

# 1

## Introduction

*There is no such thing as destiny. We ourselves shape our own lives.*

*The ticking time bomb of ageing.*

*The population explosion (and implosion).*

*The migration bomb.*

Demography appears to promise more bombs and explosions than a Hollywood blockbuster. To continue the movie metaphor: the demographic future is presented like *Die Hard* (and its four sequels), as an endless fight against explosion after explosion; the best we can hope for is to emulate the cast of *The Hurt Locker*, trying (sometimes in vain) to defuse all these ticking time bombs. This, so the traditional alarmist narrative goes, is *why demography matters*. It matters because China's ageing population means its future economic growth might soon be checked, with disastrous consequences worldwide. It matters, some say, because migration into the UK will inevitably lead to its public services being overwhelmed. It matters because the tremendous population growth in much of sub-Saharan Africa, coupled with climate change, could lead to conflict, drought, mass relocation and disaster. This *could* happen, and some might claim that it already partly has. But this is not to say that it *will*. Indeed, what will happen in terms of numbers of people is far from certain; and what will happen as a result of whatever level our population eventually reaches is even less predictable.

*I think we're fucked.*

There are not many lines in books on demography that our undergraduate students can directly quote, but this one from Stephen

Emmott's recent study of the environmental consequences of population growth is certainly a contender. In *Ten Billion*, Emmott sets out the challenges that have accompanied rapid population growth in the twentieth century, and offers a vision of how they will progress in the current century. His conclusion is profoundly pessimistic. The passage at the end of the book that precedes the line above is as follows: 'We urgently need to do – and I mean actually do – something radical to avert a global catastrophe. But I don't think we will' (Emmott 2013: 202).

*Ten Billion* is just one of a huge number of books, articles and press headlines describing the potentially negative consequences of population change. We began writing this book during the build-up to the UK's referendum on EU membership. The 'Brexit' campaign presented horror stories of an 'out-of-control' immigration system, a 'break down of public services', projected overwhelming population growth soon to be hitting our 'crowded island' leading to the building over of the English greenbelt, and much more besides. In the aftermath, one key aspect of demography – immigration – was presented as the single most important reason to explain why the UK voted to leave. There was also a rise in fear, hatred and racist attacks. It became apparent that control over immigration was the main factor shaping debate over the process of how to withdraw from the EU. When the vote was analysed demographically the results showed that it was the old who voted for Brexit in the largest numbers, the old who 'feared' the migrants most, or who thought that limiting immigration would somehow help younger generations (see Dorling, 2016a).

If fertility in the UK had been higher in the past then there would have been more young voters. Had UK society not become so individualistic over the last four decades more of the young might have turned out to vote, and economic inequalities might not have risen so high. We would have been a very different population and had a very different political and demographic make-up had we had a few more children in the 1930s or a few more emigrants in the 1990s. Demography shapes our politics. Politics shapes our demography.

A number of recently published books, mainly emanating from the United States, have sought to paint a bleak future for Europe based upon a convergence of problems associated with its low fertility rates, rapidly ageing population and, in some cases, the fear of some imagined vigorous growth of Islamic culture in Europe (Coleman and Basten, 2015). In China and India, population ageing leading to eventual economic decline is projected to be a core factor in shaping

their relative futures, with India perceived to have an ‘in-built’ economic advantage as it already has far more children.

In Europe, demographic change is painted as being ‘responsible’ for the crises in pensions, health care and social care, the latter now especially acute in the UK. There are simultaneously too few people in some places and too many in other places, and whether they stay *in situ* or move, the consequences are often portrayed to be dire. The decline of the traditional family model is lamented and blamed for everything from the growing need for more housing to the lack of decent care provision for both the elderly and the young.

Given how profoundly depressing so many popular demographic views of the world are, it is a miracle that demographers are ever invited out to social gatherings at all. In truth, we aren’t invited that often – and we often lie when asked ‘so what do you do?’ at parties. Believe it or not, the authors of this book find it much easier to be thought of as geographers and sociologists (hardly test pilots or brain surgeons) respectively, rather than as demographers. But in truth, recent demographic change is on the whole far from depressing. In our lifetimes we have seen infant mortality rates plummet; health around the world improve beyond the most optimistic dreams of our forebears; increased freedom of movement; greater freedom to live how you wish to and with whomever you like; and children (on average) treated with ever greater love, compassion and respect. Ageing (which we unduly lament) is brought about by falling fertility and mortality rates, which in turn have been brought about by improvements in health, well-being, education, women’s rights and workers’ rights (which we rightly celebrate). So why is demography seen as so depressing?

This ‘depressing streak’ within demography can most easily be traced back to the earlier writings of Thomas Malthus, whose tales of impending doom became so popular at the turn of the nineteenth century. In the classic Malthusian model – which still lurks in the thinking of many writers today – population growth will inevitably outstrip food production. The suggestion is that either the population starts collectively to pull its finger out and apply ‘preventive’ checks to growth, such as marrying later, or else there will follow a ‘positive’ check (which should really be termed ‘profoundly negative’) of famine, war, pestilence and general destitution in order to ensure and maintain a balance. In 1800, when this debate began to gather steam, the world population was around 1 billion. And in fact, Malthus was not quite as grim as he is often portrayed, especially as

he aged, but the ideas contained in his earlier writings have long outlived his later reflections. Ideas can have much longer life expectancies than people.

Interestingly, Malthus was not just a demographer but also the world's first salaried economist. Economics is often referred to as 'the dismal science', a term first coined by Thomas Carlyle in the mid-nineteenth century. It is a common misconception that Carlyle coined this phrase in response to the writings of Malthus. This is not true, but the fact that it persists tells us something about how we perceive Malthus and how, by definition, we perceive demography as a close academic relative of economics. Demography can easily be grouped in with the more uncaring and inhuman side of the social sciences. But there is another side to demography that is more optimistic, and it is not simply the unscientific side.

Carlyle did have something of significance to say about Malthus. In his 1839 book *Chartism* he wrote that Malthus's world of preventive and positive checks presented a view that was 'dreary, stolid, dismal, without hope for this world or the next' (1842: 109). Carlyle was insinuating that Malthus had projected Thomas Hobbes' state of nature, wherein life is 'poor, nasty, brutish and short', and that this was short-sighted.

It is human nature to do as Carlyle did back in the mid-nineteenth century and write a riposte to the most gloomy vision of the future. In general, people tend to have a positive outlook and believe in their community; only a minority are not pro-social. Sometimes these more positive views will be directly based upon new evidence; at other times a different interpretation of the evidence will be in play. Some ripostes, or alternative futures, are based upon serious empirical endeavour. And some take a very long time to materialize. Demography matters because a combination of current and outdated demographic understandings often underlie so much else that we have come to believe. And, as our understanding of our demography changes in future, so too will our beliefs.

It was not until the 1980s, almost two centuries after Malthus began to devise his original dire warnings, that the Danish economist Ester Boserup (1981) was able to convincingly demonstrate that the Malthusian view of the relationship between people and land was over-simplistic, and that food production was far more elastic in terms of labour inputs. Other visions of the future, however, are based more on pessimism than on fact. Stephen Emmott, for example, offers a pessimistic view of the future based upon *his* interpretation of recent trends and what they might portend for the future,

but others interpret these same trends differently and, as a result, view the possibilities for the future much more positively.

In her recent, excellent and short *No-Nonsense Guide to World Population*, Vanessa Baird (2011) explains how population growth has actually been slowing for some time, and that our real problems concern how we treat and respect one another. It is no coincidence that her other book in the same series was the *No-Nonsense Guide to Sexual Diversity*. In a similar vein, Matthew Connelly's (2010) *Fatal Misconception: The Struggle to Control World Population* tried to place a lid on the scare stories still being told about future demographic dystopias. Those who argue that population is a problem may actually be more concerned about something else that worries them, perhaps something less politically correct, which would explain why repeated recent UN projections showing a rapid population slowdown have little influence on them. The argument can then often deteriorate into a battle between 'pessimists' and 'optimists'.

But even optimists can easily be turned pessimistic by current events. In the UK, the regional distribution of both the population as a whole and its growth rates has become very unbalanced. Parts of the north continue to face depopulation, while London becomes more and more overcrowded. Couple this with decades of under-investment in infrastructure and, ironically, many people in the less densely populated areas are likely to suffer from what might feel like overpopulation. This was a key theme in the 2016 Brexit referendum, but the perceived squeeze on public services was due more to austerity and long-term under-investment than to immigration. Much the same story can be told about the contemporary United States and the 2016 presidential campaign there.

Today in the UK and US the direct and indirect effects of strict constraints on migration could be severe, for both the economy and the labour market. Unforeseen circumstances might transpire that were not raised in the political debates of 2016. At the moment, for example, much migration from the mainland of Europe into the UK and from Mexico into the US is 'temporary', in the sense that migrants come to work for a period of time before returning home. If a shift in migration policy led to higher levels of lifetime migration this could serve to exacerbate the ageing issue in both countries. Repatriation (voluntary or otherwise) of older UK emigrants back to the UK would only add to this, as would a further decline in fertility in the US (one outcome that restricting migration could cause).

Demographers have to consider government policies that could impact on demographic change (Gietel-Basten, 2016a, 2016b).

Perhaps the most immediate issue in the UK is the crisis in the NHS and, more especially, in social-care funding, and in the US the changes being made in 2017 to the Affordable Care Act. These political changes have the potential to increase mortality rates, or at least slow down the improvements that had been seen over recent decades in the UK and which have recently been reported to have halted, or even gone into reverse, in the US (Dorling, 2017a, 2017b).

As with many debates, demographic debates can tend towards the inane ('I am right!' ... 'No! I am right!'), especially when they extend to estimating the potential effects of political policies. This is not least because each 'side' usually offers an equally superficially viable view of the future. It is a curious thing that pessimism tends to be seen as more scientifically 'grounded' or 'realistic', while optimism tends to be associated with the words 'breezy' or 'fanciful'. What is perceived as optimistic when it comes to demographic soothsaying can just as easily be perceived as pessimistic in another sense – usually in terms of a trade-off between economic well-being and the environment. For example, a future of very low birth rates could be looked at 'pessimistically' in terms of population ageing and hence declining economic markets and growth; but it might also be portrayed as environmentally 'optimistic' in terms of the prospect of there being fewer people with a smaller collective carbon footprint.

Compromises are also often viable. It is not impossible that higher economic growth resulting from advanced manufacturing techniques could lead to more resources being made available for better sustainability and climate-change adaptation. Technology and 'robotization' could also offset some of the impact of population decline and ageing on manufacturing – but at what human cost? The future really is unpredictable, especially in times of rapid change, such as is the case today.

If you live in the US or UK it is all too easy to become obsessed with the demographic debates in these two relatively small parts of the world. However, the most significant demographic changes are taking place elsewhere, and it is these changes that will determine the size of the world's human population over the course of the next few decades.

It is not our purpose here to get into the 'optimist' versus 'pessimist' debate about the future of world population – we don't have a position on what would be 'good' or 'bad' when it comes to future numbers. Rather, we want to think about how these visions of the future are arrived at and where demography sits in this process, and to see how our understanding of global demographics can

influence local politics and populations. If you are told that we live in a big bad world of ever more desperate foreign migrants, then you are more likely to support policies that would pull up drawbridges and build walls. If you are told that your people are having fewer babies and that this represents a threat to both your economy and your *culture*, then you might become more likely to support pronatalist policies that could be both anti-feminist and bullying in tone, as well as being nationalistic in spirit.

The title of Steve Emmott's book, *Ten Billion*, is important here. While it is all about the disasters to come, it is not titled 'global consumption', or 'environmental degradation', or 'challenges to irrigation systems' or 'issues with the global food supply chain'. Rather, the fundamental problem is seen as the total number of people in the world, just as it was for Malthus. Conversely, for those who study the natural world, i.e. who study species other than humans, it is more often population *decline* that is seen as the dire problem.

The analogy often employed in relation to the future of world human population is that of the 'bomb'. Google 'demographic time bomb' to see the most popular and often heated exchanges on the subject. The notion of a 'population bomb' was popularized by Paul Ehrlich in work relating to environmental degradation written back in the 1960s, and is still widely employed in the same vein. Today there are no shortage of demographic bombs presented as nascent threats, with their fuses already burning: ageing time bombs; migration time bombs; delayed fertility time bombs; you name it, there's a bomb for it. The political potency of these metaphors can be huge; they work like modern-day fairy stories, warning of the dangers lurking in the shadows of the future.

In some ways, the bomb metaphor is quite good, at least if what you have in mind is just an old-fashioned weapon with a long fuse and a bang at some point in the future. Demographic change is often a slow-burn process. While very notable exceptions, such as sudden large migrant flows, famines, wars and so on, occur, the more predictable effects of lower fertility and improved mortality on population ageing, for example, can take many decades to reach their full impact. It is the latter that are usually referred to as demographic time bombs, and that is a problem.

The bomb metaphor is dangerous because it implies something other than a small explosion. The future, so the metaphor suggests, will be determined by the bomb going off. By definition, the bomb exists. It is a fixed 'thing', and the only two choices we have are to deal with it when it explodes, or to defuse it. The clear implication,

then, is that it is our *destiny* to confront this ‘challenge’ at some point in the future. *Ten Billion*, including an ageing population with profoundly negative economic consequences, is our ‘destiny’ – one which we need to deal with – and even now we may already be powerless to do so. ‘We are fucked’ if we cannot rise to the challenge, one that has been thrust upon us and that we must reluctantly accept. Such talk is often nonsense.

This leads us to another oft-used expression: ‘demography is destiny’. Again, this is fundamentally linked to the metaphor of population ‘bombs’. For instance, a perennial favourite of *The Economist* is to compare China and India in terms of the former’s low birth rate and rapidly ageing population, and to declare that ‘demography is destiny’ in terms of how this will shape future economic growth. The profoundly depressing film *Demographic Bomb: demography is destiny* – part-funded by the Family First and GFC (serving God, Family and Country) Foundations – paints a bleak picture of a world characterized by low birth rates and, essentially, economic and societal collapse (see [demographicwinter.com](http://demographicwinter.com)). Others have suggested that Africa’s future is likewise a dystopian, dysfunctional one of weakening security, poor economic growth and dearth as a result of rapid population growth, again on the grounds that ‘demography is destiny’ (see French 2013).

The notion of demography as destiny is often deployed in discussions of changes in the voting populations of democracies, and perhaps nowhere more so than in the US. There it is linked to changes in the nature of the population related to age, gender, race (and, perhaps, sexuality), leading some to pronounce that ‘demography is political destiny’, and that the coming demographic changes will be good news for the Democrats (in the future at least). But people who cannot change their age or gender or race can easily change their political affiliations. It takes only small swings in closely fought elections for changes in political affiliation, or voter turnout, or even voter registration, to be what matters most.

The expression ‘demography is destiny’ is often erroneously ascribed to the French sociologist Auguste Comte. In fact it probably didn’t appear in print until 1970, in a book about changes in the US electorate: *The Real Majority* by Richard Scammon and Ben Wattenberg, in which the authors tried to set out who the voters were and thus by definition who the politicians should be seeking to woo. Chapters 4 and 5 of the book were both titled ‘Demography is Destiny’, with the subtitles ‘Unyoung, Unpoor, Unblack’ and ‘Middle-aged, Middle-Class Whites’ respectively. These two titles

essentially present the entire project of the book: to identify who the ‘middle voters’ were not, and who they were. Indeed, they actually define the ‘middle voter’ as ‘metropolitan ... middle-aged, middle-income, middle-educated, Protestant, in a family whose working members work [more likely] with hands than abstractly with head’. More precisely, the middle voter was ‘a forty-seven-year old housewife from the outskirts of Dayton, Ohio, whose husband is a machinist’ (Scammon and Wattenberg, 1970: 70). Given that ‘demography is destiny’, the authors concluded that ‘The winning coalition in America is the one that holds the centre ground on an attitudinal battlefield’ (1970: 80).

It is ironic, therefore, that the forty years which have passed since this first use of the expression ‘demography is destiny’ have shown that it really isn’t destiny at all. While the housewife in Ohio might still be critical in US politics, this has perhaps more to do with Ohio’s current status as a swing state rather than with the housewife’s demographic status as white and middle class. Indeed, looking at the electoral landscape of the US today, it is easy to see an entirely different future having played out than the one anticipated by Scammon and Wattenberg. The Ohio housewife really might not matter at all as her ‘demographic’ may simply be split between today’s two options. It was older, wealthier white men who swung much more for Donald Trump in 2016, while the ‘young, poor and black’ were not as inspired by Hillary Clinton as they had been by Barack Obama. Again, though, having said all this, when we started writing this book back in early 2016, it seemed that the shifting demographic of the American voting population might have been key to a Democrat victory. How quickly perceptions can change, and how easy it is to get it wrong – for any of us to get it wrong.

We are not blaming Scammon and Wattenberg for being naive. The point is that their mistake was not their fault. They looked at recent trends in voting behaviour, policy formulations and the demographic structure of the country and made a prediction about the future based on that information. Demography turned out not to be ‘destiny’ for two reasons: first, the demographic future they foresaw did not transpire exactly as they thought it would; second, *everything else* transpired differently than they thought it would. What also mattered might have been the Cold War, or Watergate, or the rise of Reagan, or deindustrialization, or further changes in civil rights, or profound changes in the household as a result of feminism, and so on and on. Scammon and Wattenberg painted a rational picture of the future, but it just wasn’t the future that transpired. Similarly,

no respected commentators writing in 2014 predicted the outcome of US presidential election that was just two years away. Given that, how seriously should we take current forecasts of the world population or economy for 2050 or 2100?

A complementary mistake to believing that current demographic trends will predictably lead to various outcomes, is to believe that various demographic interventions have already had profound effects. This mistake has often been made regarding one of the most famous and notorious population policies in human history: the so-called one-child policy in China, which is widely credited with drastically reducing fertility in the world's largest population from its introduction in 1980 through to the present day. According to the narrative, the policy averted 400 million children being born into poverty (Wang, Cai and Gu, 2011). As such, it is a firm favourite of many who advocate measures to slow population growth in order to limit environmental degradation. But this 'standard' view of the one-child policy is in fact more or less incorrect. The vast majority of the fertility decline in China took place in the 1960s and continued into the 1970s, prior to the full implementation of the one-child policy in 1980 (Basten and Jiang, 2014). That matters, but it is also not really the point here. The point we are trying to make here, and in this book as a whole, is that there is a view that 'policy is destiny', that demographic change is merely a slave to policy changes, whether they be the diktats of Beijing or local family planning cadres, the building of a wall between the US and Mexico, or the UK leaving the EU. In this view, and following the same logic, the recent reforms to the family planning policy designed to alleviate rapid ageing in China should therefore see birth rates increase – but as yet they have not. That has had no great effect on the dominant narrative suggesting that the reform of the one-child policy will lead to a new 'baby boom' (Baculinao, 2016). When these reforms were first hinted at, concerns over a shortage of paediatricians were expressed, while the value of stocks in baby formula and toy companies rose (Steger, 2013).

In the same way that Scammon and Wattenberg didn't foresee *everything else* that happened in America that got between their vision of the future of demographic change and voting behaviour, so the current dominant representation of the relationship between policy and demography in China ignores *everything else* that happened in China between 1980 (and before) and today: urbanization, economic growth, the revolutions in education, health, women's rights, the labour market. As such, changing the policy meant just changing one

parameter. Indeed, as we discuss in Chapter 5, there is now strong evidence that very many couples in China are voluntarily choosing to have just one child. Without changes in the other parameters, it is unlikely that a major demographic change will occur in the near future, whether the Chinese state wishes it to occur or not. Similarly, Trump's Mexico Border Wall and Theresa May's Brexit are very unlikely to have the precise demographic repercussions both politicians tell their voters about.

Demographic change is often seen as either completely passive, succumbing to the will of the state, or, in the 'demography as destiny' scenario, as completely active, where everything else succumbs to largely unstoppable demographic forces. These two diametrically opposed positions both represent extremely simplistic views of the world and of how people relate to the society around them. When contrasted with each other it becomes possible to see that neither can be correct.

So, what should we make of the line from Steve Emmott with which we began, about our 'being fucked'? Noting that it worked for him to have a pithy quote summing up the theme of his book, we are shamelessly going to do the same. Even more shamelessly, however, we are going to steal a phrase from someone else:

*There is no such thing as destiny. We ourselves shape our own lives.*

Which heavyweight thinker did this phrase come from? A classical scholar? An ancient Chinese philosopher? An economist (unlikely!).

No. This is a quote from none other than Giacomo Girolamo Casanova, whose name is now synonymous with 'lover'. Casanova actually informed demography by providing one of the most detailed early accounts of a wide array of innovative contraceptive methods (including an extensive use of lemons), which he utilized in order to minimize his lover-to-child ratio (Quarini, 2005).

The growth of social science came about following the realization that people can exercise control over their destiny, even if the circumstances they start out from can in turn have a great effect on that destiny. This book, therefore, is not about what the future will or won't look like – it is not about being 'pessimistic' or 'optimistic', but about how, by better understanding the role demography has played in recent years and how it might change in the future, we can *take greater ownership* of the future. In other words, we turn 'demography is destiny' on its head. The current vogue, based on this notion of destiny, is to take demography as the fixed variable going into the

future, and to suggest that we therefore have to build our future around it: to ‘defuse’ the bomb, if you will.

On the contrary, as we argue throughout this book, demography is simply too important to be relegated to being a ‘constant’. The decisions to move, to marry, to have children, to adopt a healthy or unhealthy lifestyle, to take a job in a city – or to *not* do any of these – are infinitely complex at the individual level. Multiplying these complexities up to the societal level results in an almost infinite array of choices and decisions, each simultaneously determined by – and in turn determining – a multitude of external factors relating to society, economy, politics, religion, culture and a myriad other factors.

In other words, instead of saying ‘demography matters’ because of its effect on ‘x’ or ‘y’, we want to think more about how demography matters in terms of both *reflecting* and *driving* the changes we see around us and how this, in turn, informs our visions of the future. We suggest that only through a better understanding of this interdependence between demographic change and ‘everything else’ can we move away from what is often a constrained (and dialectically inconsistent) view of the future and towards one that we can take ownership of – one where we can forge our own destinies, and recognize that this is what we mostly do. We say mostly, because demographers have long memories and there are times when events simply overtake us. Plague, disease, famine and war sometimes occur either without our knowing intervention at all, or with the intervention of all but a tiny few, or even despite the attempts of many good people to prevent them. However, in retrospect, we can often say, ‘It needn’t have been so bad had we behaved differently.’ Or we can say, ‘It only turned out so well because of the often difficult choices that were made.’ Demography frequently gives a firmer basis for planning for the future, by learning both from the past (history) and from other places (geography).

Although we don’t like dialectics (it is a clumsy word!), it is inevitable that the end point of our argument entails embracing ‘uncertainty’ rather than ‘destiny’. More so than at many other times in our history we live today in a world where the demographic future is very much up for grabs. To a certain degree, however, our perspective might ultimately lead to a rather agnostic, weak view of the future. We don’t know what will happen, and so, er ... that’s it. This can lead us – and those who think like us – into abdicating our own desires for what we consider a better future. It is therefore tempting to object that if we don’t have a more solid view of what might at least be desirable, then ‘what’s the point?’ What’s the point of writing this book, or, for that

matter, spending a good many years studying demographic change, without a vision of a better future?

What we will do, therefore, is to state throughout the book where *we* believe ‘demography matters’ – albeit in a slightly different way to how it is usually presented. So far we have mostly related the standard narrative about how demography matters. In the following chapters we will argue more strongly that demography matters because it is used to exploit fears and frighten people; because immigrants may be denied rights and resources; because low birth rates must tell us something about the societies in which we live; because we have a completely outmoded view of what it means to be old; because we are only just learning how often men and women will now choose to live, and to live together, in ways that were until very recently classed as immoral and sometimes criminal (and still are in many places); and it matters because very often demographic stories can give great hope. Who cannot be hopeful when they learn just how rare it is today to lose your baby in its first year of life, compared to just how common that was for almost all of human history, and that infant mortality rates are now improving worldwide even faster than before?

In order to think anew about demographic change in the future it is first necessary to set out the tools we will employ. In Chapter 2, therefore, we introduce some of the key measurements relating to demography, while Chapter 3 considers projections and their methodologies in more depth. These are not dry methodological chapters though. If we believe that demographic change will prove to be a vital component in our global future, and that other interventions will in turn play a critical role in shaping these demographic processes, then it is vital that we get a better idea of how we actually *describe* populations and their changes, *measure* the effect of interventions, and *present* our visions of the future. To that end, in Chapter 4 we attempt to defuse the idea of a population explosion.

In Chapter 5 we ask why so many people are now having so few children. In very recent years there has been a near collapse in global fertility rates. So why has this not drawn more media attention and what does that silence and the trend itself tell us about what is happening? Most importantly, are circumstances stopping people from having children when they might wish to, or are they freer to choose not to have children, with the result that when they do so choose, the children they have are (on average) so much healthier? In countries with almost no family planning or social welfare provision, are people having more children than they would like to simply because the

choices they have are so limited? There are so many questions to ask once you no longer consider demography as destiny.

What would a world look like in which people were actually free to have children when they wanted, not to have them if they so choose, and to live in the kinds of families or other groupings that best suited them? We know more and more people are now living alone. Is that out of choice? We need to begin to think about how a world including so many adults with no siblings will function in future. Family gatherings in two generations' time are likely to be much smaller affairs. So will friends come to matter more? And what effect will that have on the future of demography? Perhaps we should start measuring friendship rates as much as fertility rates. And how many real friends can you really have?

In Chapter 6 we take issue with the accepted wisdom that population ageing is problematic, and show how it can be looked at very differently. Do this, as we do, and we face a less cataclysmic future than the one we are usually presented with. The inverse of puberty could be defined as 'doterty'. Doterty is the age at which you start to get into your dotage, when you begin to age rapidly, mentally and/or physically. This is a stage of life that has moved forward over time, but may now occur up to a dozen or more years before death occurs.

Doterty does not necessarily mean a slow decline. Sudden deaths are quite common in the elderly, but rarely cause the distress that they can cause at younger ages. In contrast, deaths from cancer are now hardly ever sudden, and are mostly of people younger than the very elderly. Those in their dotage are not completely incapacitated, just as children are not incapacitated before puberty, but they are in a different stage of life. Is this a helpful way to begin to look at ageing differently? To no longer consider fifty, sixty or seventy as old, but being 'old' as when you begin to feel old?

How might we in future make our dotage something to look forward to, in the way that so many of us now look back on much of our childhood fondly? Until recently childhood was often a time of struggle for most children in the world. They had little power, could frequently be beaten (and abused in other ways), and were made to work long hours for little or no pay. It is possible that people in future will look back at us today and ask how we could have treated our very elderly so badly, in their dotage. There will almost certainly be many kinds of behaviour that we take for granted as normal today which will be looked back on in future as abhorrent.

In Chapter 7 we turn to migration and global economics, the most widely debated demographic issues of our time. We consider

trends in the global economy and suggest that the numbers of people moving around the world are still, when compared to the numbers who do not move, very low. We should expect more migration in future. But we should also expect a time when hostility to migration reduces, when migrants are recognized as being innovative, enthusiastic and, except in refugee camps where they are given no choice, rarely staying in places they are not actually needed. Just as most of us in affluent countries no longer worry about people having too many babies (we don't tell our friends to limit the sizes of their families), the time will come when we no longer worry about migrants coming. We will worry if they don't come.

In Chapter 8 we turn to the red meat of political demography and to where politicians and statisticians most often clash. Some politicians wish there were no demographers, as demography encourages planning, and planning (they mistakenly believe) is the road to communism. We have tried to avoid touching on the most contentious issue in demographical history until this point in the book, but it is here that we address eugenics, in both its historical and contemporary manifestations, and then look again at migration and past fertility patterns that may influence it. Throughout the book we present a series of different ways of looking at demographic statistics and introduce some less commonly known measures and concepts that we believe can be used to gain new and better insights. At the end of the chapter we explain the idea of 'net-lifetime-cohort migration' and how it relates to lemons, condoms and the pill.

In Chapter 9 we will state our beliefs with a little less subtlety and more succinctly than we have in this introduction. We have had enough of dismal demography, of a science that forgets that its object of study is us, and forgets that we can have great agency. We have spent too many hours and weeks looking at tables of numbers that treat the (tragic) death of a child as an interesting slight fluctuation in a more general trend, and divide people up by borders that were mostly created to separate the spoils of empire with little thought for those who already lived there. Demography will always be statistical and numeric, but it can become a lot less cold-hearted and careless. It can recognize when politicians are abusing a convenient scapegoat, playing on the fear of or dislike for another group. It is time for this discipline we work in and with to grow up a little as it grows a little older. Demography is about us, and our fellow children, women and men; it is not about 'them', and should not be about fear of others but about concern for all.

As the UN Millennium Declaration so clearly explains: ‘We will spare no effort to free our fellow men, women and children from the abject and dehumanizing conditions of extreme poverty, to which more than one billion of them are currently subjected.’ As a species we have come a long way in a very short time. A century and a half ago such statements would have been regarded as revolutionary and impossible to achieve because of the then prevailing Malthusian beliefs. Today they are made in the heart of the central chamber of our global politics.