



ON THE ROAD AGAIN

From origins in Africa we've conquered the world. Can modern migration really be a crisis, wonders **Debra MacKenzie**

HUMANS migrate. It is a characteristic of our species. Yet now a migration crisis is headline news. More than a million desperate people fled to Europe in 2015, and nearly 4000 died trying. The influx is increasing and about to swell more as the weather improves. The United Nations says Europe faces “an imminent humanitarian crisis, largely of its own making”. And it is not alone. The UN has also censured Australia for sending boatloads of refugees to squalid camps in other countries. And US politicians talk of building a wall while tens of thousands of lone children flee violence in Latin America across the US-Mexican border.

In January the World Economic Forum ranked large-scale refugee flows as its global risk of highest concern. When the US Council on Foreign Relations drew up its top ten priorities for conflict prevention in 2016, it included political instability in the EU due to the influx of migrants. Concerns about refugees and economic migrants are grist to the mill for those who want Britain to vote to leave the EU in June. And there’s no doubt migration will increase as the world’s economy becomes more global, and as demographic and environmental pressures bite.

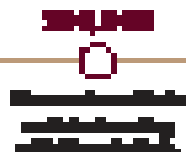
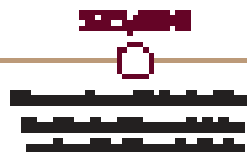
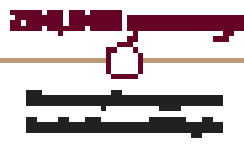
Should we be alarmed? What is the truth about migration? It is an emotive issue. But the scientific study of what happens when humans move is starting to supply some non-emotive answers. It’s showing that many widespread beliefs don’t hold up to scrutiny. “Concern about immigrants falls sharply when people are given even the most basic facts,” notes Peter Sutherland the UN Special Representative for migration. One analyst even says removing all barriers to migration would be like finding trillion dollar bills on the sidewalk.

The millions fleeing Syria have shone

ALEX MAJOLI / MAGNUMPHOTOS



A SPECIES ON THE MOVE



a spotlight on refugees, but that tragedy is just a small part of a bigger picture. More than 240 million people worldwide are international migrants. Refugees account for fewer than 10 per cent of the total and, in theory, they are the least contentious group, as many countries have signed international commitments to admit them. The rest are moving to work, or joining family members who have. When such people travel with refugees they are often derided as “just” economic migrants. This is unfair, says Alex Betts head of the Refugee Studies Centre at the University of Oxford. Whether or not they meet the official definition of a refugee, many are fleeing dire conditions that still pose a threat to their survival. Although globalisation of the world’s economy has lifted millions out of poverty, it has not been able to create enough jobs where there are people in need of work. Aid funds are starting to address this problem – but for the most part people must go where there are jobs.

That’s why some see migration as a crisis. The 2008 financial crash spawned insecurity about jobs, increasing concerns about economic migrants. Several populist parties took the opportunity to warn of a flood of freeloaders at the gates, increasing the issue’s political visibility and hardening the policies of some mainstream parties, including in the UK. The US government decided not to bail out firms that hired too many immigrants. Spain paid migrants to leave – even after they had stopped coming as jobs disappeared. And feelings of insecurity remain.

“The logic driving this is the idea that migrant workers present additional competition for scarce jobs,” says Ian Goldin at the University of Oxford. That appears reasonable. Indeed, it’s probably part of our evolved human nature to see our support system as a

↑ THE ORIGINS OF XENOPHOBIA ←

All the evidence suggests migrants boost economic growth. So why don’t we just fly people who want to work to countries where there are jobs and welcome them with open arms? Prejudices rooted in humanity’s evolutionary past may be partly to blame.

“Perceptions of competition drive a lot of our thinking and are difficult to avoid,” says Victoria Esses at the University of Western Ontario in London, Canada.

Humans think of their support systems as a zero-sum game. Such perceptions were accurate during our evolutionary history as hunter-gatherers when the appearance of others on our patch really meant fewer mastodons or mushrooms for us. If they were close relatives they might share – or at least our common genes would benefit from their success. But anyone displaying different cultural markers was likely to be a

competitor. A modern capitalist economy is not a zero-sum game – if you add more workers, it grows (see main story). Regardless of this, our evolutionary hangups make it difficult to accept the economic sense in welcoming immigrants.

That’s not all. We are instinctively wary of close contact with different groups because in our evolutionary past this helped us guard against infectious disease, according to Mark Schaller at the University of British Columbia in Canada. Separate groups of people often have different histories of exposure and acquired immunity to pathogens. A disease carried innocuously by one might devastate another, as happened to the native Americans after Europeans arrived.

Steven Neuberg at Arizona State University at Tempe notes that groups also evolve different survival-enhancing behavioural

rules. “Foreigners with different rules might interfere with the social coordination you need to do important tasks, or might get members of your group to follow their rules instead,” he says. “Chaos could emerge if your group makes decisions by consensus but theirs is authoritarian.”

Schaller and Neuberg believe that for both these reasons, human cultures evolved to be wary of close interaction with people who were different from their group.

This xenophobia persists, says Neuberg, who has found that people feel threatened by groups with different values of many kinds. Ethnic groups in modern cities often form enclaves rather than mixing randomly – which can foster strong local communities but also engenders wider mistrust. Our evolved tendencies to avoid out-groups could be making it hard to live in multicultural societies.

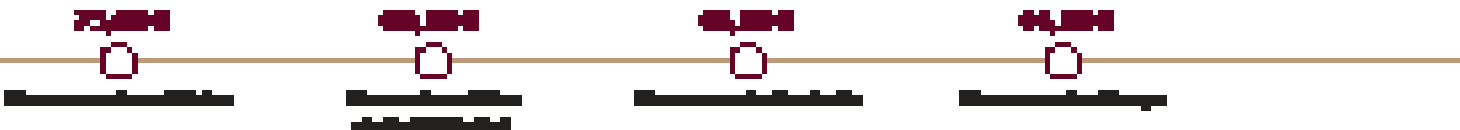
Refugees entering Europe through Greece have put the spotlight on migration ←

zero-sum game – more for you means less for me (see “The Origins of xenophobia”, above). But that’s not how modern economies work.

If an economy really were zero-sum, wages would go down as labour supply increased and natives might well lose jobs to immigrants. But no modern economic system is that simple, says Jacques Poot at the University of Waikato, New Zealand. The knock-on of economic migration is that increased labour also brings an increase in profit, which business owners can invest in more production. They can also diversify, creating opportunities for a broader range of workers. In addition, migration means workers can be more efficiently matched to demand, and make the economy more resilient by

doing jobs natives won’t or can’t do.

“More people expand the economy,” says Goldin, because people are moving from places where they cannot work productively to places where they can. In a survey of 15 European countries, the UN’s International Labour Organisation (ILO) found that for every 1 per cent increase in a country’s population caused by immigration, its GDP grew between 1.25 and 1.5 per cent. The World Bank estimates that if immigrants increased the workforces of wealthy countries by 3 per cent, that would boost world GDP by \$356 billion by 2025. And removing all barriers to migration could have a massive effect. A meta-analysis of several independent mathematical models suggests it would increase world GDP by 50 to ➤





BETTMAN/CORBIS

Millions migrated to the Americas in the 19th century, but far more stayed at home

150 per cent. “There appear to be trillion-dollar bills on the sidewalk” if we lift restrictions on emigration, says Michael Clemens at the Center for Global Development, a think-tank in Washington DC, who did the research.

But who gets those billions? Most of the extra wealth goes to migrants and to their home countries. In 2015, migrants sent home \$440 billion, two and a half times the amount those countries received in foreign aid – promoting development and jobs at home. But what do natives of countries that attract migrants get out of it?

In the EU it has been difficult to tease out the effect of free movement of workers from other economic results of membership. However, a study of non-EU member, Switzerland, is illuminating. Different parts of Switzerland allowed free access to EU workers at different times, enabling Giovanni Peri of the University of California at Davis to isolate the effects. He found that while the workforce grew by 4 per cent, there was no change in wages and employment for natives overall. Wages increased a little for more educated Swiss people, who got jobs supervising newcomers, while some less educated Swiss people were displaced into different jobs.

Peri has also looked at the situation in the US. “Data show that immigrants expand the US economy’s productive capacity, stimulate investment, and promote specialisation, which in the long run boosts productivity,” he says. “There is no evidence that immigrants crowd out US-born workers in either the short or the long run.” Natives instead capitalise on language and other skills by moving from manual jobs to better-paid positions. Peri calculates that immigration to the US between 1990 and 2007 boosted the average wage by \$5100 – a quarter of the total wage rise during that period.

Further evidence comes from a

THE RELUCTANT MIGRANT

Humans have always migrated. Our species started as African apes and now covers the planet. Tales of migration are central to our religions, our literature and our family histories. And migration is at the heart of modern life. I am a migrant. You may be too. Some 38 per cent of scientists working in the US and 33 per cent in the UK are foreign-born. Yet they may be exceptions to an ancient rule. In fact, few people migrate. And when we do, often it’s because we feel we have no other option.

Take our ancient ancestors who left Africa between 55,000 and 65,000 years ago. At the time, humans had evolved 35 different lineages of mitochondrial DNA, a stretch of genes that changes very slowly. The migrants were carrying just two of these, which with other DNA data suggests that they could have numbered as few as 1000.

The vast majority of human diversity outside Africa stems from this single migration, suggesting this small band of pioneers may not have gone far, occupying the first lands they came to in the Middle East and discouraging followers. Their descendants would then have expanded into further territories when those hunting grounds got crowded. In this way, over tens of thousands of years, humans occupied the world, moving first to Asia and Australia, then to Europe, and finally colonising the Americas.

The biggest emigration the world has ever seen is much more recent. A mass movement of people from Europe to the New World occurred between 1850 and 1910. At its peak, over 2 million people a year were relocating. Nevertheless, the vast majority chose to stay put. On average, only

5 per cent of the population of Britain – among the biggest sources of migrants – left each decade.

Today, just 3.3 per cent of the world’s people are migrants, little more than in 1990. Even within the European Union, where citizens are free to live wherever they choose, only 2.8 per cent, 14 million people, now reside outside their native country. “The idea that without controls, everyone moves, is contradicted by the evidence,” says Philippe Legrain at the London School of Economics. “Niger is next to Nigeria, Nigeria is six times richer and there are no border controls, but Niger is not depopulated. Sweden is six times richer than Romania, the EU permits free movement, but Romania is not depopulated.” Even strong economic incentives are often not enough to tempt us to leave home.

1850



Mass migration from Europe to the Americas begins.

1860



Mass migration from Europe to the Americas continues.

1870



Mass migration from Europe to the Americas continues.

1880



Mass migration from Europe to the Americas continues.

1890



Mass migration from Europe to the Americas continues.

meta-analysis Poot did in 2010, which collated all the research done to that point. It reveals that rises in a country's workforce due to foreign-born workers has only a small effect on wages, which could be positive or negative. At worst, a 1 per cent rise caused wages to fall by 0.2 per cent, mostly for earlier generations of immigrants. The impact on the availability of jobs for natives is "basically zero", he says. Any tendency for wages to fall with an increase in immigration can be counteracted by enforcing minimum wage.

Britain's Migration Advisory Committee came to a similar conclusion in 2012. "Both EU and non-EU migrants who have been in the UK for over five years are not associated with the displacement of British-born workers," it reported. Very recent migrants do have a small impact, but mainly on previous migrants. What's more, the ILO notes that low-skilled migrants do "dirty, dangerous and difficult" jobs, which locals do not want – crop picking, care work, cleaning and the like. Meanwhile, high-skilled migrants plug chronic labour shortages in sectors such as healthcare, education and IT. Nearly a third of UK doctors and 13 per cent of nurses are foreign born.

Another presumption made about migrants is that they put a strain on benefit systems. This is also not borne out by the evidence. "It is widely assumed that economic migrants are mainly poor people out to live off the tax money of the relatively rich," observes human rights expert Ian Buruma. "Most of them are not spongers. They want to work." Indeed, a lot do not go to countries offering generous benefits, but wherever there are jobs. Some 82 million people, 36 per cent of the world's migrants, have moved from one developing country to another, especially from Haiti to the Dominican Republic, Burkina Faso to Ivory Coast, Egypt to Jordan and

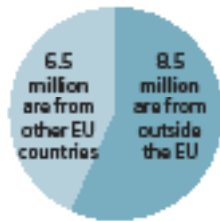
34.3 million

People in the EU are citizens of a country other than the one where they live



15 million

Workers in the EU are citizens of a country other than the one where they live



Indonesia to Malaysia.

Those that do end up in developed countries are not the burden people sometimes assume. The Organization for Economic Co-operation and Development, which represents 34 of the world's most wealthy nations, calculates that its immigrants on average pay as much in taxes as they take in benefits. Recent research shows that EU workers in the UK take less from the benefits system than native Brits do, mostly because they are

244,000,000

Total number of immigrants globally in 2015 ←

3.3%

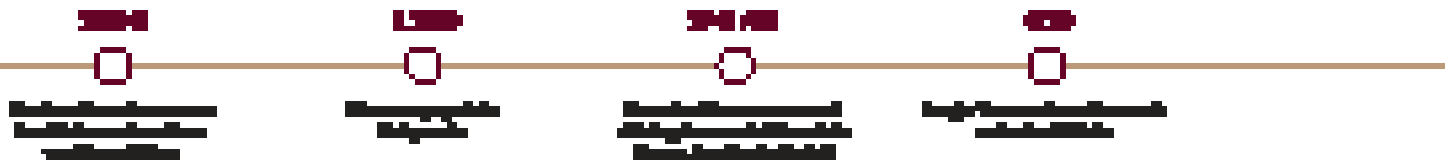
Percentage of people worldwide who are migrants ↓

younger on average. Moreover, they bring in education paid for by their native countries, and many return to their homeland before they need social security. Based on recent numbers, Britain should conservatively expect 140,000 net immigrants a year for the next 50 years. The Office for Budget Responsibility, the UK's fiscal watchdog, calculates that if that number doubled it would cut UK government debt by almost a third – while stopping immigration would up the debt by almost 50 per cent.

Illegal migrants make a surprising extra contribution, says Goldin. While many work "informally" without declaring income for taxes, those in formal work often have taxes automatically deducted from their pay cheques, but rarely claim benefits for fear of discovery. Social security paid by employers on behalf of such migrants but never claimed by them netted the US \$20 billion between 1990 and 1998, says Goldin. That, plus social security contributions by young legal migrants who will not need benefits for decades, is now keeping US social security afloat, he says.

"One of the dominant, but empirically unjustified images is of masses of people flowing in...taking away jobs, pushing up housing prices and overloading social services," writes Stephen Castles at the University of Sydney, Australia, and two colleagues in their book, *The Age of Migration*. They argue that an increase in migration is often the result rather than the cause of economic changes that harm natives – such as neo-liberal economic policies. "The overwhelming majority of research finds small to no effects of migration on employment and wages," says Douglas Nelson of Tulane University in New Orleans. "On purely economic grounds, immigration is good for everyone."

That may come as a welcome >



1995-2000

Global migration flows. Figures are in millions



2000-2005



PASSPORT TO SUCCESS?

Governments only started to control who entered their country relatively recently. Other than in wartime, pre-modern authorities worried more about people getting out. Roman and medieval laws kept peasants bound to their farms. In the 1600s, English labourers needed locally issued passes to travel for work, partly to stop them “benefits shopping” for parish poor relief. But controls were largely internal. External passports were mere requests for safe conduct, rather than restrictive documents determining where you could go, says John Torpey at the City

University of New York. This was partly because technology to identify individuals, such as photography, was not widely available until the late 19th century.

But the main reason was that an individual's nationality had little political meaning before the late 1700s. The passport as an instrument of state regulation was born of the French revolution of 1789. At first, ordinary people were issued passes to control internal movement, especially to Paris. But after the king tried to escape, and foreign aristocrats attacked the revolution, the authorities started

requiring such papers for exit and entry to the country. The revolution created one of the world's first “nation-states”, defined by the “national” identity of its people rather than its monarchs' claims. “This novel importance of the people and their nationality made identity papers integral to creating the modern state,” says Torpey.

As the idea of the nation-state spread, so did passports. But as the industrial revolution snowballed in the 19th century, there was pressure to allow free movement of all the factors of production – money, trade and labour. Passport requirements

were widely relaxed across Europe – in 1872, the British foreign secretary, Earl Granville, even wrote: “all foreigners have the unrestricted right of entrance into and residence in this country”. The situation was similar in North America.

In the early 20th century, European legal experts were divided over whether states even had the right to control people's international movements. But the nationalism that was propelling Europe towards war changed that. Among other things, it meant foreigners might be spies. Passport controls were re-applied, and never lifted again.



1848
The first passport was issued by the British government to a man named John Bull.



1872
The British foreign secretary, Earl Granville, wrote: “all foreigners have the unrestricted right of entrance into and residence in this country”.



1914
The first international passport was issued by the British government to a man named John Bull.



1920
The first international passport was issued by the British government to a man named John Bull.

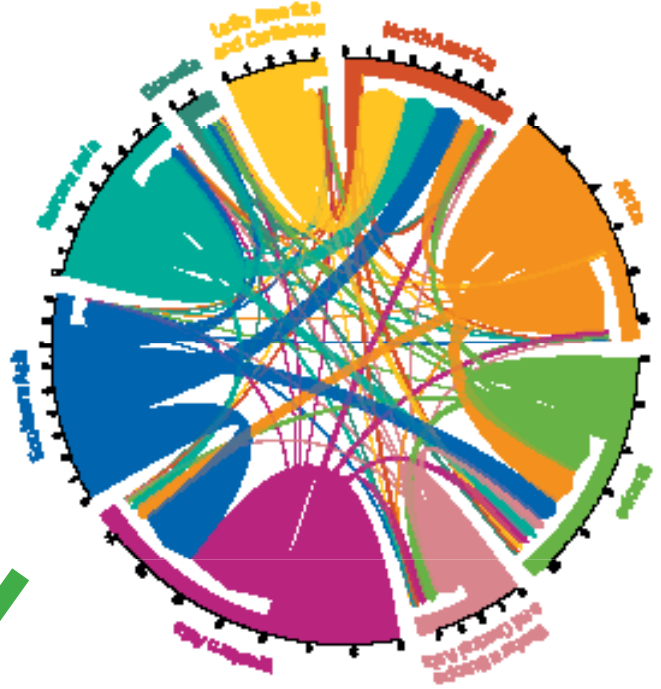
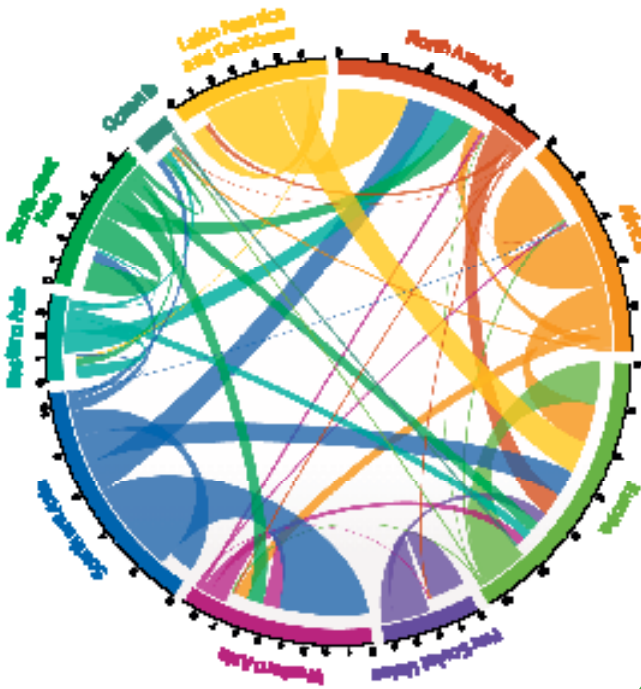


1945
The first international passport was issued by the British government to a man named John Bull.

2005-2010

2010-2015

First estimate for most recent period



GUY ABEL, ASIAN DEMOGRAPHIC RESEARCH INSTITUTE, SHANGHAI UNIVERSITY, AND VIENNA INSTITUTE OF DEMOGRAPHY, AUSTRIAN ACADEMY OF SCIENCES
[HTTP://WWW.OEAW.AC.AT/VID/DOWNLOAD/WP2016_02.PDF#PAGE=18](http://www.oeaw.ac.at/vid/download/wp2016_02.pdf#page=18)

surprise to many. But economics is not the whole story. If perceptions about jobs and wages were the only problem, you would expect anti-immigrant views to run high where jobs are scarce. Yet a 2013 study of 24 European countries found that people living in areas of high unemployment tended not to have negative views of migrants. So, what else are we worried about?

One major issue is a perceived threat to social cohesion. In particular, immigrants are often associated with crime. But here again the evidence doesn't stack up. In 2013, Brian Bell and colleagues at the London School of Economics found no change in violent crime in Britain linked either to a wave of asylum seekers in the 1990s, or eastern EU migrants after 2004. The

\$356 Billion

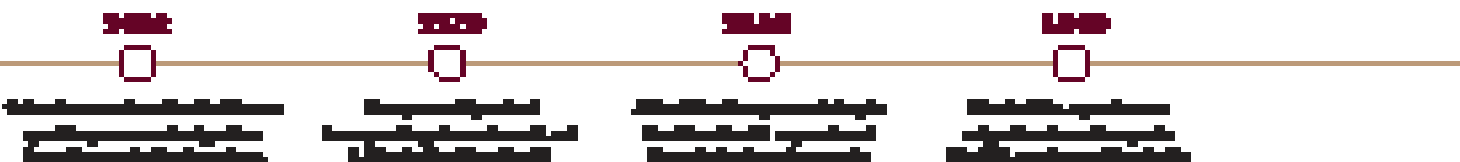
Boost to world GDP by 2025 if immigration increased workforces in high-income countries by 3 per cent

asylum seekers were associated with a small increase in property crime such as theft – boosting existing local crime rates some 2 per cent – perhaps because they were not allowed to work, suggest the authors. But areas where eastern Europeans settled had significantly less of any crime. Another study found that immigrants had no impact on crime in Italy. And immigrants in the US are much less likely to commit crimes and are imprisoned less often than native-born Americans. Tim Wadsworth of the University of Colorado has even suggested a rise in immigration in the 1990s may have driven an overall drop in US crime rates since then.

\$39-\$117 Trillion

Estimated boost to world GDP if all barriers to migration fell

Nevertheless, immigrants can put pressure on local communities. High rates of arrival can temporarily strain



AGE CONCERNS

As birth rates plummet in the developed world, migrants are keeping our economies afloat. They account for half of the increase in the US workforce since 2005, and 70 per cent in Europe. Even so, the number of people of working age supporting each retiree over 65 is falling. In 2000, this “dependency ratio” was 4 across the European Union. Today it is 3.5. And even with current levels of migration it’s set to fall to 2 by 2050.

In 2000, the UN Department of Economic and Social Affairs ran a detailed simulation to see how many immigrants would be needed to support the population over 65 in developed countries. They found that with no migration, Europe’s population is set to fall 17 per cent by 2050 – with a 30 per cent decrease in working-age people. To maintain overall numbers, the EU needs 850,000 immigrants per year – for comparison, the net migrant number from outside the EU in 2013 was 540,000. However, to keep the working age population from falling it needs nearly double that: 1.5 million a year. That would mean recent migrants and their children would account for 14 per cent of the UK population and over a third of Germany’s and Japan’s. Even then, the dependency ratio would be just over two. The US fares better – current and expected migration kept its dependency ratio at three.

“Migration might be the most relevant force to have an impact on the age distribution in Europe to 2050,” says demographer Pablo Lattes, an author of the study. Germany, which has a shortfall of 1.8 million skilled workers, is keenly aware of this. Officials have been saying quietly at international meetings that this is why they have accepted so many of Europe’s current wave of refugees. In 2000, the government tried to bring in 20,000 foreign high-tech workers, but this was met with strong opposition from the public. Germany may hope refugees will be harder for people to object to.

schools, housing and other services. “That is what people tend to see,” says Goldin. He says investment is required to mitigate these problems.

“Governments need to manage the costs, which tend to be short-term and local,” he says. That’s a challenge, but it can be done. Bryan Caplan of George Mason University in Fairfax, Virginia, points out that since the 1990s, 155 million Chinese have moved from the countryside to cities for work. “This shows it’s entirely possible to build new homes for hundreds of millions of migrants given a couple of decades.”

China may be managing the biggest mass migration in history, but there’s one problem it mostly doesn’t face. Perceived threats to national identity often top natives’ list of concerns about immigrants. It can even be an issue when such identities are relatively recent constructs. But countries with a clear ethnic identity and no recent history of significant immigration face the biggest problem, says Nelson. “It’s tricky for Sweden, which went from essentially no immigrants to 16 per

Refugees account for fewer than 10 per cent of total migrant numbers

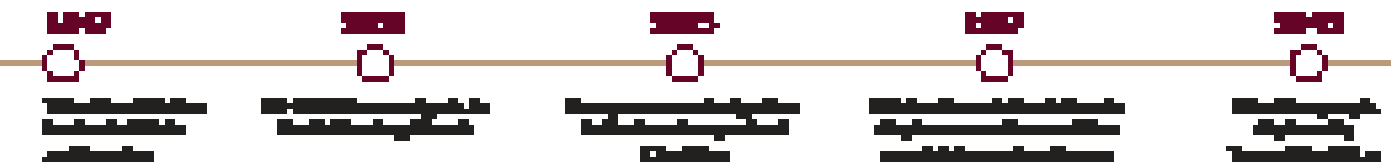


cent in half a generation,” he says. And Denmark is another nation where anxiety over the loss of cultural homogeneity has been blamed for a backlash against immigrants.

Elsewhere, there has been a hardening of attitudes. Ellie Vasta of MacQuarie University in Sydney, Australia, is trying to understand why Europe, which embraced multiculturalism in the 1970s, today calls for cohesion and nationalism, demanding that immigrants conform and testing them for “Britishness” or “Dutchness”. She blames an increasing loss of cohesion in society due to “individualising” forces from mass media to the structure of work. As people rely more on their own resources, they have a longing for community. The presence of foreigners appears to disrupt this, creating a “desire to control differences”, she says.

Research by Robert Putnam at Harvard University suggests this move away from multiculturalism could be problematic. He finds that increased diversity lowers “social capital” such as trust, cooperation and altruism. However, this can be overcome in societies that accommodate, rather than erase, diversity by creating “a new, broader sense of ‘we’”. In other words, success lies not in assimilation, but in adaptation on both sides. Canada has tried to achieve this by basing its national identity on immigration. Canadian prime minister Justin Trudeau told the World Economic Forum in Davos, Switzerland, this year that “diversity is the engine of investment. It generates creativity that enriches the world.”

This view is shared by complex systems analyst Scott Page at the University of Michigan, Ann Arbor. He argues that culturally diverse groups, from cities to research teams, consistently out-perform less diverse groups due to “cognitive diversity” –



exposure to disagreement and alternative ways of thinking. "Immigration provides a steady inflow of new ways of seeing and thinking – hence the great success of immigrants in business start-ups, science and the arts," he says. But more diversity means more complexity, and complex systems need more energy to maintain – investment in management, for example. The fact that immigrants have settled more successfully in some places than others suggests specific efforts are required to get this right. Achieving broad agreement on core goals and principles is one, says Page.

We had better learn how to manage diversity soon because it's about to skyrocket in wealthy countries. As birth rates fall, there's a growing realisation that workers from abroad will be required to take up the slack (see "Age concerns", left). In addition, the fertility of incomers remains higher than that of natives for several generations. In 2011, for the first time since mass European migration in the 19th century, more non-white than white babies were born in the US, mainly to recent Asian and Hispanic immigrants and their children. By 2050, white Americans will be a minority, says Bill Frey of the Brookings Institution in Washington DC. That's good news for the US, he adds, as it gives the country a younger workforce, and outlook, than its competitors in Europe and Japan.

Even if we finesse multiculturalism, there is a potential game changer looming on the horizon. Massive automation and use of robotics could make production less dependent on human labour. This "fourth industrial revolution" may see governments paying their citizens a guaranteed minimum wage independent of work. There has been little discussion of how this might affect a mobile global workforce. However, some warn that cheap, automated production in



S. BARBER/EVIVINE

wealthy countries could destroy export markets for poor countries. This would worsen unemployment and political instability, leading to massive migration pressure.

One way to prepare for this would be to take a more coordinated and strategic approach to the global workforce. As it is, it's hard to track migration amidst a mess of non-standardised data and incompatible rules. Countries do not agree on who is a migrant. Even the EU has no common policy or information for matching people to jobs. Migrants are usually

By doing jobs that natives won't or can't migrants make economies more resilient

managed by foreign ministries, not labour ministries that understand the job market. "What could be of real value would be for governments, companies and trade unions to get together and look at where the labour shortages are, and how they could be filled, with natives or migrants," says Michelle Leighton head of migration at the ILO.

Amazingly, says Goldin, there is no body to oversee the global movement of people. Governments belong to the International Organisation for Migration but it is not an official UN agency so it cannot set common policy. Instead, each country jealously guards its borders while competing for workers. Goldin and others think there should be a UN agency managing migration in the global interest, rather than leaving it to nations with differing interests and powers. This, combined with real empirical understanding of the impacts of migration, might finally allow humanity to capitalise on the huge positive potential of its ancient penchant for moving. ■

Debora MacKenzie is a consultant for *New Scientist* based in Brussels. See online version for links to research

4%
of the UK population were foreign citizens in 1993

8.5% →
of the UK population were foreign citizens in 2014

