10/2011. 'World's 'seven billionth baby' is born.' Access at <http://www.guardian.co.uk/world/2011/oct/31/seven-billionth-baby-born-philippines>

<sup>2</sup> BBC Website 'What's my number' gives you the opportunity to estimate where you are located in the great global population growth surge. Access at <http://www.bbc.co.uk/news/world-15391515>

Well that was what I used to think until quite recently. Then in May 2011 the UN revised its projection for future global population. Things were being brought forward: 9 billion by 2041 and 10 billion at some point just beyond 2081. Population could still be rising at the end of the 21st century but only by relatively small increments above 10 billion.<sup>3</sup> What had informed this revision were some observed small changes in fertility rates in particular countries. As Danny Dorling, a Professor of Geography at Oxford University points out “Just a tiny change in fertility can be magnified in a century to an extra billion human beings”.

Dorling is one of the growing band of *practical possibilists* in geography who believe that humanity has, within its gift, the ability to negotiate the complex challenges of the 21st century. His 2013 book ‘Population 10 Billion: The Coming Demographic Crisis and How to Survive It.’ is certainly a far more positive analysis than that of a book published at the same time ‘10 Billion’ by Stephen Emmott.<sup>4</sup> Emmott is Microsoft’s Head of Computational Science, visiting lecturer at Oxford University and author/auteur of the rapturously received 2012 Royal Court play/lecture also entitled 10 Billion. This was a performance that Michael Billington, The Guardian’s theatre critic described as “one of the most disturbing evenings I have ever spent in a theatre”.<sup>5</sup> Emmott has described himself as a

‘rational pessimist’. He has been pigeon holed by the media through his despairing aside “in truth, I think we are already fucked.”

Here is a question to consider. From a curriculum perspective what position would you most like to hold sway in the school geography classroom? Dorling or Emmott? Dorling is measured, humane and not wildly optimistic. He admits ‘what is reassuring tends to also be bland.’ He takes a very long view of human development on the planet and is clearly interested in solutions with a very strong dose of radical – although not necessarily state led – political economy.

Emmott is showier (well obviously seeing as it started with a show) but his work is based around dramatic and worrisome, statements of ‘fact’. Some of these ‘facts’ such as an equivalence in energy use between boiling a kettle and making one Google search are more speculative than anything concrete.<sup>6</sup> His final conclusion has more than a whiff of despair about it and I guess my concern is that if we really are, as Emmott so emphatically puts it, “already fucked”, what do we teach our children? Don’t bother with all this learning; there is no point really because you are all going to hell in a handcart and there is nothing you can do about it?

<sup>3</sup> UN Press Release. 3/5/2011. ‘World Population to reach 10 billion by 2100 if Fertility in all Countries Converges to Replacement Level.’ Access at [http://esa.un.org/unpd/wpp/other-information/press\\_release\\_wpp2010.pdf](http://esa.un.org/unpd/wpp/other-information/press_release_wpp2010.pdf)

<sup>4</sup> Emmott, S (2013) ‘10 Billion’ Penguin London. and Dorling D (2013) ‘Population 10 Billion: The Coming Demographic Crisis and How to Survive It.’ Constable London

<sup>5</sup> The Guardian 19/7/2012. ‘Ten Billion – Review.’ Access at <http://www.guardian.co.uk/stage/2012/jul/19/ten-billion-review-royal-court>

<sup>6</sup> O’Callaghan, T, in New Scientist 24/7/2012. Access at. <http://www.newscientist.com/blogs/culturelab/2012/07/tiffany-ocallaghan-culturelab-editorbefore-packed.html>

In an interview about '10 Billion' Emmott was asked: "Given everything that you've said, do you think that there is any point in any of us doing anything?" He replied "...the thing that we all need to do is radically change the way we live, and I personally, honestly don't see any of us doing it."<sup>7</sup> His pint isn't half empty; it has barely got a dribble in the bottom. Dorling on the other hand at least has something worth drinking, half full or not. Dorling's approach is closer to Marx's critique of philosophy that its protagonists "have only interpreted the world, in various ways; the point is to change it." It is better to see a problem and contribute towards fixing it. Dorling's is a narrative of change not despair.<sup>8</sup>

Emmott and Dorling may both be part of the intellectual agenda for Britain's liberal chattering classes but they have very different perspectives on the 'population boom' and what it means for the future. Still, they can be united by the critical invective of some of the supporters of the neo-liberal, free market right wing who, pulling no punches, describe Emmott's performance as "a cheap rhetorical device that would wow ignorant ideological psychopants?(sic)".<sup>9</sup> Dorling is attacked as "a past master at pushing tendentious and hand-wringing arguments about how unfair the world is because some people have more than other people".<sup>10</sup> Maybe they should meet up to

debate their differences in an Oxford pub and try to search for what they have in common.

What is certain is that global population growth will continue to rise, albeit at progressively lower and lower rates until a peak is reached. When this peak will come and at what level this will be are still on the table. Small changes in fertility, particularly at the mesa-scale, could both derail predictions by a billion in either direction. Yet the broad evidence is that global fertility continues to fall from a figure of just below 5 children per fertile woman in the 1950s to 2.6 in 2010. The trend is downwards to 2 children per fertile woman by 2045 according to the UN's population division.

That great population boom is now on its down-slope and regardless of doom-laden prophecies it is a reality to which we have to adapt to. That is a reality we have to adapt to, not wring our hands in despair. We are not necessarily 'fucked'.

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<sup>7</sup> Transcript of interview Accessed at [https://sites.google.com/site/mytranscriptbox/home/20120809\\_tb](https://sites.google.com/site/mytranscriptbox/home/20120809_tb)

<sup>8</sup> This famous quote originates from Karl Marx Theses on Feuerbach: Thesis 11 (1845).

<sup>9</sup> Quoted comment of contributor to discussion about the statistical errors of Stephen Emmott's show '10 Billion' by Geoff Chambers and Alex Cull on climate change sceptics' website climate-resistance <http://www.climate-resistance.org/2012/08/it%E2%80%99s-a-fct-we%E2%80%99re-fcked.html>

<sup>10</sup> Quoted comment of contributor to blog site hosted by Tim Worstall <http://timworstall.com/2012/03/28/danny-dorling-social-geographer/>

## It's not us it's them.

When the Chinese applied their infamously coercive 'one-child policy' in 1979 they were setting in train potentially the most significant environmental policy ever enacted globally. The policy commenced at a time when fertility rates in China were already falling although neither fast enough nor significantly enough for China's post-Mao leadership. Zhao Bingli, vice minister of the State Family Planning Commission claimed in 2002 that this policy had directly led to 300 million fewer children being born – a little short of the population of the USA.<sup>11</sup> Less than five years later Zhang Weiqing, a Chinese government minister, claimed this figure to be nearer to 400 million.<sup>12</sup>

What really caught the global imagination was the highly interventionist approach the Chinese authorities used. Rigorous target setting was adhered to through active monitoring of women's fertility, control of access to future resources such as education and even abortions against the will of pregnant women (implicitly acknowledged in the Zhao Bingli interview).<sup>13</sup> As the old adage goes 'every action has a reaction'. For China the consequence of 300 to 400 million fewer people to manage has been the enhanced ability to enact the fastest transformation in history of moving from

a predominantly rural economy to the world's soon-to-be largest economy. Walt Rostow, the fervently anti-communist American economic geographer, whose model of development has graced thousands of geography lessons, would be proud of them. Except, that the Chinese achieved this with a communist government, something he assumed was not possible.

There are also a host of other outcomes as a result of the one-child policy: a growing gender imbalance and the rise of the 'little-emperors', a generation of single children who have known nothing but rapid increases in wealth throughout their lifetime. A rapidly ageing population has intriguing challenges for a Chinese state that is, as Dr Wei Zhang of Nottingham University points out, "one of a few countries in the world in which the population has aged before becoming rich or even moderately rich".<sup>14</sup>

Perhaps the most high profile of Britain's advocates of an interventionist population policy is Sir David Attenborough, TV naturalist extraordinaire and all-round national treasure. He is a patron of Population Matters, a charity that campaigns for "a voluntary reduction in population" in order to enable "an acceptable quality of life for all, [that] protects wildlife and is ecologically sustainable."<sup>15</sup>

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<sup>11</sup> Interview with Zhao Bingli, vice minister of the State Family Planning Commission. Access at <http://www.china.org.cn/english/2002/Oct/46138.htm>

<sup>12</sup> Bristow M (2007) 'Has China's one-child policy worked?' BBC News. 20/9/2007. Access at <http://news.bbc.co.uk/1/hi/7000931.stm>

<sup>13</sup> Report in New York Times. Accessed at [http://www.nytimes.com/2012/07/23/world/asia/pressure-to-repeal-chinas-one-child-law-is-growing.html?\\_r=0](http://www.nytimes.com/2012/07/23/world/asia/pressure-to-repeal-chinas-one-child-law-is-growing.html?_r=0)

<sup>14</sup> Zhang, W (2012) 'Ageing China: changes and challenges'. BBC News Access at <http://www.bbc.co.uk/news/world-asia-china-19572056?>

<sup>15</sup> From the 'Goals' statement found on the Population Matters website 25/1/2013 <http://www.populationmatters.org/about/pm-goals/>

Sir David was more forthright than anything Population Matters publishes when he declaimed to the Radio Times magazine in January 2013:

**“We are a plague on the Earth. It’s coming home to roost over the next 50 years or so. It’s not just climate change; it’s sheer space, places to grow food for this enormous horde. Either we limit our population growth or the natural world will do it for us, and the natural world is doing it for us right now.”<sup>16</sup>**

Whilst it is undoubtedly true that human activity, both in terms of the numbers of humans and the their consumption of natural resources, has, is having, an extremely deleterious impact upon biodiversity and natural environments it is perhaps an overdrawn conclusion that the natural world is ‘culling’ human population numbers by a level greater than it has in the past, at least not in proportional terms.

I would not wholly demure from the ‘Attenborough dictum’ that all our problems are harder with ever more people but, but...

One of the themes of some anti-natalists like Attenborough is that the population problem is one that is rooted in the developing world, amongst the world’s poor. Nobody can deny that the world’s poorest countries have the world’s highest fertility rates; Niger 7.5 children per couple, Uganda 6.6, Mali 6.3, Afghanistan 5.6, Burkino Faso, 5.9.<sup>17</sup>

However these poor countries also have a much smaller negative distance between their bio-capacity and their ecological footprint than wealthy nations such as the United States and United Kingdom.<sup>18</sup> Some, like Mali are still in ecological credit. That is to say Mali lives within its bio-capacity. Poverty has kept its ecological footprint small.

Such knowledge does not spare a poor African nation, Ethiopia, (eco-footprint 1.1 hectares per person) from the fate of being Sir David’s exemplar of the core population problem (resident of UK whose eco-footprint is 4.9 hectares per person.)

**“We keep putting on programmes about famine in Ethiopia; that’s what’s happening. Too many people there. They can’t support themselves – and it’s not an inhuman thing to say.”<sup>19</sup>**

<sup>16</sup> Gray, L (2013) ‘David Attenborough – Humans Plague on Earth’ The Daily Telegraph 22/1/2013. Access at <http://www.telegraph.co.uk/earth/earthnews/9815862/Humans-are-plague-on-Earth-Attenborough.html>

<sup>17</sup> CIA World Fact book 2013 Access at [http://en.wikipedia.org/wiki/List\\_of\\_sovereign\\_states\\_and\\_dependent\\_territories\\_by\\_fertility\\_rate](http://en.wikipedia.org/wiki/List_of_sovereign_states_and_dependent_territories_by_fertility_rate)

<sup>18</sup> For all things ecological footprint the Footprint Network is the definitive place to start. How accurate its pronouncements are is a source of significant debate even on the sites web pages. Look at the data and follow the debate at. [http://www.footprintnetwork.org/en/index.php/GFN/page/footprint\\_for\\_nations/](http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_for_nations/)

<sup>19</sup> Op cit. Gray

Now I could be an over-sensitive, bleeding heart liberal but this all smacks of the sentiment ‘it is not us it’s them!; the idea that the population problem is one of poor people. Too many of them, and they breed like, well, poor people.

An echo of this appears in Britain with the invective that is directed towards larger families from poorer backgrounds from not only from sections of the media but government advisors as well.<sup>20</sup> This is nothing new. Sir Keith Joseph, the political mentor of Margaret Thatcher, is recorded – way back in October 1974 – as arguing for restrictions on the fertility of poor girls of ‘low intelligence’.<sup>21</sup>

Back in the early 20th century the idea of eugenics (the notion that biosocial interventions could improve human development) gained an intellectual cachet amongst even those who in some ways might have been considered liberal at the time. Universities taught the idea, conferences were held, and organisations were set up.

That such thinking has never been wholly disavowed was made plain when the readers of the liberal-left newspaper, The Guardian, voted Marie Stopes ‘Woman of the Millennium’ in 1999. This is the same Stopes who, in her 1920 book ‘The Control of Parenthood’, advocated legislation introducing

the compulsory sterilisation of the “insane, feebleminded... revolutionaries... half castes”. She may have propelled birth control into the 20th century and lent her name to a respected global organisation – The Marie Stopes Foundation – but on her death in 1958 she left much of her estate to the British Eugenics Society. She wasn’t alone. Neville Chamberlain, John Maynard Keynes and William Beveridge were all members of what is now known as the ‘Galton Institute’. The current President of the Galton Institute is celebrated geneticist Steve Jones. Genetics are important to eugenicists.

Sir David Attenborough is following a long tradition of Social Darwinism, a philosophy that remains active today. The Galton Institute, whose stated core aim is to ‘promote and support the scientific study of human heredity and of its social implications’ thrives with its last conference being hosted by The Royal Society.<sup>22</sup> Now I may not be the sharpest tack in the box (probably a hereditary thing) but I can still sniff out what the subtext of such a stated aim is, and this often sits at the heart of what often appears well-meaning concern about the impact of population on the global environment: the idea that if only ‘they’ could be more like ‘us’.

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<sup>20</sup> Government advisor Louise Casey suggests that poor mothers of large families should be ashamed. Daily Telegraph 20th July 2012  
<http://www.telegraph.co.uk/news/politics/9416535/Problem-families-have-too-many-children.html>

<sup>21</sup> Watt, N (2010) “Howard Flight echoes Keith Joseph’s warning that ‘our human stock is threatened’”. The Guardian. 25/11/2010.  
Access at <http://www.guardian.co.uk/politics/wintour-and-watt/2010/nov/25/conservatives-davidcameron>

<sup>22</sup> Details about the Galton Institute can be found on their website. <http://www.galtoninstitute.org.uk/about.htm>

## **IPAT. No it's not an Apple.**

The theoretical backbone to the interconnected debates about population growth and human consumption and the consequential impacts of both upon the environmental stability of the planet is summed up in a simple equation.

**I** (Impact) = **P** (Population) x **A** (Affluence) x **T** (Technology)  
or **IPAT** as it is known.

This equation evolved out of a spirited and sometimes bad tempered debate between Paul Ehrlich, the co-author of the 1968 apocalyptic environmental classic 'The Population Time Bomb', his friend John Holdren, who went on to become a science advisor to Barak Obama and the late environmentalist, who was once candidate for the US President in 1980, Barry Commoner.

IPAT is a pretty unsophisticated model and of course the relative value of each component part can be actively debated, which was pretty much the basis of the spat between these three grandees of the evolving US environment movement. In a nutshell Ehrlich and Holdren asserted the pre-eminence of population in driving environmental destruction and Commoner saw the impact as being more complex with the importance of technology in particular being pre-eminent in shaping the impacts of human activity upon the environment.

This argument remains at the heart of much of the internal push and shove in contemporary environmental movements.

Consider our earlier protagonists Danny Dorling and Stephen Emmott. Dorling sees consumption as key and advocates changes to political systems to not only create greater equality of resource-use but also lower overall use of raw materials. Stephen Emmott, on the other-hand, doesn't believe it is possible to alter the engine of consumption and thus attributes the coming ecological crisis primarily to over-population. I simplify, but that is the core of the difference in their perspectives. David Attenborough also looks to population because he retains a significant vested interest in not challenging the political status quo. I suspect Emmott, as an employee of one of the world's largest corporations, is probably a little light on revolutionary fervour too. One is a biologist the other a computer scientist: maybe both are too narrowly focused to piece together the bigger picture.

When looking at IPAT theory the key decision to make is which of the variables are you most able to influence and how altering it can reduce the I (Impact). Whilst it is possible that fertility can fall – and to a large extent this has already been enacted globally – population will peak and we can broadly predict when and within what range this will happen.

However the current model of neo-liberal, free-market capitalism, driven by continuous growth, can only be supported into the future if technology can offset the environmental impact of growth. Although there is now the beginnings of a debate concerning ‘Peak Stuff’ (the idea that economic growth can continue whilst overall material resource consumption declines) this thinking is at an early stage and I will examine this in a later story.

Therefore if technology cannot offset the consumption impact of a growing population you are only left with changes in levels of consumption itself. There is a considerable range of interventionist policies that could reduce consumption – some carrot, most stick – but enacting them in a growth driven society can only be piecemeal at best.

There is an apocryphal saying “what does a green economy look like... a bit like a developing countries economy”. It is easy to see why this is an area to which no politician in a liberal democracy is going to pay any lip service towards. “Vote for me I’m going to make you materially poorer; you might just be happier; mind, you might not.” This does not win elections.

The idea that human development might just have something to do with happiness is an increasingly interesting idea in geography. The New Economics Foundation in London has adapted the IPAT formula to come up with an alternative ‘Happy Planet Index’.

The formula used to calculate the index is as follows:

$$\text{HPI (Happy Planet Index)} = \frac{\text{life satisfaction} \times \text{life expectancy}}{\text{ecological footprint}}$$

What this formula attempts is to numerically assess the quality of life in relationship to the environmental costs of achieving it. Now David Attenborough should find this interesting as the HPI for Ethiopia (39.2) is better than that of the USA (37.3). That is the ecological debt of sustaining an eco-footprint of 7.2 planets worth of resources to maintain an average US citizens lifestyle is greater than the impact – per capita – of the average Ethiopian with an eco-footprint of 1.1. A bit of simple maths suggests that the impact of 315 million American citizens is 24 times greater to the planet than that of the current population of Ethiopia.<sup>23</sup> Something for Attenborough to ponder.

<sup>23</sup> The Source of these figures is the The Happy Planet Index 2012 prepared by the New Economics Foundation. Accessed at <http://www.happyplanetindex.org/data/>

You may note that the eco-footprint for Ethiopia, 1.1, quoted in HPI is higher than quoted in previous sources used (Ethiopia 0.85). This reflects variations in methodology and dates of data sources.

## **Predicting the future is difficult. Just ask Paul Ehrlich.**

Predicting future population is a tricky business: just ask Paul Ehrlich, co-author with his wife Janet, of 1968's 'The Population Bomb'. This work was certainly incendiary insofar that it lit a fire of environmental concern. Predicting that millions would die in mass famines that would sweep across earth in the 1970s, this was a US-published book that spurred the UK's Ecologist magazine to produce, in 1972, the UK's first 'green' manifesto, 'Blueprint for Survival'. This manifesto was co-authored by Edward Goldsmith, who went on to become a founder of the People Party which eventually evolved into the Green Party.

Ehrlich was very spatially specific in his predictions. "I would take even money that England will not exist in the year 2000" is one bet that didn't reflect the odds as being 'evens'. It sometimes feels as if whole forests have been removed to provide the paper-pulp for written refutations of Ehrlich's predictions but he remains broadly unrepentant. In an interview with The Guardian newspaper in April 2012 he stated: "Most of the predictions [in Population Bomb] have proved correct". He went further arguing that the optimum population of Earth – enough to guarantee the minimal physical ingredients of a decent life to everyone – was 1.5 to 2 billion

people rather than the 7 billion who are alive today or the 9 billion expected in 2050.<sup>24</sup>

Predicting the future has been quite a theme of Paul Ehrlich's work. In 1980 he found himself drawn into a bet with right-wing US economist Julian Simon, author of the 1981 pro-population book 'The Ultimate Resource' – a man also prone to bouts of futurology. The bet was about the price of 5 important metals; tin, tungsten, chromium, copper and nickel. The time frame for the bet was 10 years. Ehrlich lost by a substantial margin. All the metals fell in price as alternatives, new sources and technology lowered demand and thus price. However, it has been argued that if the timeframe had been longer then the money would have been Ehrlich's.

On the other-hand the victor, Simon, wouldn't live long enough to test his bold assertion:

**"This is my long-run forecast in brief. The material conditions of life will continue to get better for most people, in most countries, most of the time, indefinitely. Within a century or two, all nations and most of humanity will be at or above today's Western living standards."<sup>25</sup>**

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<sup>24</sup> Vidal, J (26/4/2012) The Guardian 'Cut world population and redistribute resources, expert urges'  
Accessed at [http://www.guardian.co.uk/environment/2012/apr/26/world-population-resources-paul-ehrllich?CMP=twf\\_fd](http://www.guardian.co.uk/environment/2012/apr/26/world-population-resources-paul-ehrllich?CMP=twf_fd).

<sup>25</sup> Quoted in Regis E, 'The Doomslayer' in Wired accessed at [http://www.wired.com/wired/archive/5.02/ffsimon\\_pr.html](http://www.wired.com/wired/archive/5.02/ffsimon_pr.html)

Nobody could accuse Simon of lacking optimism. He believed in people as the ultimate resource and the operation of the free-market as the framework in which they would thrive. Hayek and Friedman, the totemic theoretical economists of neo-liberalism praised his work.

Unlike Julian Simon, Paul and Anne Ehrlich are still up and running in this debate. In January 2013 they published the cheery polemic 'Can a collapse of global civilization be avoided?' in the Proceedings of The Royal Society Biological Sciences.<sup>26</sup> Reading this I felt maybe I had been a little unfair on the Ehrlichs over the years – my disdain in some classes when discussing their work has been a sight to behold - as this paper is actually a reasonably close approximation to many of my own views about the challenges that face the earth in the 21<sup>st</sup> century. And it *is* optimistic in that it does not foretell unavoidable doom but sets out the bare bones of a way to address the potential collapse of global society. "Humanity has the assets to get the job done", they state. They are also wise enough to realise that a fundamental challenge is the necessity for new structures of governance, at local but particularly global levels. The Ehrlichs have evolved from irrational pessimists into rational possibilists.

There is no talk of political theory in the Ehrlich paper but nevertheless it lurks in the background. It is the same assumption that the neo-liberals, the climate change deniers and the powerful elite who hold a staggeringly disproportionate amount of the world's capital wealth also realise: that only through significant intervention into the free-market, the socialisation of core environmental services and a new, transparent politics of equity can we address problems on this scale. The rich, powerful and unelected know that. That is why they fight tooth and nail against any form of perceived government intervention that might challenge their position of privilege.

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<sup>26</sup> Ehrlich, P and Ehrlich A (2013) 'Can a collapse of global civilization be avoided?' Proceedings of the Royal Society Biological Sciences 280,20122845 published online 9 January 2013.

## Songlines.

Homo sapiens, modern man, is a fairly recent addition to our planet's history. Evolving in the Rift Valley of central Africa about 200,000 years ago they started to migrate – the so called 'Out of Africa' theory – to populate the rest of the world between 150,000 and 120,000 years ago.

That humans are a migratory species – given what we have learnt about DNA in recent decades – is unquestionable. It took these early hunter-gathers until after the last ice age, a comparatively recent 10,000 years ago, to populate above the Arctic Circle; they probably didn't make it down to Patagonia until 15,000 years ago. That is only 600 or so generations. Three times the couple of hundred generations since equitable conditions in the Middle East persuaded humans to settle down and think about farming, urbanisation, culture and calling some particular place home.

It was at that moment, when agriculture gathered a head of steam and the plough became a must have implement for any aspirational human that we first started to influence earth systems. William Ruddiman, a US palaeoclimatologist, has advanced the theory that changes in land use from that time onwards have influenced carbon-dioxide concentrations in the atmosphere.<sup>27</sup> This he posits is the beginning of the Anthropocene, the name given to our current historical period by many scientists, the period of human impact on earth-systems.

Whilst the more agreeable parts of the earth took to agriculture, aided by the domestication of wild animals and the grasses that were to become the world's core sources of nutrition, other more marginal areas retained a strong tradition of migratory hunter gathering. Those who ranged across deserts, tropical grasslands and the great tropical forests that ringed the equator, as well as those who survived in the Arctic margins retained – as a necessity – the need to move.

Shearwood Road nestles between The University of Sheffield and the Hallamshire Hospital in my home city. It was also the starting point for the restless journey of life taken by Bruce Chatwin, author of 'The Songlines' published in 1987. This was his birthplace; I doubt he ever came back to Sheffield.

The Songlines is a pot pourri of fiction and non-fiction that explores the long history of the human migratory urge whilst Chatwin meditates on the use of song to express the nomadic mental maps of the Aboriginal people of Australia. It is a kind of hallucinatory travel writing. I first read The Songlines a quarter of a century ago whilst backpacking around India – ideal circumstances really. At the time I concurred with the sentiment he expressed in The Songlines. I had more romance about me then.

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<sup>27</sup> Ruddiman W (2005) 'Plows, Plagues and Petroleum. How Humans Took Control of Climate.' Princeton University Press.

**“As a general rule of biology, migratory species are less ‘aggressive’ than sedentary ones. There is one obvious reason why this should be so. The migration itself, like the pilgrimage, is the hard journey: a ‘leveller’ on which the ‘fit’ survive and stragglers fall by the wayside.”<sup>28</sup>**

Today I am less sure about things such as a ‘general rule’. What I do know is that migration certainly kept population growth down. Successfully having children whilst on the move was a significant challenge. It is sedentary agriculture that allowed humans the possibility of growing their population. Ultimately it will be agriculture that defines the parameters of how many people can live on this planet and how well.

Migration has been the safety valve of growing populations, allowing pressure on resources to be relieved and new resources to be exploited. It is intriguing to speculate what the impact on 19<sup>th</sup> century industrialising Britain would have been if the 28 million Britons who left the country between 1815 and 1914 had remained at home. What would have been the impact on overall demographic development and economic growth if these willing millions had not populated the Empire? A 1900 population stretching towards 100 million?

Instead the United Kingdom carved out the biggest empire ever created in the history of the world (in terms of occupied land mass). At its centre was London, the imperial capital and place of destination for the whole world.

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<sup>28</sup> Chatwin, B (1987). ‘The Songlines’. Random House. London. (2012 reprint in Classics imprint.)

## London: The global city.

Few know London better than Peter Ackroyd. His biography of the city, a masterpiece not just of research but of style, contains a blunt appraisal of the city's history. "London has always been a city of immigrants. It was once known as 'the city of nations' ".<sup>29</sup> Little has changed. London is a city of 'super-diversity' – a name coined by a 2007 report.<sup>30</sup> The London Evening Standard reported at least 270 nationalities to be living in London, speaking between them 300 languages.<sup>31</sup> A project to meet a citizen of every nation in the world who was living in London within one year between 2006 and 2007 foundered with 3 countries absent from the official UN list of countries, the Pacific Island states of Tuvalu, The Marshall Islands and Palau.<sup>32</sup> The total population of Palau is 21,000.

In 2012 it became official with the release of the 2011 Census when the biggest media story teased from the extensive data sets was the fact that only 45% of Londoners described themselves as 'white British'.<sup>33</sup> In the London borough of Brent this falls to 38.4%. We should not be surprised. 160 years earlier William Wordsworth commented that on the streets of London where he lived there could be found:

**"Every character of form and face; The Swede, the Russian: from the genial south, The Frenchman and the Spaniard; from remote America, the Hunter-Indian; Moors, Malays, Lascars, the Tartar and Chinese."**<sup>34</sup>

Global cities are hubs for migration across the world, both internal and external. Furthermore, such migrations span the range of economic circumstances. In London it has been widely reported that the top end of the housing market has been buoyed post 2008 by an influx of multi-millionaire buyers. Research on million plus house sales in London during 2010 indicated that non-British nationals, for the most part by Russians, bought 2,327 properties at this price tag or higher.<sup>35</sup> It is a mute point whether any of these purchasers,

<sup>29</sup> Ackroyd, Peter (2001) 'London: The Biography'. Vintage. London. P701

<sup>30</sup> Vertovec. S (2007). 'New Complexities of Cohesion in Britain.' Commission on Integration and Cohesion. London.

<sup>31</sup> Neather A (2011) '270 nationalities and 300 different languages: how a United Nations of workers is driving London forward.' London Evening Standard 01.03.2011. Access at [www.standard.co.uk/news/270-nationalities-and-300-different-languages-how-a-united-nations-of-workers-is-driving-london-forward-6572417.html](http://www.standard.co.uk/news/270-nationalities-and-300-different-languages-how-a-united-nations-of-workers-is-driving-london-forward-6572417.html)

<sup>32</sup> Owen Powell and Alex Horne explain their project on 'The World In One City' blog. Access at <http://www.worldinonecity.blogspot.co.uk/>

<sup>33</sup> BBC News. 11.12.2012. '2011 Census: 45% of Londoners white British'. Access at <http://www.bbc.co.uk/news/uk-england-london-20680565>

<sup>34</sup> Quote is taken from Peter Ackroyd's 'London a Biography.'

<sup>35</sup> Daily Mail 28.10.2011. 'Foreign buyers snap up more than half of £1m+ homes in London in the lasy year.' Access at <http://www.dailymail.co.uk/news/article-2054638/Foreign-buyers-snap-half-1m-homes-London-year.html>

often using offshore holding companies to avoid stamp duty and ownership transparency, will ever live in these tax-free baubles.<sup>36</sup>

At the other end of the scale, investigations by Channel Four's *Dispatches* current affairs programmes uncovered thousands – up to ten thousand some suggest – of slum shacks located in the suburban gardens of west London, the greatest concentration around the districts of Ealing and Southall.<sup>37</sup> Here whole streets have had illegal residences slotted into gardens, converted garages and garden sheds. So significant is this phenomena that private mapping firm The GeoInformation Group claims to have mapped all potential 'Beds in Sheds' in the capital. This information is used by those charged with the responsibility for identifying and closing down such illegal dwellings.<sup>38</sup> Often the landlords are second and third generation migrants from the Punjab who are preying on more recent migrants coming into London. Southall is directly under the flight path into Heathrow.

The motivations of the global multitudes that are drawn to London are therefore highly variable and unsurprisingly their ability to enter Britain is highly mediated by their socio-economic status. In February 2012 the UK immigration minister, Damian Green, set out proposals to restrict entry into Britain for those who couldn't demonstrate that they would earn above at least £31,000 a year. These people were described as 'the brightest and the best' with levels of pay being used to determine who fits into that category.<sup>39</sup> Most of Britain's working households do not earn this threshold, migrant or not.

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<sup>36</sup> The Guardian 01.02.2014

<sup>37</sup> Lydall R (2011) 'Slum families living in sheds in suburban back gardens'. London Evening Standard 04.07.2011. Access at <http://www.standard.co.uk/news/slum-families-living-in-sheds-in-suburban-back-gardens-6418325.html>

<sup>38</sup> GeoInformation Group. 'New Shed Base Mapping'. Access at <http://www.geoinformationgroup.co.uk/uncategorized/new-shed-base-mapping>

<sup>39</sup> Travis A (2012) 'New immigration policy favours the wealthy, say critics.' The Guardian 02.02.2012. Access <http://www.guardian.co.uk/uk/2012/feb/02/selective-immigration-policy-wealthy>

## Borders and barriers.

The first modern British passport, a result of the British Nationality and Status Aliens Act 1914, consisted of a single page folded into eight and held together with a cardboard cover. Until then passports were not required for international travel. War changed all that. Immigration controls are a 20<sup>th</sup> century phenomenon.

At various times in British history restrictions have been placed upon foreign nationals entering Britain. Queen Elizabeth I expelled or imprisoned all Irish nationals and in 1793 controls were introduced to restrict French citizens entering Britain in the belief that they might ferment revolution as they had across the Channel.<sup>40</sup> Of course the vast majority of people did not have to concern themselves with the mechanics of crossing borders. Those who did were generally part of an army and they weren't stopping at immigration control, if such a thing even existed.

The head of steam that led to British passports being issued was generated by the influx of European Jews into Britain at the beginning of the 20<sup>th</sup> century. Media-stoked fears of the Jewish influx impacting upon public health and morals led to the establishment of a Royal Commission in 1902 on 'Alien Immigration'. Chief cheerleader for introducing immigration

restrictions at that time was The Daily Mail, which only goes to demonstrate a continuity of thought over generations for this the most scurrilous of rags. You might sense that I am not a fan.

Today it is almost impossible to imagine a world without passport and border controls. In a hyper-globalised world, capital, services and goods increasingly move about the world with unrestricted ease aided by new technologies in transport and communications. Furthermore, endless cycles of global trade negotiations have tried to move towards the removal of more and more impediments to free trade. Labour – or people – on the otherhand have increasingly found themselves sifted according to their perceived desirability. You, yes you but not you. The rules are simple: wealth conveys mobility.

Four years after my birth my namesake Everett Lee devised a model of migration that has withstood the test of time in my classroom. Like all the best models it is beguilingly simple. People can be pushed away from their current residence by a range factors ranging from war to lack of economic activity; they can be pulled towards locations by perceived or known advantages such as employment opportunities or religious, political or sexual freedoms. Between these push and pull factors sit a range of intervening obstacles of which immigration control is significant but not the only factor. In the past distance would have been a more significant

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<sup>40</sup> Clayton, G. (2010) Textbook on Immigration and Asylum Law. OUP. Chapter 1 page 6

intervening variable than it is today. But modern transport and communication technologies increasingly mean that distant is now near or at least nearer.

It is notable that migration into Britain remains at the forefront of public concern and political debate. The *2012 State of the Nation* Report identifies ‘tension between immigrants and people born in Britain’ as the issue most likely to cause division in British society.<sup>41</sup>

The pressure group Migration Watch has championed the cause of ‘managed migration’ into the UK. Its aim is to balance immigration against emigration so that no net increase in population accrues as a result of migratory movement.<sup>42</sup> At heart Migration Watch occupies some of the same campaigning ground that groups campaigning for zero population growth also occupy.

There has always been a whiff of xenophobia about MigrationWatch which has become a darling of the right wing press – a Daily Mail perennial. It isn’t that the data that they present to make their case is not correct; it comes from the government so is as accurate as can be. No. The problem lies with the ‘spin’ they give to the data and the conclusions that

they tend to over draw. These conclusions then tend to be amplified by the press and the debate gets distorted away from rational discussion and into the area where it becomes a ‘touch stone’ issue to which all politicians with a credible design on power must pay homage to.<sup>43</sup>

Guardian journalist Gary Younge demonstrates the problem, pointing out that “a Mori poll in 2002 revealed that...the public’s mean estimation of the proportion of immigrants in Britain is 23%; the actual figure was around 4%”.<sup>44</sup> A MigrationWatch claim in August 2010 that “immigration has damaged employment prospects for British workers” suggested that for every 1,000 migrants to Britain 900 British born citizens lost their job.<sup>45</sup> It needs to be remembered that most migrants are economic migrants and so tend to move specifically for work. Furthermore, it must also be observed that in the period commented upon – January to June 2010 – UK-born people in employment rose by 41,000 (0.2%) and those born outside the UK saw employment rise by 145,000 (3.9%). These figures generated headlines such as “Migrants rob young Britons of jobs” in the Daily Express and “Record four out of five jobs going to foreigners between May and June” in the Daily Telegraph.

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<sup>41</sup> State of the Nation 2013. British Future. Access at <http://www.britishfuture.org/wp-content/uploads/2013/01/State-of-the-Nation-2013.pdf>

<sup>42</sup> Migration Watch UK have an extensive website that covers its key arguments and stated policy responses. Access at <http://www.migrationwatchuk.co.uk>

<sup>43</sup> Nick Robinson’s Newslog BBC News 19/4/11. Ed Milliband: “We got it wrong on immigration”. Accessed at [http://www.bbc.co.uk/blogs/nickrobinson/2011/04/ed\\_miliband\\_we.html](http://www.bbc.co.uk/blogs/nickrobinson/2011/04/ed_miliband_we.html)

<sup>44</sup> Younge, G. (2010) ‘Immigrants cause job losses? Like ice-cream brings sharks.’ The Guardian 16.08.2010. Access at <http://www.theguardian.com/commentisfree/2010/aug/16/immigrants-ice-cream-sharks>

<sup>45</sup> I’d like to reference this report but it has been deleted from the Migration Watch website, however see reference 46 for a full and rigorous critique of the faulty methodology used.

Institute of Public Policy researcher Sarah Mulley keeps the methodological sleights of hand employed by MigrationWatch under scrutiny. As she says “perhaps it’s to be expected that MigrationWatch might play a bit fast and loose with the evidence – it is a campaign group, after all. But this seems to be becoming a habit.”<sup>46</sup>

When it comes to borders, barriers, passports and people it is necessary to have a level head. Most migration is driven by economic inequalities at either the regional or national level. Perhaps the most efficient way to reduce long-term migration is to reduce inequality? Danny Dorling in pondering such a dynamic lets his imagination run a little with this thinking when he muses on the ultimate demise of passports in the future:

**“Our current obsession with border controls could seem as quirky and sad to future generations as, say, the racist demand that black people sit at the back of the bus – or in another bus entirely – seems to us today.”<sup>47</sup>**

We are a few years from that I suspect but if such a thing is ever possible it has already been sung about in one of the most popular songs of all time: “Imagine there’s no countries. It isn’t hard to do.”<sup>48</sup>

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<sup>46</sup> Mulley, S. (2010) ‘Why Migration Watch is wrong – a plea for a more robust debate on immigration’ The New Statesman 19.08.2010.  
Access at <http://www.newstatesman.com/blogs/the-staggers/2010/08/immigration-migrationwatch>

<sup>47</sup> Dorling, D (2011) ‘Possible ‘peak population a world without borders’ Open Democracy 18.10.2011.  
Access at <http://www.opendemocracy.net/5050/danny-dorling/possible-peak-population%E2%80%99-world-without-borders>

<sup>48</sup> John Lennon ‘Imagine’. (1971). I preferred the b-side.

## British and proud.

Well I've been imagining no countries and, as things stand John, it *is* pretty hard to do. The fact is nationality matters. I am British. That is my nationality. Ethnically I am like many of the British – a mix of different roots. My immediate family is a mix of English, Irish, Welsh and Scottish. My mother-in-law's first great-grandchild is ethnically English, Indian and Philippino. She never would have imagined that when she was growing up in the Lincolnshire Fens in the 1930s. We are entering a world of super-diversity.

It may be the island status of Britain that has helped it become one of the world's great migrant nations. That and a mixture of adventure and aggression: both requisite characteristics for any nation set on forging an empire as grand as the British Empire in 1919. From Cairo to the Cape. Of course when we travel the world today the front of our passport is adorned with the royal motto of the British Monarch, 'Dieu et mon droit'. That's French for 'God and my right' – yes that's right, French, once the language of the British ruling class for the small matter of approximately 400 years. That would be the consequence of William of Normandy (himself a Danish Saxon by descent) usurping the crown of England from Harold (yep a Danish Saxon by descent) and setting us on a path to glory.

So much of what we think of as 'our culture' – that is, 'the British way of life', as so often invoked by beleaguered Prime Ministers from Blair to Churchill – is a construction of recent history, developing out of Victorian certitudes and a constant looking over our shoulder to past glories. The victors always dominate the writing of history.

Yet try to pin down 'the British way of life' and it gets a little hazy. I have tried this with hundreds of students. First, do we really mean the English way of life? Possibly, as the English are so dominant within the United Kingdom. Is it concerned with artefacts of life, ritual, custom, diet, habits and proclivities? Is it deep and spiritual? Does it concern our political values and social organisation?

The Daily Telegraph had a go at defining Britishness in 2005 by what it called 'ten core values': the rule of law, the sovereignty of the Crown in Parliament, the pluralist state, personal freedom, private property, institutions, the family, history, the English language and the British character were their debatable and open-ended choices.<sup>49</sup> Kate Fox in her book 'Watching the English' has had a more specific go at nailing down what that character might be.<sup>50</sup> Her list includes hypocrisy, courtesy and empiricism. She doesn't examine the Welsh or the Scottish.

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<sup>49</sup> The Daily Telegraph editorial 27/07/2005

<sup>50</sup> Fox K (2004) 'Watching The English' Hodder London.

More inclusive and more contemporary was the 2012 London Olympic ceremony devised by the Lancastrian working class filmmaker Danny Boyle.<sup>51</sup> Boyle's vision – projected to billions worldwide – was one of working class heritage, pastoral beauty, industrial grime, business and socialism, women's rights and multicultural youth. It literally rocked. The world's media were engaged, thinking it 'subversive and sublime' (The Sydney Morning Herald), 'eccentric' (China Daily) and 'slightly insane' (New York Times).<sup>52</sup> Conservative MP Aidan Burley neatly summed it up as 'The most leftie opening ceremony I have ever seen – more than Beijing, the capital of a communist state!' That made me proud to be British and made me laugh as Burley had a few years previously become embroiled in a scandal in France when he attended a 'stag do' dressed in full Nazi regalia.<sup>53</sup>

The reality is that I – like millions of others - love my country, would die for my country, (under a very narrow range of circumstances – an existential crisis or some such event). But I love the world even more. The world is what sustains my family, my community, my country and me. I bear no specific antagonism to any of the world's people and am excited by the global reach of Britain in this 'super-diverse' form although I appreciate there may even be limits to this.

To paraphrase, with apologies to Sir John Betjeman:

**"For me, Britain stands for not having to believe in religion, in eccentric humour, raucous public houses, feminism, modest local football teams, arguments about politics, the sound of the Today programme on Radio 4 every weekday morning, feisty newspapers, local festivals like Notting Hill, the literature of Conrad, Faulks and Orwell, young talent, local bands playing to ten people and a dog, a visit to a local curry house, endless branches of Greggs, light summer evenings, leaning on gates and looking across fields: for you it may stand for something else, equally eccentric to me as I appear to you, something to do with Wolverhampton or dear old Swindon or wherever you happen to live. But just as important. But I know the Britain I want to come home to is not very different from that in which you want to live."**<sup>54</sup>

<sup>51</sup> See the whole of the 2012 Olympic ceremony at <http://www.youtube.com/watch?v=4As0e4de-rl>

<sup>52</sup> World reaction to Olympic opening ceremony as reported by the BBC . Accessed at <http://www.bbc.co.uk/news/uk-19025686>

<sup>53</sup> Sandy, M and Allen P (2011) 'A toast to the Third Reich! Oxford –educated louts 'face proecution' for dressing as Nazis and taunting French waiter...while Tory MP looked on.' The Mail 22.12.2011. Access at <http://www.dailymail.co.uk/news/article-2072639/Tory-MP-Aiden-Burley-Nazi-stag-night-French-ski-resort.html>

<sup>54</sup> Original idea and text from Sir John Betjeman. Shamelessly re-written. First broadcast on the BBC 25.02.1943. Subsequently printed under the title 'Oh to be in England' in The Listener 11.03.1943.

## The least worst system. I'd vote for that.

After being beaten at the ballot box Winston Churchill was, in 1947, in a thoughtful mood. In the House of Commons he reflected:

**“No one pretends that democracy is perfect or all-wise. Indeed, it has been said that democracy is the worst form of government except all those other forms that have been tried from time to time.”<sup>55</sup>**

Churchill is also quoted as saying that “if we allow women to vote it will mean the loss of social structure”. But that was before he had to appeal for their votes.<sup>56</sup>

The reality is that democracy is a relatively recent invention in Britain. Less than 100 years ago – in 1928 – did the notion of a universal adult franchise become law. True, women over 30 could vote from 1918 but they had to be married. In such a short time it has become part of the core fabric of our lives even if we treat it with less care than it sometimes deserves. In 1950 total UK elector turnout in the general election was 83.9%. It dipped to 59.4% in 2001 before recovering to 65% in 2010.

Parliament is the sovereign power of the UK. OK so it is really the Queen who is head of state but she, or whoever follows her, would do well to remember that this is just a titular role. At the helm is the Prime Minister. Or are they?

First, in a politically globalised world a range of the UK's decision-making power now resides within the European Union. Some of the frameworks within which the country operates are even more global – such as the UN Single Convention on Narcotic Drugs of 1961 which prohibits the legal recreational use of drugs in all signature countries. Changing the law in this respect would mean leaving this treaty. This is why – contrary to popular mis-conception – cannabis has never been legalised in Holland.

Secondly, it is debatable what amount of power any government has on the economic levers of power in a world of hyper-mobile capital. James Rubin, Assistant Secretary of State in the Clinton US Presidency is famously quoted as saying that bond traders are now more powerful than the President of The United States of America. This was a sentiment heartily endorsed by the Greek Prime Minister in 2010 when he mused that “an elected government...with the consent of the people, is being undermined by concentrated powers in unregulated markets – powers that go beyond those of any individual government”.<sup>57</sup>

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<sup>55</sup> Churchill quote from House of Commons. 11/11/1947

<sup>56</sup> Attributed to Winston Churchill at <http://www.coeffic.demon.co.uk/things.htm>

<sup>57</sup> George Papandreou, Greek prime minister referring to the role of financial markets in the Greek debt crisis of 2010 at a speech in Washington DC U.S.A. March 2010

It is a moot point how far a government programme could intervene in the market. Say a radical socialist government found its way to a thumping parliamentary majority on a tide of popular support – think 1997 without Tony Blair. Actions that they might be mandated to take; say the bringing of all water and sewage companies under state control – nothing too radical – might be beyond their budget.

The 23 water companies that serve England and Wales (Scotland and Northern Ireland are already under decentralised government control) have a complex structure. Some are 100% foreign owned such the YTL Corporation of Malaysia who control Wessex Water or Australian owned Thames Water. Others are part of some of Britain's biggest corporations.

For example my own water supplier is Yorkshire Water, privately owned and worth just over £3billion when it changed hands in 2008. Presently the owners are a New York based and privately owned 'asset management platform', the private equity and infrastructure arm of the Government of Singapore and a UK equity investment company based in a street beside the Tower of London. They all of course own it through a Jersey-based company called Skeldergate Topco Limited.<sup>58</sup> Just part of their portfolio of investments, they aren't really interested in the public good. They do what they are regulated to do and no more; any other approach would be selling the shareholders short. This is about the shareholders at the very least achieving a decent compound rate of return in the long-term.

I digress. The point is: what would be the cost to the taxpayer of bringing all the water companies under government control again achieving that dangerously subversive notion that water supply is a socialised good that should be managed sustainably for the benefit of all citizens? At least £20 billion. And then there are the organisational costs of joining these disparate and essentially competitive hierarchies into a cohesive co-operative whole. We might also have to consider what scale of capital investment such a unified institution would require to safeguard supply and to minimise wastage from an antiquated supply network.

The nation state could neuter the demands of the corporations who currently control the water companies in the UK. They could, in theory, seize the assets without compensation. Although superficially attractive, such an approach would keep a small army of corporate lawyers ungainfully employed for years, lead to potentially hazardous impacts on 'market confidence', reduce many pension pots and of course it is illegal to enact such legislation within the European Union.

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<sup>58</sup> OFWAT consultation paper. 'The completed acquisition of Kelda Group Plc by Saltaire Water Limited' June 2008

When one considers what the role of government is in a complex society at its heart must be the equitable management of core natural resources for maximum collective utility. Does the British government have such control through its 'light touch regulation'? Clearly not. Is democracy served by this state of affairs? Again, clearly no. Is the market a more efficient system? Though we are told so, the evidence is less than convincing.

Here is the big problem: If enough people felt that a core service – the supply of clean fresh water to citizens – should come under the control of the state is it possible to enact? Maybe but it will not be easy. So much for the will of people in the face of the market. So much for democracy.

## **Or should we be more like them. The Chinese, I mean.**

Thomas Friedman has been a staple of my teaching over the past decade. He has explored the reach and impact of globalisation as the New York Times foreign correspondent with far more gusto and insight than the majority of academic scholars. His Pulitzer Prize-winning writing has always been rooted in the prism of US market capitalism. He has many critics, particularly amongst the 'rottweiler right' in the USA where he has often found himself on the receiving end of 'digital lynch mobbing'.<sup>59</sup>

Nothing enraged his critics more than when Friedman on NBC's Meet the News current affair programme in May 2010 said:

**"What if we could just be China for a day? I mean, just, just, just one day. You know, I mean, where we could actually, you know, authorize the right solutions, and I do think there is a sense of that, on, on everything from the economy to environment."**<sup>60</sup>

What Friedman was getting at was the ability of the Chinese to be nimble – to change policy fast and to enact those changes with rapidity. He particularly noted the way that the Chinese had taken up the idea of green energy technology

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<sup>59</sup> Just one example of the bile directed towards Thomas Friedman can be found at <http://reason.com/blog/2010/05/24/thomas-l-friedman-wants-us-to>

<sup>60</sup> NBC Meet the Press interview with Thomas Friedman May 23rd 2010

and generation on a staggeringly large scale in a very short time (albeit whilst increasing their consumption of coal and increasing their overall carbon emissions).

What China can do is plan for the future in a way that the liberal democracies of the West are unable to do, blown about as they are on an ever-changing political landscape running from election to election. As Peggy Liu, chairperson of the organisation Joint US-China Collaboration on Clean Energy (JUCCCE), points out: “China has ambitious targets in its 12<sup>th</sup> five year plan to address energy, water, carbon emissions and forest coverage”.<sup>61</sup> China is, Liu notes, “unique because the government can help push behaviour change with local policies”. What this means is that a state with an overarching architecture of control can ‘nudge’, cajole and ultimately enforce behaviours which could create a new sustainable model of high density urban living. Given the challenges facing China it may be one of the most realistic and possible routes through the 21<sup>st</sup> century.

Xi Jianping was made General Secretary of the Chinese Communist Party in November 2012. This technocrat is going to lead China for a decade. In his inaugural speech after he had

paid notice to the 5,000 years of Chinese development (they have a long view of government in China) he made it plain that he understood what was expected of him – democracy wasn’t on the wish list.

**“People love life and expect better education, more stable jobs, better income, more reliable social security, medical care of a higher standard, more comfortable living conditions, and a more beautiful environment.”<sup>62</sup>**

One of the most informed observers of this era of change in China is the academic Martin Jacques. He argues that both of the most commonly held views in the West about China’s future political evolution are misplaced. The first is that China will evolve into a western democracy as a consequence of its development into a market economy; the alternative view is that the statist Chinese model will collapse under the pressure for fundamental political change to become more like the West. Jacques, like Liu, puts forward a completely different perspective arguing that China sees the West becoming more like it. A strong state is not going to wither. It has been a central plank of the ‘civilisation state’ of China for thousands of years. It is part of the country’s sense of itself and it has no need to ape the West.<sup>63</sup>

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<sup>61</sup> Liu, P (2012) ‘China Dream: a lifestyle movement with sustainability at its heart’ for the Guardian Professional Network 13/06/2012.

Access at <http://www.theguardian.com/sustainable-business/china-dream-sustainable-living-behaviour-change>

<sup>62</sup> Text of inaugural speech of Xi Jianping accessed at <http://www.bbc.co.uk/news/world-asia-china-20338586>

<sup>63</sup> Jacques M (2012) ‘When China Rules The World’. Penguin. London

Intrinsically the Jacques position is that we won't be China for a day but that we will increasingly look to China for solutions to the big global problems and not to the free-market model of the West. This is not what we expected to happen. Whilst we are fretting about the future in election defined bite-sized chunks of time the Chinese are thinking about how to survive and thrive in a world of 10 billion people – 13% of them Chinese.

## **The Starship Enterprise or Blade Runner?**

There are many people who are instinctively resistant to the idea of centralised political control; the state, in whatever form it takes. These people often describe themselves as lovers of freedom. They are drawn towards the idea that the rights of the individual citizen should be predominant over the rights of wider society. This has become an increasingly difficult area in recent decades within western liberal democracies as 'identity politics' – how people think of themselves as an individual – has become as important as the old class divisions. Gay rights, women's rights, animal rights, religious freedoms even earth rights.

This is where geography enters the realm of philosophy, or perhaps where philosophy enters the realm of geography. What is good for planetary sustainability does not necessarily dovetail with the liberal-humanist notion of over-arching individual rights. The car is a good example. What an invention, conveying as it does a 'right' to choose, as an individual, where and when to go and as one pleases: the freedom of the open road. Yet what if the road isn't free, clogged as it is by millions of other like-minded people exercising their freedoms, all sitting in traffic jams emitting substantial amounts of pollution into other peoples' lives. Negative externalities as economists say.

The tensions between individuals and societies will be ever-present as long as humans have dominion of the Earth.

However most of the futurology that has painted imagined pictures of times to come has been predicated on dystopian visions of the future where ‘the little people’ are pushed about by the all-powerful state or a nexus of state and big business.

In the film *Blade Runner*, released in 1982, the setting is Los Angeles in 2019. This is a place of extreme pollution, great inequality and bio-engineering that has been allowed to get out of hand. The cityscape is dominated by huge neon advertising hoardings and the Tyrell Corporation looms large over the city and its multitude of congested inhabitants. The police are ever present. Surveillance is a part of everyday life. There are clear echoes to Orwell’s *Nineteen Eighty-Four* with its ‘Big Brother’ exhortation of constant conflict and a continuous social panoptic. More recently David Mitchell’s *Cloud Atlas* reveals a totalitarian state that has grown out of an all-consuming corporate culture.<sup>64</sup> This state eventually collapses returning the world to a new form of techno-primitivism. All of these dystopias have proved immensely popular cultural offerings.

In the more optimistic times of the 1960s an alternative vision of the future was created that proved enduring across generations: *Star Trek*. The framework of these adventures is the United Federation of Planets: an intergalactic organisation dedicated to ‘universal liberty, equality, justice, peace and cooperation.’ A reflection of this unity is the crew of the *Starship Enterprise* which comprises multi-ethnic humans and

non-humans. This benign super state was created in 2087 after the end of ‘World War 3’. What led to a war so terrible that it not only united a planet but also whole solar system is not told.

Although they are entertaining, sometimes frightening and occasionally prescient these fictions have as a common theme a unified global state; some brutal and dysfunctional, drunk on the retention of power and privilege, others a model of technocratic and co-operative utopia. The reality, as is so often the case, probably lies somewhere between. Yet it is almost a certainty that the 21<sup>st</sup> century world, if it is to get even close to planetary sustainability, will be a world where individual nation states will not necessarily be the most powerful organisations. Supra-national organisations in the economic, environmental, cultural and social realms will increasingly come to the fore. The problems facing our world are so great that only organisations on this scale will address them with anything close to a sense of equity for all 10 billion of us. Without such thinking the haunting song constantly on repeat in Winston Smith’s mind in *Nineteen Eighty-Four* will become a lament for what could have been.

**“Under the spreading chestnut tree  
I sold you and you sold me”**

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<sup>64</sup> Mitchell D (2004) *Cloud Atlas* Sceptre. London

## Getting smart. How much can you possibly know?

In the YouTube sensation 'Shift Happens' the barrage of facts leaves you reeling. 3,000 books are published daily; a week's worth of The New York Times contains more information than a person was likely to come across in a lifetime in the 18<sup>th</sup> century; 1.5 Exabyte's (1.5 X 10<sup>18</sup>) of unique information will be generated worldwide in a single year; the amount of technical information doubles every 2 years.<sup>65</sup> Phew, it all sounds daunting and that was back in 2006. Things have moved on since then. How the hell are we going to cope?

It can be a bit scary when you are a student thinking about how much you are expected to know. Don't panic here is the unvarnished truth – we are all a bit dim, and quite bright. Nobody can know much more than a few grains of knowledge in this unending desert of information. Furthermore knowing things is different from understanding things. However it is amazing what you can pick up if you bear in mind a few basic key questions like: Where? What? Why? How? When?

To see how far you can travel armed with these fundamental questions – and a society that encourages you to use them – consider education in my home city of Sheffield 100 years ago.

The early days of the 20<sup>th</sup> century were heady times for education in Sheffield. The primary school attended by my own children was built in 1905. It was created just after the formation of 330 local education authorities following the 1902 Education Act. In 1899 the school-leaving age had been raised to 12. The oldest of Sheffield's secondary schools was also born around this time - King Edward VII School in 1904. By 1912 it was getting 'boys' into Oxford and Cambridge: 5 in that particular year.

The reality for most working class children was that what education they did receive was severely constrained and basic indeed. In 1921 in Sheffield, 86,196 were on primary education rolls, only 2,470 made it to secondary school (these figures do not include privately educated pupils).<sup>66</sup>

The University of Sheffield came into being in 1905 after a long gestation since the introduction of a Medical School in Sheffield awarding certificates validated by the Society of Apothecaries in 1815. In 1906, 114 primarily local people were registered on a degree course on an annual budget of £30,000 (worth about £3 million at today's value)<sup>67</sup> 40% of which was paid out of the general Sheffield rate. As a percentage of the general population those receiving a university education was less than 1%.

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<sup>65</sup> There are so many versions now posted on Youtube. However the original from 2006 can be found here <http://www.youtube.com/watch?v=FdTOFkhaplo>

<sup>66</sup> Mercer M (1993) 'Education in Sheffield Early Provision 1843-93' in 'The History of the City of Sheffield 1843-1993: Society' editors Binfield et al, Sheffield academic Press pp298-316

<sup>67</sup> Calculated using 'This is money' website. Access at <http://www.thisismoney.co.uk/money/bills/article-1633409/Historic-inflation-calculator-value-money-changed-1900.html>

In the 1960s children generally left school at 15, most with no formal qualifications at all. In Sheffield what followed for boys was the pit or the mill, for girls the options were more limited. It is possible to see the residual of this in recent census data. In working class neighbourhoods with a particular elderly bias the number of unqualified individuals is strikingly high. Many have been highly motivated auto-didacts. Even in the alleged 'golden' age of grammar schools 40% of these selected children left with no qualifications. A school leaving certificate was the most common qualification. Labour market skills were learnt on the job and there were jobs for all.

The 1960s saw about 5,000 students a year at The University of Sheffield with a budget, in 1964, of £4.3 million (£73 million at today's value). Nationally just over 200,000 studied for a 1<sup>st</sup> degree: less than 0.5% of the adult population.<sup>68</sup>

Today we have never been more absorbed by measuring educational success. In 2012 55.2% of Sheffield students studying GCSEs at 16 achieved 5 or more passes at grade C or above. Data on how many students left school with no qualifications is more hard to come by, however the figure is south of 3% for the city.

The latest 2012 University of Sheffield figures state that just over 25,000 students were studying for undergraduate or postgraduate qualifications of which 26% were overseas students. This was sustained on an income of £446.9 million. The Times Higher Education world ranking for the university was 110th. The place has come a long way in 107 years.

Nationally 2.5 million people were attending university in 2011/12. The 2011 census revealed that 27% of the population had now been educated to degree level – 12.4 million people. More than the 10.3 million people who had no qualifications.

What does this barrage of data illustrate? That on average we are far better educated today than we were 100 years ago. There is more to know but we are more able in our attempts to know it. We are smarter than we have ever been, not because we are more intelligent but because we are better educated. Those working class kids in Sheffield who left school at 12 in 1905 with barely a leaving certificate to their name and a lifetime of graft ahead of them could only marvel at the newly-opened university, even though it was their graft that helped to pay for it.

Much of the educational progress of the last 100 years in the UK can be attributed to the stratospheric rise in educational achievement by women. It is amazing what equality can achieve. That is another story worthy of being told but for now let us cast our eyes further afield.

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<sup>68</sup> Hasnson B (1993) 'The post-War Development of Further and Higher Education'. In 'The History of the City of Sheffield 1843-1993: Society' editors Binfield et al, Sheffield academic Press pp337-363.

## Let's study graphs.

In the mid 1990s the Organisation of Economic Co-operation and Development (OECD) decided that it would be a good idea to engage in comparative testing of the educational ability of 15 year olds in the world's most developed economies. The Programme for International Student Assessment (PISA) has in rapid time become the closest thing that exists to an international benchmark of educational standards. The results do not directly reflect the institutions, investment, exam systems or teaching ability but measure the level of student ability in three key areas: reading, maths and science.

Today we can immerse ourselves in performance league tables not just in our local area but right across the globe. Now brace yourself: the UK is not the sharpest tack in the box. Here is our global school report for 2012. Reading 23<sup>rd</sup>, Maths 26<sup>th</sup> and Science 20<sup>th</sup>.<sup>69</sup> Now what you might be a little apprehensive about is who is the school swot?

China is represented three times, Shanghai province, Macao and Hong Kong. It is the first of these that has results so far ahead of the other 65 countries surveyed, in all three criteria, that you cannot help but wonder if somebody added up the test results incorrectly. Shanghai students are nearly 10% better at maths than the next high achieving country, Singapore, 3% better than South Korea at reading and nearly

4% better than those superlative scientists the Finns. Do you want to know how bad the news is? The Chinese are 24% higher scoring at Maths than the UK and we are by no means slouches internationally speaking. And you thought China was all about low skilled, low cost manufacturing employment? Time to think again.

Actually it gets to be even more of a 'gulp!' moment when you consider what the official PISA report in 2012 didn't say. Referring to unpublished results from China's poor rural hinterland Andreas Schleicher - the man responsible for the PISA project - commented: "Shanghai is an exceptional case... but what surprised me more were the results from poor provinces that came out really well." Let's put this into perspective; the kids of Chinese rural peasants are as educationally-able as the kids of middle class Europeans.<sup>70</sup>

How has this happened? Well Schleicher is clear: China expects all pupils to do well and does not employ a sorting mechanism to find a chosen few. In China the best teachers teach in the toughest schools and finally Chinese children value effort as the route to success not some notion of natural ability. Equity of opportunity is everything. Schleicher summarises "anyone can create an educational system where a few at the top succeed; the real challenge is to push through the entire cohort."

<sup>69</sup> Although you can go directly to the PISA results at the OECD website (access at <http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm>) it is more straight forward to go The Guardian facts are sacred webpages at <http://www.theguardian.com/news/datablog/2013/dec/03/pisa-results-country-best-reading-maths-science#zoomed-picture>

<sup>70</sup> Coughlin S (2012) 'China: The world's cleverest country' BBC News 09.05.2012. Access at <http://www.bbc.co.uk/news/business-17585201>

It probably pays to not get overly carried away by the results of PISA. Peter Wilby in The Guardian comprehensively addresses the shortcomings of such an approach. As Wilby acknowledges, even the OECD report itself “contains numerous caveats and warns of margins of error in their league tables.”<sup>71</sup>

Measures such as PISA are useful in addressing some of the more spurious claims that float around international comparisons of education standards. One of the most famous is the endlessly recycled quip that “that after the Chinese the South Indian’s are the smartest people in the world”, attributed to Bill Gates. You could lose count of the amount of people who tell you this in Bengaluru. Is it true? Did Gates actually say this? I cannot confirm either.

PISA also tends to shoot down the notion that - somehow - some people are innately more clever than others. China does well because it really values education, works hard at creating equal opportunities and doesn’t emphasise the idea of an educational elite. In the UK we work hard at maintaining an educational elite. Are my A-level students any less innately able than those at the most expensive private schools in the UK? No. What can we learn from studying graphs? That a bit more effort wouldn’t go amiss and a lot more equality of opportunity in the UK education system is required. Remind me; *what* is the ‘public good’ that allows so many of Britain’s private schools to claim charitable status and thus tax advantages? I’ve always been puzzled by that.

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<sup>71</sup> Wilby P (2013) ‘Don’t let dubious Pisa league tables dictate how we educate our children’. The Guardian 01.12.2013. Access at <http://www.theguardian.com/commentisfree/2013/dec/01/dont-let-pisa-league-tables-dictate-schooling>

## Bare foot genius.

One of the intriguing aspects of a growing global population is that it also leads to a growing pool of human talent. As we have just seen, the educational potential latent in the hundreds of millions of rural Chinese is huge. It isn't just China where smarter, better informed people are rising out of ill educated pasts. All over the world people that for generations have been firmly ensconced on the global periphery are starting to figure out better ways to live their lives.

There are many stories of inventiveness in the face of adversity. Most are simply stories of everyday life, a better way to grow vegetables, imaginative irrigation schemes or a clever ways to recycle scarce resources. Studying geography brings you face-to-face with human ingenuity on a global scale.

A favourite story of mine is that of 14 year old William Kamkwamba from Malawi. His family were so poor that he was forced to drop out of school but undeterred he studied books about windmills and decided to build a wind powered generator out of scrap materials lying around in his remote rural village. This was a success and soon electricity was powering radios to listen to reggae music and light bulbs to study by at night. William built further wind turbines in his

village before his endeavours leaked out into the wider world. He is currently studying Environmental Science and Engineering at Dartmouth College in the USA.<sup>72</sup>

The barriers that exclude the global poor from improving their lives are considerable. Risk is part and parcel of everyday life. Lack of access to resources both material and financial hampers ideas and development.

Abhijit Banerjee and Esther Duflo explore the constraints on decision making by the global poor in their 2011 award winning book 'Poor Economics'. In conclusion they observe that "expectations about what people are able or unable to do all too often end up turning into self-fulfilling prophecies."<sup>73</sup> As they go on to point out "small changes can have big effects". Believing in equality as a tool for transformative change, encouraging people to realise the depths of their talents and convincing individuals and societies that practical solutions to what appear our most intractable problems are possible is a good place to start.

Back in the early 1980s I used to pick hops in Kent. I stayed with friends who lived deep in a Wealden sweet chestnut wood using recycled materials to extend an old caravan. They had a wooden toilet that was moved around the various hectares at their disposal, placed above a newly dug hole. The extra

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<sup>72</sup> Start with Wikipedia on background on William Kamkwamba. Access at [http://en.wikipedia.org/wiki/William\\_Kamkwamba](http://en.wikipedia.org/wiki/William_Kamkwamba)

<sup>73</sup> Banerjee A and Duflo E (2011) 'Poor Economics'.

guest pressure meant that I was dragooned into digging after a month. Such low-tech ecological approaches to sanitation have now been rolled out at various locations in the world. The Arborloo is one such an approach. It involves planting trees on the sites of previously used sanitation pits to create orchards of fruit-bearing crops. That such simple responses to a global crisis of sanitation are possible is indicative of the appropriate, practical responses that a little education and a lot of drive can bring to the most marginalised of communities. Dr Peter Morgan, a Zimbabwean national, has been innovating solutions for low-cost rural sanitation for three decades. The success of Morgan's Arborloo is well documented outside of Zimbabwe.<sup>74</sup>

It is the largely unseen ideas and work of Africans such as Peter Morgan and William Kamkwamba that gives hope that a smarter world has the potential to be a much better world.

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<sup>74</sup> Stockholm International Water Institute (2013) 'Dr Peter Morgan Receives the 2013 Stockholm Water Prize'.  
Access at <http://www.siwi.org/news/dr-peter-morgan-inventor-in-sanitation-receives-the-2013-stockholm-water-prize/>

## Did you know?

The latest version on 'Shift Happens' – 6.0 as it happens – reiterates a point this zeitgeist YouTube hit information graphics film made in its original 1.0 form (5 million and counting):

**“We are currently preparing students for jobs that don't exist yet. Using technologies that haven't been invented in order to solve problems we don't even know are problems yet.”<sup>75</sup>**

Well you might consider this hyperbole - something scripted to jump out and grab your attention. Clearly there is an element of over-statement, many jobs will remain the same as they were – midwives aren't essentially going to change what they do, neither hairdressers. However, there is also some truth within this statement as well.

So much of my education in the 1970s lacked specific relevance to what I ended up doing with my life. It was a general education; maths, science, written English, the sort of geography Michael Gove would be proud of and that has proved extremely useful for pub quizzes. The first computer I ever saw was at Sheffield City Polytechnic. It was the size of a small car, was fed data on punch cards and was only marginally more useful than a pocket calculator. We used it for statistical tests. Icon driven computers were a real 'wow' a few years later.

I grew up without a telephone or a television in my house. If you had described the internet to my 17-year-old self I would have scoffed and muttered something about reading too much science fiction. Modern mobile phones were straight out of Star Trek.

All this has taught me to discount very little about the future. Yet many of the problems that we will have to address in the 21<sup>st</sup> century are not going to jump out at us from nowhere. They are eminently predictable. Furthermore we probably have within our gift the ability to mediate against the worst of the fallout from those crises that may beset us.

Climate change, extreme weather events, water shortages, food shortages, energy demand, loss of biodiversity, pollution and technological anomie – all of them are within our grasp to address. The fundamental problems are whether we will be smart enough and politically-organised enough to create the framework for solutions.

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<sup>75</sup> Hard to keep up with all the versions of Shift Happens but this quote is from the 2012 version from David Rose, the originator of the idea. Access at <http://www.youtube.com/watch?v=XVQ1ULfQawk>

We are getting smarter and smarter. The XO computer, a rugged, internet connected and low-cost laptop computer is promoted as a solution for 'One Laptop Per Child'.<sup>76</sup> At least 2.4 million have been delivered to date. The tools to unlock the potential of the world's poor and marginalised are clearly a part of the solution. The school results from China illustrate the scale of that potential.

Even cheap mobile phones can be used to help teach useful skills. The Janala programme in Bangladesh which helps to teach English is an example of this. The BBC, who run this scheme, designed to target young people living on less than \$2 a day, aim to improve the English language skills of 25 million people by 2017.<sup>77</sup>

In India technology billionaire Azim Premji has put his money where his beliefs are and invested \$2 billion in setting up a university that carries his name in his home city of Bengaluru. The focus of the Azim Premji University is training a new generation of educationalists and development facilitators to go out into India's rural heartland and transform society. Recently the reclusive but influential Premji was quoted as saying (as he gave away further billions) that he "was deeply influenced by Gandhi's notion of holding one's wealth in trusteeship, to be used for the betterment of society and not as if one owned it".<sup>78</sup>

What is possible is down to what we practicably make possible. The distance we have travelled educationally and the numbers globally who have made or who are beginning to make that journey of educational enlightenment is unprecedented. This does not have to be the age of stupid. It depends on the choices we make.

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<sup>76</sup> One laptop per child website with mission statement. Access at <http://laptop.org/en/vision/index.shtml>

<sup>77</sup> Bunz M (2010) 'BBC's education service Janala has delivered 1 million lessons in 3 months'. The Guardian 17.02.2010. Access at <http://www.theguardian.com/media/pda/2010/feb/17/bbc-bangladesh-janala-lessons>

<sup>78</sup> An open letter from Azim Premji setting out his principles is available on-line at [http://givingpledge.org/pdf/letters/premji\\_letter.pdf](http://givingpledge.org/pdf/letters/premji_letter.pdf)

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