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World higher education under conditions of national/global disequilibria

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Abstract

Higher education systems, institutions and disciplines, including higher education studies itself, together make an immense and growing contribution to human society, economy and culture. Yet they operate in circumstances only partly of their own making. On one hand, they are continuously affected by medium and long-term developments such as marketisation and performance management policies in the public sector, the growth of national inequalities, the expanding role of research, big data and the rise of China. On the other hand, they are shaped and often destabilised by shorter-term events such as tensions over migration, the Trump policies in the United States, Brexit in Europe, attacks on academic freedom in countries such as Hungary and Turkey, and fluctuations in national politics, where social media have introduced greater responsiveness and volatility. The paper considers in sequence the rapid worldwide rise of participation in higher education and its institutional and social effects; the concurrent rapid growth and spread of research, and the extraordinary rise of China in the physical sciences and engineering/computing; developments in economic globalisation, including the part reversal of world marketisation, global cities, and global patterns of quality and inequality; the growing tensions in some countries in relation to migration; and political populism and the associated attacks from some quarters against universities and science. Notwithstanding the last set of problems, universities remain relatively resilient, perhaps more so than democratic politics. The final sections reflect on implications for research and scholarship in higher education studies.

* This paper is a revised version of a keynote lecture at the annual conference of the Consortium of Higher Education Researchers (CHER), Higher School of Economics, Moscow, 30 August 2018

Introduction

Higher education systems, institutions and disciplines, including higher education studies itself, together make an immense and growing contribution to human society, economy and culture. Yet they operate in circumstances only partly of their own making. Higher education in Europe and beyond is closely engaged in nation-states and also deeply implicated in international relations and global society. It is continuously affected on one hand by medium and longer term developments such as marketisation and performance management policies in the public sector, the growth of national inequalities, the expanding role of research, big data and the rise of China; and on the other hand by shorter-term events such as tensions over migration, Trump, Brexit, attacks on academic freedom in Hungary and Turkey, and fluctuations in the role of social media in national politics.

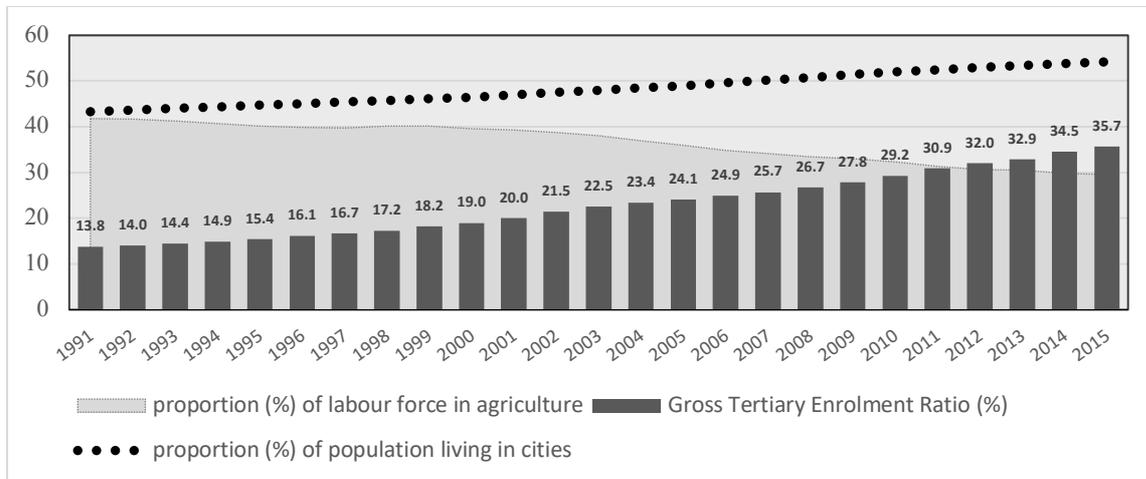
This paper reflects on the social and economic roles of higher education and the associated research, their present condition of national/global disequilibria, and some implications for research and scholarship in the field of higher education studies. It is a birds-eye view of the sector and its context and the tendencies in that setting.

Inevitably, given its ambitious stretch across the world, the paper is limited and rather schematic; every section would benefit from greater length and depth of treatment.

The world-wide growth of participation

From 1995 to 2015 the world Gross Tertiary Enrolment Ratio (GTER), as measured by the United Nations Educational Social and Cultural Organisation's Institute of Statistics, rose from 16 to 36 per cent, with four fifths of the 216 million tertiary students enrolled in full degree programmes. In 60 education systems the GTER now exceeds half of the school leaver age cohort (UNESCO, 2018). The quality of mass higher education and rates of completion vary by country. In the poorest 30 per cent of systems in sub-Saharan Africa and South Asia participation is very low. In many other systems, not all of those people who are captured in the participation data actually attend classes, or learn. Nevertheless, overall we are experiencing a great growth of educated 'capability', to use Amartya Sen's term, an expansion of the higher educated proportion of the global population that is unprecedented in history. This is changing the lives of many millions. It is changing the world forever.

Figure 1. Worldwide Gross Tertiary Enrolment Ratio (%), compared to proportion of people living in cities (%) and proportion of labour in agriculture (%), 1991-2015



Source: Author, from data in World Bank (2018), UNESCO (2018).

In some measure, the Kantian ideal of the European Enlightenment that underpins the university form – the ideal of self-forming students, immersed in knowledge, whose learning prepares them for participation in a rational public culture and the continuous improvement of society (Kivela, 2012; Marginson, 2018a) – has been brought within the reach of most people in Europe. If participation continues to grow at the present rate, in another generation, half of all young people across the world will enter degree programmes.

In the book *High Participation Systems of Higher Education*, released on 18 October 2018, the three editors and 13 other chapter authors draw out the implications of this great growth of participation for higher education and the larger world in which it sits (Cantwell, Marginson and Smolentseva, 2018). The book reviews Martin Trow’s (1973) study of the passage from elite to mass to universal higher education on a multiple country basis, and considers the implications of advanced levels of participation for higher education governance, diversity of institutional mission, the stratification of systems, and social equity. It also opens but does not close the question of the emerging ‘high participation society’.

What were the overall findings of the book? In brief, in high participation systems (HPS), those where over 50 per cent of the school leaver age cohort is enrolled, governance is more corporate in character and increasingly preoccupied with multi-level coordination. In relation to horizontal institutional diversity, the large multi-purpose university is more dominant as an institutional form, and on the whole there is less diversity of institutional type (less specialist institutions, and less non-university institutions) but more diversity within institutions. In relation to vertical stratification in systems in terms of resources and status, there is an evident trend to

greater vertical stratification as they grow, especially in countries that foster competition between institutions, with World-Class Universities peeling away from the rest. In relation to equity, while national systems have become more socially inclusive at the point of entry, equal social access to elite universities has become harder to achieve. Further, the price of non-participation has increased. The social position of those young people who do *not* enrol in higher or tertiary education has worsened.

Of course, there are important national variations. *High Participation Systems of Higher Education* finds that Norway and Finland have been less caught up in the secular tendencies to greater stratification and inequity. This is not only because policy in those national systems is less neo-liberal in character but because government has succeeded in partly cushioning the secular tendencies to Bourdieuan bifurcation that are triggered by enrolment growth itself. Determined efforts are made to ensure that all universities are equivalent in social value.

On the key question of the drivers of the growth of higher education, *High Participation Systems of Higher Education* disagrees with the 'common sense' assumption that growth is driven by government policy, more or less in response to rising economic demand for skilled labour. This illusion is generated by the human capital theory narrative.

The book notes that accelerated enrolment growth is taking place in countries with the full range of rates of economic growth, providing the country has achieved a threshold level of development – roughly \$5000 per capita GDP – that is sufficient to fund the infrastructure of higher education. Accelerated enrolment growth is also taking place in economies with varying configurations of industry and ratios of services to manufacturing, with a wide range of industry specialisms. The only industry configuration not associated with the accelerated growth of participation is an economy dominated by traditional village agriculture. Rather than being correlated to changes in the economy, the growth of participation is tracked to modernisation and development, especially urbanisation (the growth in the proportion of the population living in cities) and the growth of the urban middle classes (Figure 1). Between 1960 and 2017 the share of world population living in cities rose from 34 to 55 per cent (Table 1, World Bank, 2018). This is the foundation of the growth of higher education.

Why the universal tendency for urban populations to grow the demand for higher education? Here the book agrees with Martin Trow. The longer-term drivers of growth in higher education are social rather than economic. Once there are enough middle-class families who can support higher education through taxation and/or tuition, its growth is self-perpetuating. The more the proportion of the middle class enrolled in higher education increases, the more necessary it is for the remaining families to participate. The penalties of non-participation grow. The effect is magnified in cities. Economies of scale are maximised in cities, while the

participation of each family is obvious to all, and aspirations for higher education spread down through the class structure. The political pressures to further expand participation are concentrated and are difficult for any government to resist.

Table 1. Proportion of people living in urban areas, by world region: 1960 and 2017

| Region | 1960 % | 2017 % |
|----------------------------------|-------------------|-------------------|
| North America | 70 | 82 |
| Latin American and the Caribbean | 49 | 80 |
| Europe and Central Asia | 55 | 71 |
| Middle East and North Africa | 35 | 65 |
| East Asia and the Pacific | 22 | 58 |
| Sub-Saharan Africa | 15 | 39 |
| South Asia | 17 | 34 |
| WORLD | 34 | 55 |

Source: From World Bank (2018)

Once the dynamic of growth of participation becomes self-perpetuating, governments tend to follow rather than lead popular demand. It seems that in all types of political system except the most repressive, governments never reverse the expansion in the participation rate, certainly not for long and never in the medium and longer term. This is not a rational response to fluctuations in economic need. This is a political response to social demand, and in the higher education sector social demand never contracts, it only expands.

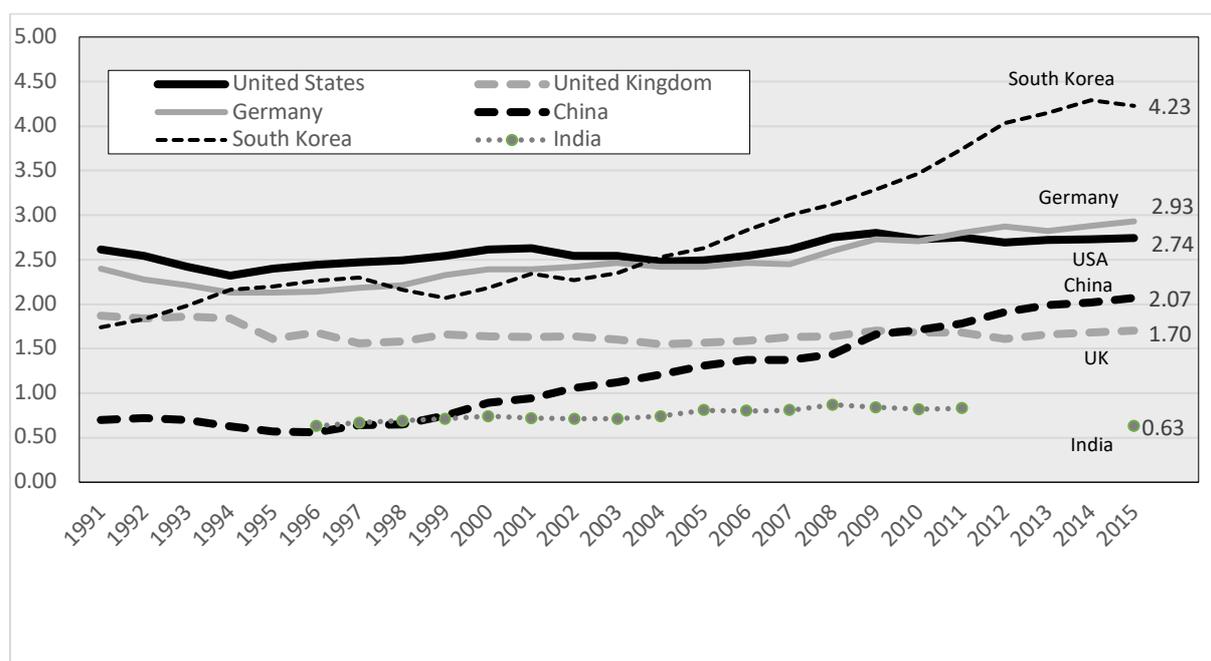
Research and the rise of China

The 1990s Internet established a dominant world system of English-language journals. Global science. In most countries outside the US most science-based innovations are sourced from global not national science. Together with the growth of knowledge-based industry, this has made it essential to develop national scientific capacity. To access global science, nations need their own trained people, not just users but producers of research who interact with researchers abroad. Most middle-income countries now want their own science system, and see large multi-disciplinary universities as optimal for housing research and facilitating the cross-border circulation of knowledge and people essential to science.

Hence alongside the expansion in student enrolment since the mid 1990s there has been equally rapid growth in investment in R&D, part of it centred on research universities, and in the stock of published knowledge. Figure 2 details R&D trends and Figure 3 the expansion in published science in East Asia. Between 1990 and

2015 US research spending tripled in real terms. China grew R&D from \$13 billion to \$409 billion between 1995 and 2015, moving close to the US. Between 1991 and 2015 China's R&D as a share of GDP rose from 0.72 to 2.07 per cent, Korea's from 1.83 to 4.23 per cent. East Asia now spends much more on research than Europe/UK and more than North America. In 2003-2016 total world output of science papers, mostly by university researchers and many fed into knowledge-intensive industries, rose from 1.2 to 2.3 million, 93 per cent in 13 years (NSB, 2018).

Figure 2. Investment in R&D as a proportion (%) of GDP, United States, United Kingdom, Germany, China, South Korea, India: 1991-2015



There are series breaks for India, with no data for 2012-2014 inclusive.

Source: Author, using data drawn from NSB (2018), Table A4-12.

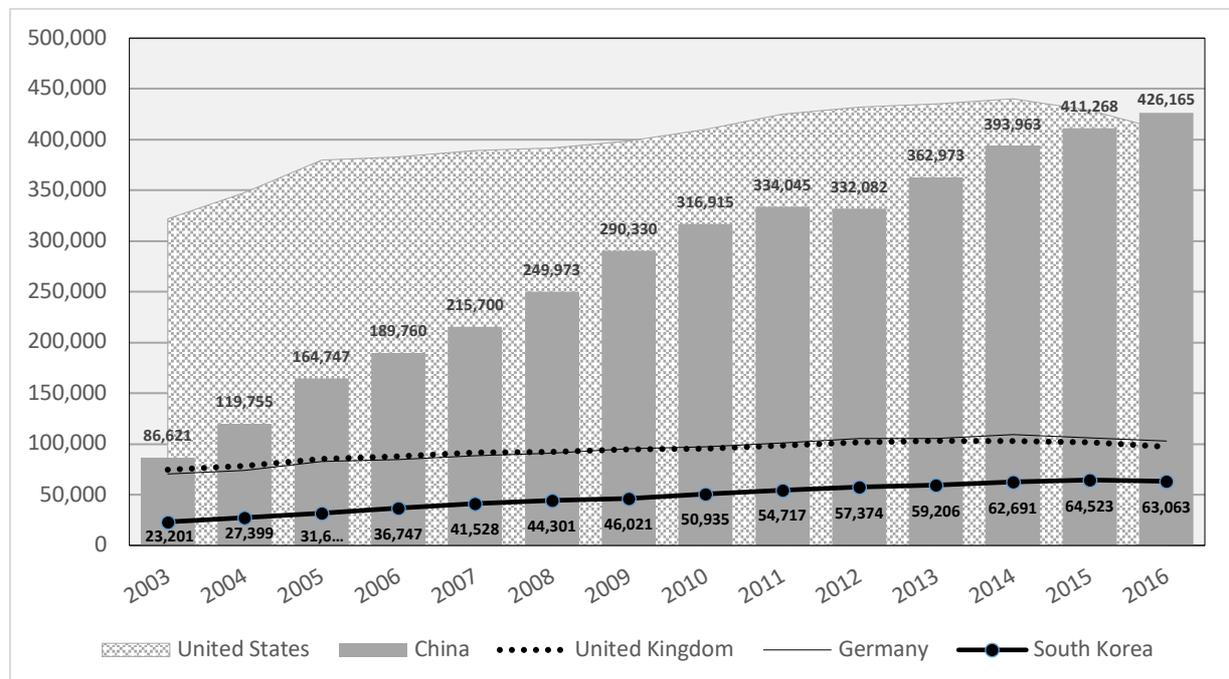
The rise of China in research is greater than Figure 3 suggests. An NBER paper by Xie and Freeman (2018) finds that when papers by researchers with Chinese names in Europe or US are added to those from China, including collaborative papers with a weighted allocation based on shares, China's total of all Scopus papers rises from 18 to 23 per cent in 2016.

However, when all papers with at least one Chinese address or name are included, without weighting on the basis of shares, China was associated with almost 35 per cent of global science in 2016 (Figure 4). In addition, there was a large volume of science published in 4216 Chinese language journals within China in 2017. Only 329 of these journals were listed in Scopus. The authors conclude that when the full set of material published in Putonghua is added, people with Chinese names are associated with about 45 per cent of global science. That last figure is too high

because not all work in languages other than English and Chinese has been included in the calculation. But is impossible to disagree that China now has ‘a huge role in developing the knowledge-based economy’ (Xie and Freeman, 2018, p. 9).

How did China manage to expand research science like this in a one-party Leninist state in which party secretaries sit alongside academic leaders at every level? Where American or European forms of academic freedom are absent? Won’t science in China hit a ‘glass ceiling’ as some of our colleagues in higher education studies have suggested? Probably not. Posing the issue this way indicates a failure to grasp China’s political culture and its implications in universities. The Anglo-American split between state and society does not apply in China.

Figure 3. Annual number of published science papers, 2003-2016; United States, China, Germany, United Kingdom, South Korea



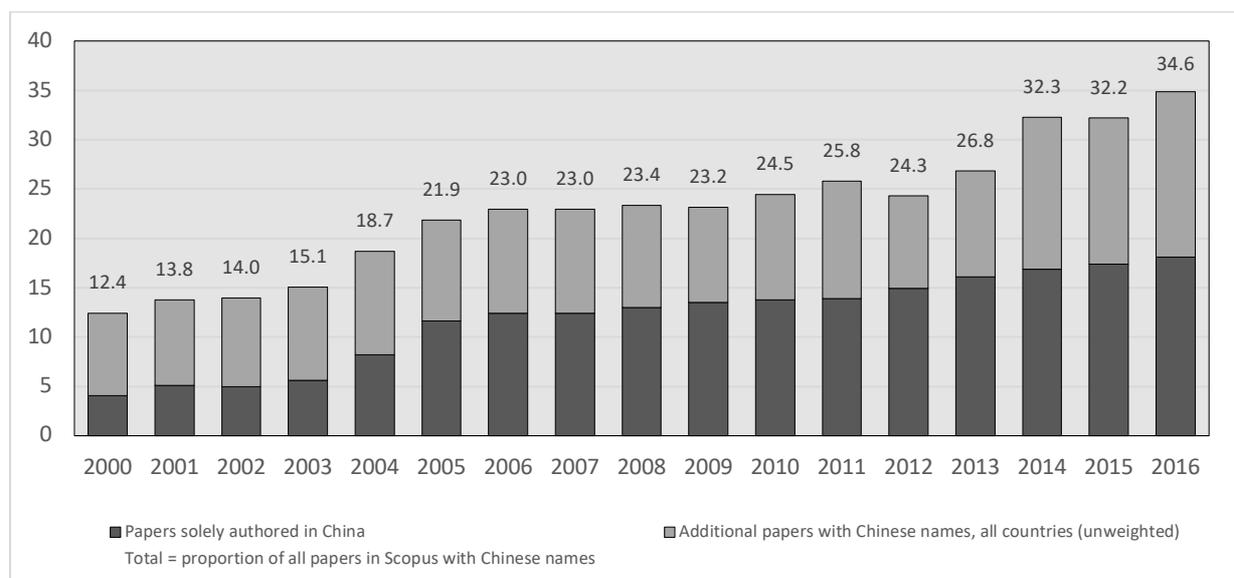
Source: Prepared by author on the basis of data from NSB (2018), Appendix Table 5-27. Original data from Scopus. Inclusion of papers for the most recent years 2015 and 2016 appears incomplete. It is likely in future compilations the number of papers for those years will increase for all countries.

China has its own long tradition of academic freedom. No scholars anywhere like being told what to do by either government or managers. But in China’s tradition, independent-minded scholars see responsible service to the state and nation as their highest duty (Zha, 2011).[†] Further, since the Song dynasty a thousand years ago, China has been able to couple central control with forms of governance that are devolved to an advanced level.

[†] ‘Once one can excel in terms of productivity and meet the State’s criteria for producing valuable and useful knowledge, one may enjoy a high level of intellectual authority. This type of intellectual authority is not identical with academic freedom in the Western context, but in some ways it provides

Under Deng Xiao-Ping from 1978 onwards, China pursued extensive site-based economic decentralisation, unleashing the capitalist entrepreneurial dynamic within the party and so keeping it under full political control, while progressively opening up the economy to foreign engagement. The clues to the successful development of Chinese science lie in the parallel reforms in the universities. These are detailed in the biography of Deng by Harvard China scholar Ezra Vogel (2011), which is strongly recommended.

Figure 4. Growth of China-associated science papers, proportion (%) of total worldwide papers in Scopus: 2000-2016



Source: Xie and Freeman, 2018

Vogel outlines the first stage reforms in higher education and science. Deng saw new knowledge, created in China, as the key to improving China’s comparative position in all domains: the military, industry and agriculture. He emphasised basic, academically-controlled research and reversed the politicisation of Peking and Tsinghua Universities which had taken place under Mao. ‘Better expert than red’, said Deng, upending the Maoist formula. If scientists were loyal to the country, that was enough. They should be able to do their best work without interference. A merit-based approach was largely implemented. Deng also wanted to create an independent research unit in social science. There he was less successful. The party could not give up its monopoly in cultural and policy matters.

even more flexibility and greater power than does academic freedom. There is certainly some overlap between these two concepts, yet clearly a different emphasis. Westerners focus on restrictions to freedom of choice, whereas Chinese scholars looking at the same situation focus on the responsibility of the person in authority to use their power wisely in the collective interest’ (Zha, 2011, p. 464).

In China's centralised regime Deng's formula for managed decentralisation in higher education was implemented rapidly and in full. This still patterns Chinese universities. In science the Chinese universities today are similar to the American universities they seek to emulate, with parallel academic practices, though there is more direct government interference in decisions about research in China than is the case in the US or Western European countries. Importantly also, China did not develop an American civil society populated by public intellectuals. Faculty lack ease of access to the public sphere and the size of that public sphere in China fluctuates sharply between liberality and repression. Nevertheless, in the period under Deng and since, China has sustained considerable discussion and debate inside the party-state; and from time to time the internal debate has included vigorous criticisms of policy by faculty in national universities. China's universities are seen as an autonomous part of government (the criticism is inner rather than public), much as was the case for scholars and national academies under the Imperial dynasties.

In recent months the potential for re-politicisation and enforced conformity in Chinese universities has re-emerged. There is also growing surveillance of the civil population; and the party-state surveillance of the Internet blocks full global openness in universities. Nevertheless, at this stage the Deng policy on universities is still largely in place, especially in the global realm. China's universities still deal freely and openly with foreigners. China continues to use international benchmarking as a principal tool for lifting quality.

China remains well behind the United States in its share of the world's peak science, the top 1 per cent papers by citation rate (Leydesdorff, Wagner and Bornmann, 2014), especially in life science and medicine. Nevertheless, the gaps between the US, and both China and Europe, are decreasing, especially in the physical sciences and STEM disciplines. In this discipline cluster, China's Tsinghua is arguably now the world's leading university. In terms of the total number of STEM papers in the top 10 per cent of their field, Tsinghua is way ahead of MIT and Berkeley in the US. In terms of the number of papers in the top 1 per cent of their field, Tsinghua is the clear world leader in maths and computing, though it follows MIT, Stanford, Berkeley and Harvard in engineering and physics/chemistry. Singapore's Nanyang is just behind Tsinghua in top 1 per cent papers in engineering and physics/chemistry. Cambridge, top of the table in Europe, is next (Leiden University, 2018).

China's practice of openness and internationalisation are the main lesson for Russian policy. Despite much talk about global benchmarking and rankings the Russian government has failed to effectively encourage faculty participation in global intellectual conversation. Rates of international collaboration are poor and science production in English has stagnated. As a result, Russian universities continue to perform badly by global standards but more importantly, Russian intellectual life lacks the full stimulus of the global disciplines.

So far, all the stories have been positive – the expanding role of higher education, the growth of access, the growth of research, and the emergence of a more plural set of players in global science: linear progress at a rapid rate. However, the context of higher education is more unstable and troubled than this suggests. In Europe and English-speaking countries, the downsides of economic globalisation have become more obvious. Tensions over inequality and mobility have increased. This is trouble for higher education and research.

Economic globalisation

‘Globalisation’ (pertaining to the world), like ‘internationalisation’ (between nations) is most usefully understood in spatial and neutral terms. Simply, globalisation is the tendency to convergence and integration across national borders. David Held and colleagues (1999) classically defined globalisation as ‘the widening, intensifying, speeding up and growing impact of worldwide interconnectedness’. For example, given the worldwide science system in which knowledge spreads instantly, the period of time a company can profit from an innovation has now shrunk. Practical research findings, and the associated products, have shorter life cycles. This helps to explain the accelerated investment in science and in turn contributes to the shortening turnover time of capital overall. Likewise, knowledge, data and organisational models in higher education now spread across borders very rapidly, and every university is visible to every other. This feeds into a complex pattern of isomorphism and path-dependency in which both governments and institutions are active agents.

Of course, in the economic sphere, globalisation is anything but neutral in content. The main beneficiary of the globalisation of production and trade, and the associated economic growth, has been private capital (Bourguignon, 2015, p. 84). In the last three and a half decades economic globalisation in Europe and America has mostly taken the form of neoliberal globalisation. It has been closely joined not only to world market formation and enhanced competition, but also financial deregulation, pro-business taxation and workplace regimes, and worsening of inequality inside countries. The technological, communicative and cultural globalisation which has accompanied economic globalisation has spread its benefits more broadly, and encouraged the growth of global society; though here too there have been downsides. For example, in higher education and research cultural globalisation has fostered global homogeneity, sidelined work outside the English language and weakened cultural diversity. At the same time, as discussed below, economic globalisation has led to greater equality between countries; and some emerging countries like China have benefitted holistically from it, using open capital flows and accelerated economic development to strengthen both average living standards and geo-political position.

But whether in positive or negative guise, economic globalisation has fundamentally transformed the landscape in which higher education sits. Consider the rise of global cities and the changing map of industry worldwide. Consider also the contribution of economic globalisation to inequality within many countries (though globalisation is not the only driver of in-country inequality), the associated migration resistance in some countries (though migration problems also have other causes), and the rise of political populism. The upsurge of populism too has broader roots, but now threatens to catch 'pro-global' cosmopolitan universities and science in its grip. Each of these emergent tendencies is now discussed.

Global cities

First, globalisation has fostered global cities on a world-wide scale (Sassen, 2001). Financialised cities are not just associated with global capitalism but are its 'constitutive element', the core of economic organisation and capital accumulation, 'the dominant socio-spatial formation on the planet', as Ugo Rossi put it in a recent book (Rossi, 2017, p. 2 and p. 19). Leading cities, the nodes of the global network, the hubs of global exchange and global supply chains, continually feed each other with capital, people and ideas. This autonomous network of cities has a logic that often overshadows the tenuous, more cumbersome relations between separated nation-states. The potent spatiality of global cities is mirrored in the network of global research universities, which like the cities in which most of them are housed, draw energy simultaneously from their locality and their global connections.

Currently 55 per cent of the world's population lives in cities (Table 1). The United Nations estimates there will be 68 per cent by 2050. This year there are 33 megacities with over 10 million people. By 2030 there will be 43 such cities. In 2013 China announced plans to move another 250 million people from the countryside to the cities. It is developing 13 multi-centre megalopolises of adjacent cities. It will become 80 per cent urban (Reuters, 2018a; Rossi, 2017, p. 64, p. 86). But not all cities are global cities and in spatial terms, capitalism is a zero-sum game. Capitalist globalisation makes steep hierarchies. Global cities voted for Clinton and rejected Brexit. Those same global cities empty out value and people from medium sized cities, many of them once provincial leaders that have now been turned into rust-belt, and the smaller towns. These zones, the subaltern urban precincts, like their rural hinterlands often voted for Donald Trump, and for Brexit, and for Marine Le Pen.

Changes in industry

Second, technological innovation and economic globalisation have together remade the global map of industry. Factory and routine office work accounted for almost half of all jobs in the United States in 1980. In 2016 that proportion had shrunk to 15 per cent (Mead, 2018, p. 16). Offshoring is only one part of this trend. Offshoring is

variously calculated to have eliminated between 8 and 15 per cent of US manufacturing jobs (e.g. see Ingleheart, 2018, p. 16). Technological change, accelerated by globalisation, has been a larger factor. Francois Bourguignon argues that ‘the problem is less “offshoring” than the closing of units or lines of production that have become uncompetitive, and the creation of new economic activities in countries with low labour costs’ (Bourguignon, 2015, p. 81).

In the last decade economic globalisation has shifted fundamentally again. Since the 2008 recession began cross-border financial flows have dropped from 23 per cent of global GDP to 6 per cent. Between 1986 and 2008 total global trade grew at twice the pace of global GDP; but since 2008 global trade in goods has scarcely kept pace with GDP, and the G-20 countries have implemented more than 6600 protectionist measures. Asia’s proportion of global goods trade is advancing rapidly (Lund and Tyson, 2018, pp. 130-133). The profitability of American and European multinationals has declined, compared to nation-centred companies, except in the tech sector. The proportion of production in cross-border supply chains has levelled off (The Economist, 2017). Automation means that the labour cost gains from offshoring have diminished. It is doubtful that emerging countries in Africa and Asia will be able to follow the path of Korea and China by moving tens of millions of workers out of low-productivity agriculture and into modest wage higher productivity manufacturing. That window may have closed (Lund and Tyson, 2018, pp. 137-138).

The new economic globalisation is driven by digital technology, which brings in many more actors than cross-border supply chains. It is often led by China and other emerging economies. By 2020 cross-border commerce will reach one billion customers. Estonia, with only 1.3 million people but the home of Skype and other start-ups, is a giant of the Internet era, one of the fastest growing EU economies (Lund and Tyson, 2018, p. 130, p. 133).

Table 2. Trends in global income inequality, as measured by the Theil Index: 1990-2010

A decline in the Theil index means that inequality has *reduced*

| | 1990 | 1995 | 2000 | 2005 | 2010 |
|------------------------------|-------|-------|-------|-------|-------|
| Global inequality | 0.949 | 0.918 | 0.903 | 0.827 | 0.723 |
| Inequality between countries | 0.734 | 0.696 | 0.681 | 0.600 | 0.479 |
| Inequality within countries | 0.215 | 0.222 | 0.222 | 0.227 | 0.244 |

Source: Bourguignon, 2015, p. 42

Global income inequality

Third, economic globalisation is causally linked to growing income inequality in most countries. However, the story of globalisation and inequality is two-faced.

The data show that there has been a clear increase in *income inequality within most countries* and the expansion of social mobility has stalled in the most wealthy countries (Piketty, 2014; Inman, 2018). China and parts of Europe are exceptions, but overall there has been a sharp deterioration in the share of income going to households, and high-end salaries have rocketed up, especially in the US, where inequality is now at its highest level since World War I, and in the UK and Russia. The shift to wealth and capital would be more obvious if all undeclared wealth was included in the calculation. Yet at the same time there has been a pronounced reduction in *inequality between countries*. This is primarily due to over three decades of high economic growth in the most populous nation, China (Bourguignon, 2015). There have also been gains in countries in East and Southeast Asia, India, and Latin America including Brazil. Inequality in most nations in sub-Saharan Africa, and parts of Latin America and South Asia, has not improved (Popov and Jomo, 2017).

Greater equality between countries, greater inequality within countries. The Theil index, which functions like the Gini coefficient, summarises both trends. First it looks at global equality overall. Between 1990 and 2015 the accelerated modernisation triggered by global capitalism has netted out as a substantial increase in equality between persons at the worldwide level (Table 2). The proportion of people living on \$1.25 US a day in 2005 prices has dropped by half (Bourguignon, 2015, p. 28). This is positive and important. Second, the Theil index breaks down global inequality by domain. As you can see, it confirms the stark difference between the inter-country trend and the inner-country trend. There has been a very considerable decrease in inequality between countries but 20 per cent of the rise in global equality has been lost because of the regressive tendency within countries (p. 38).

How do we explain the double trend, working in opposing directions? Is it a paradox? Not really. It is a natural result of global economic convergence and integration. In the more integrated economy, separated exogenous relations become more endogenous and there is homogenisation overall. Incomes to capital and top salaries in the higher income countries tend to converge with elite incomes in the emerging countries, partly closing the gap in average incomes. Likewise, workers' incomes tend to converge, rising in the emerging countries, flat or falling, or morphing into unemployment, in the higher income countries. This feeds the growth in inequality and job insecurity in the higher income countries.

At the same time, global trade and financial flows are only one driver of in-country inequality. Most OECD countries have seen a sharp fall in taxes on high income earners, and declining company tax rates to attract capital and head off capital flight – albeit justified on the basis of global economic competition - super-profits in finance

sectors, declining union power and the partial deregulation of working conditions and wages. Technological change is another factor, though among economists there is no consensus on its effects on inequality. Similar technologies are associated with outcomes that differ between countries.

China has not shared the trend to growing inequality in most countries. In a recent blog World Bank inequality expert Branko Milanovic (2018) compares China's income distribution in 2002-03 and 2013. The data confirm the rapid rise in average income: 'the average annual inflation-adjusted growth rate was 9.3 per cent'. The highest growth rate occurred not at the top end of the income distribution as in the United States (Saez, 2013) and most OECD countries but between the 30th and the 60th percentile. Income growth was skewed to the lower end of the distribution, being greater at the 10th percentile than the 90th percentile, though there was higher growth at the 99th percentile. Likewise, Kanbur, Wang and Zhang (2017) find that in the 1990s income inequality increased in China – as often happens in emerging countries when there is a large movement from rural areas to the cities – but in the second half of the 2000s the tendency reversed. Inequality is now declining. China's Gini-coefficient is falling, though it remains very high in world terms, in part because of the rural/urban gap. The authors cite improved social benefits and wages in rural areas (mass migration to the cities has led to tightening rural labour markets) as well as growth in low to medium wage jobs in cities. Both studies are based on large-scale household income surveys.

What are the prospects of a reversal of the trend to greater inequality within countries, in the English-speaking world, Europe and Russia? It seems that in these nations no government has the stomach to tackle taxation, wage fixing and social spending policies on the scale required; and given that the wealthy and corporations have mostly captured politics (Stiglitz, 2013), perhaps few governments have the power to do so. As Thomas Piketty points out in *Capital in the Twenty-first Century* (2014), in the twentieth century it took a depression and two world wars to pave the way for policies and outcomes that fostered equalisation and social democracy (see also Runciman, 2018). That is a terrible price. Is there an alternative, another condition in which to bring down inequality? This very much matters for research universities, which in the eyes of many are positioned on the wrong side of the growing gap between the top 5 per cent of income recipients and the rest.

Table 3. Internationally mobile or foreign doctoral students as a proportion (%) of all doctoral students in 2015, OECD systems, Brazil and Russian Federation, compared to number of ARWU top 500 universities in each country in 2018 (number of top 500 universities in brackets)

| Country | Proportion international or foreign % | Country | Proportion international or foreign % | Country | Proportion international or foreign % |
|------------------|---------------------------------------|---------------------|---------------------------------------|-----------------|---------------------------------------|
| Luxembourg (0) | 87.0 | Austria (6) | 27.0 | Slovak R.* (0) | 9.1 |
| Switzerland (8) | 54.3 | <i>OECD average</i> | 25.7 | Latvia (0) | 8.8 |
| New Zealand (4) | 46.2 | Ireland (4) | 25.4 | S. Korea* (10) | 8.7 |
| UK (39) | 42.9 | Canada (18) | 24.4 | Slovenia (1) | 8.5 |
| Belgium (7) | 42.3 | Brazil* (6) | 22.4 | Chile (2) | 8.4 |
| France (19) | 40.1 | Portugal (4) | 21.2 | Hungary (0) | 7.2 |
| USA (139) | 37.8 | Norway (3) | 20.5 | Turkey* (1) | 6.5 |
| Netherlands (11) | 36.2 | Finland (4) | 19.9 | Israel* (6) | 5.5 |
| Sweden (11) | 34.0 | Japan (16) | 18.2 | Russian F.* (4) | 4.5 |
| Australia (23) | 33.8 | Czech R.* (1) | 14.8 | Mexico (1) | 2.6 |
| Denmark (5) | 32.1 | Estonia (1) | 10.7 | Poland (2) | 1.9 |
| Iceland (0) | 31.6 | Germany (36) | 9.1 | | |

* Indicates foreign citizen students (including long-term residents) and not just internationally mobile students

Source: Author using data from OECD (2017), p. 300; ARWU (2018)

Tensions around migration

Fourth, the downsides of globalisation are feeding into growing conflicts over migration. Migration politics always have the potential to be difficult. There is an inherent global/national tension in this domain. There is a fundamental conflict between the right to cross borders, and the right to control those borders. It must be emphasised that migration is inevitable; in the last forty years annual worldwide migration has tripled; and despite the slowdown in the UK and the USA, in most countries it remains strong and often, increasing. The inherent conflict is usually resolved pragmatically. However, once migration debate shifts from questions of economic policy or humanism to questions of blood and soil identity and the rights of occupants, the global/national tension cannot be resolved pragmatically.

The two parties are in different worlds. Would-be migrants think globally. Their horizon of comparison is not their own elite but persons living in more affluent and stable countries, whether recognisably elite or not. Those opposing migration on the basis of blood and soil identity refuse all global imaginings. When global/national tensions take this form within a country, internationalised universities, seen as hotbeds of cosmopolitanism, are vulnerable.

Global/national tensions over migration can do much damage to higher education and in some countries, they already have. This should not be overstated. Most countries continue to value international student flows. Though national systems vary in the extent to which research is internationalised (Table 3), research universities, especially, depend on relatively free flows of doctoral students and faculty talent. However, the US has banned Muslims from several countries, driving down the total growth of international students. The Netherlands is becoming nervous about foreign students. Denmark recently announced that numbers would be reduced. The UK, which has introduced more than 5700 changes to the immigration rules, and doubled the total length of those rules, since 2010 (Barr and McIntyre, 2018), now makes it almost impossible for international graduates to gain post-study work visas. Brexit is the outcome of migration-resistance in the UK, and it has already harmed higher education by triggering the early exit of EU-citizen staff. In 2016-17, 42 per cent of all doctoral students in UK were non-UK citizens. At Oxford, Cambridge and Imperial more than 20 per cent of doctoral students were non-UK EU citizens and over half of all doctoral students were non-UK (HESA, 2018). Catastrophe awaits after Brexit next March.

Populist politics and higher education

Fifth, there is the destabilisation of representative democracy in the US and Europe, which is partly conditioned by economic and cultural globalisation. Once politics is awry, higher education and science are destabilised along with the rest. The problem is largely confined to the Atlantic countries and the European zone, including Russia. There is less change in Asia and Latin America, though nativism is one tool of national rule in India and China.

The rise in support for populist authoritarian parties over the last three decades roughly matches the rise in inequality, though the correlation is not perfect. What makes populism more dangerous is the concurrent shift in the communicative framework of politics. Social media are displacing other forms of political activity. Social media are not only a means of manipulating voting on a large scale, but an attractive alternative to the hard slog of participating in political parties and election campaigns. Parties, traditionally the site where different currents of thought became filtered over time and composite positions developed in coalition fashion, are morphing into movement style formations where the leader's word is law. The politics of performance, the emotions shared with thousands, the immediate gratification and the sense of belonging: it all detaches voters from institution-based forms of representative democracy (Runciman, 2018). Has the Twitter world negated the Kantian public space in which university experts pursue reasoned policy argument? It certainly makes the role of expertise more difficult to sustain.

Populist leaders do not develop, sell and implement policy, they move from one attention-seeking gesture to the next. This encourages capricious policy, which at any time can almost randomly catch universities or research. This kind of incident is

multiplying. Trump threatened to withdraw all federal student loans and research funds at Berkeley after an alt-right speaker was blocked from speaking on campus. He steps up the attacks on climate science and casually swipes at individual experts. Erdogan jails thousands of faculty. Saudi Arabia withdraws scholarship students from Canada to punish it for statements on human rights. Orban in Hungary follows through his Soros conspiracy rhetoric by pushing Central European University to the brink, and more recently, decides to ban gender studies.

Hungary's ban on gender studies is a good example of wielding a populist sledgehammer to crack a tiny nut. It is the gesture that matters, not its proportionality. In concrete terms the ban affects CEU and the state-run ELTE University. Viktor Orban's chief of staff, Gergely Gulyus, stated that 'the Hungarian government is of the clear view that people are born either men or women... The Hungarian state does not want to spend public funds on education in this area.' The decision was defended in the pro-Orban daily, *Magyar Idok*, by sociologist Balint Botond. 'Gender-faithful liberals have already caused irreparable harm to the souls of generations growing up in the past decades. We need to fight them without compromise and achieve a complete victory, otherwise they will destroy us' (Reuters, 2018b). There were only ten gender studies Masters students at ELTE in 2017.

How much is higher education affected?

Though higher education has a long history it is not guaranteed to be robust in all possible conditions. It must retain autonomy from government and business in the two functions that define its unique social being, credentialing and research. Both embody high stakes and in some countries are subject to widespread corruption. Higher education's reliance on patronage, public and private, means that its revenue streams are open to conditionalities. The sector also lacks defensible lines of accountability to the public. In those jurisdictions where the political system includes a division of powers, universities can argue that as counter-majoritarian institutions, like the independent judiciary and the free press that hold governments to account, they must be independent (Ignatieff, 2018). But how well this argument plays out in the binary social media frame of like/dislike has yet to be tested.

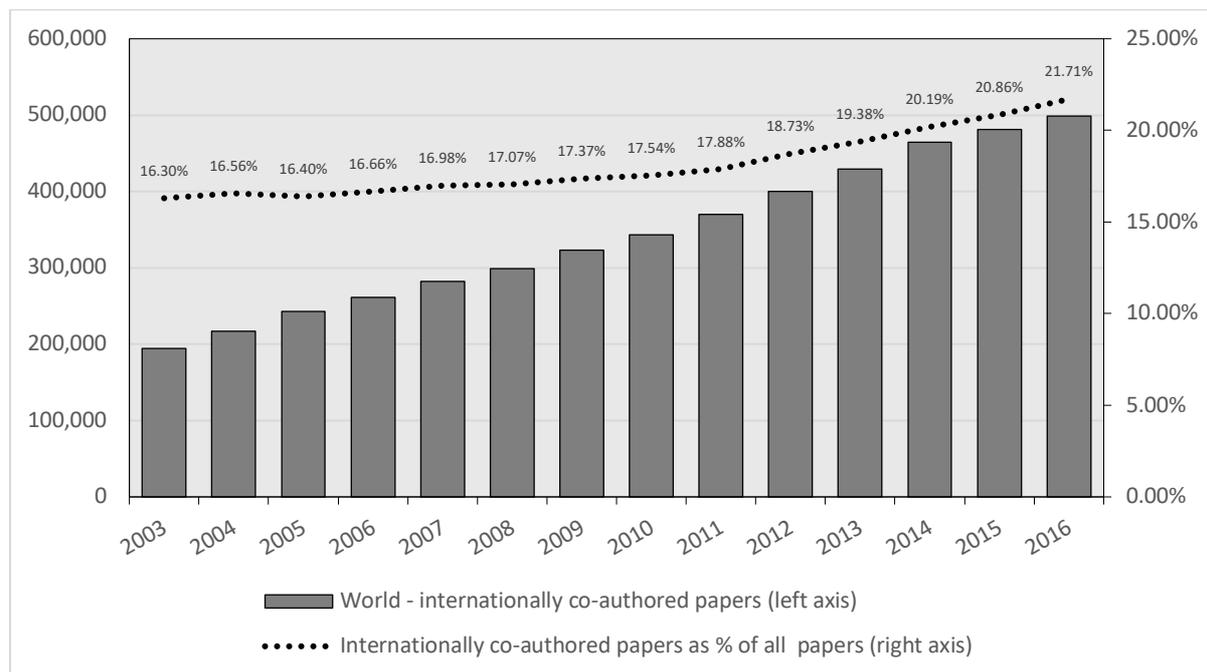
Most fundamentally, as noted, Trumpian post-truth in social media - whether as simplistic distortions or downright fictions - has the potential to negate the practice of truth telling public discourse based on reason, authority and evidence. A US Pew Research Centre Poll found that 58 per cent of Republican voters believe that universities and colleges have 'a negative effect on the nation' (Schill, 2018). This number could deteriorate further.

Nevertheless, despite the growing policy capriciousness and the certainty that higher education is and will be misunderstood in social media, higher education and science as yet are under less pressure than, say, electoral politics in multi-party

representative democracy, where the future is in real doubt (Runciman, 2018). The problem facing research-intensive universities should not be exaggerated. These institutions retain their distinctive character, not only vis a vis populism but vis a vis the longer impact of neoliberal globalisation.

Universities are new-public-managed and loaded with bureaucracy or entrepreneurial expectations. Yet faculty still interpret and develop knowledge. Market forces and private companies play a strong role in higher education in some nations, especially in sub-Saharan Africa. It is customary for critical scholars to argue that higher education as a whole has nearly but not quite succumbed to neoliberal marketisation. The 'not yet' is larger than the rhetoric suggests. With exceptions, universities are not capitalist agents. They are driven by competitive prestige more than by economic bottom lines. There is pressure to debundle them by separating teaching and credentialing but largely it has not happened. Universities are sometimes business like. They own businesses. Higher education is not itself a business.

Figure 5 Growth in annual number and proportion of internationally co-authored papers in science and engineering, World and United States: 2003 to 2016



Science includes some social science.
 Source: NSB (2018), Table A5-42

Mainstream higher education is not about to crumble either in the face of the market or political populism. It might even become a bastion of support against the latter. It embodies important counter-trends to marketisation and the rise of xenophobia.

Take worldwide research. Research collaboration is flourishing. The number of joint publications is expanding rapidly. Their proportion of total science is growing (Figure 5, Table 4). Collaboration is especially high in Europe where it is fostered by EU programmes. China and the United States, the emerging global rivals, collaborate with each other at a rate that is relatively high for both countries. Collaboration and competition are not always zero-sum: cross-border collaboration functions as one of the instruments of international competition. At the same time, the growth of collaboration also sustains relationships that move beyond national competition. It is misleading to focus on collaborations between countries. Research cooperation is primarily bottom-up and discipline driven. Governments see research-intensive universities as instruments of competition with other nations. It is probable that this, more than scientific curiosity, drives the accelerated investment in their science. However, while universities defer to states, they also operate as free global actors.

Table 4. Proportion of all papers in science and engineering that were internationally co-authored, 2003 and 2016, countries producing more than 10,000 papers in 2016, by region

| EUROPE | 2003 | 2016 |
|----------------|-------------|-------------|
| | % | % |
| Switzerland | 54.5 | 69.2 |
| Belgium | 49.0 | 66.1 |
| Austria | 46.3 | 64.8 |
| Sweden | 45.7 | 64.3 |
| Denmark | 47.7 | 63.3 |
| Netherlands | 44.7 | 61.8 |
| Norway | 45.6 | 61.4 |
| Ireland | 46.1 | 60.9 |
| Finland | 41.2 | 60.4 |
| France | 39.6 | 54.8 |
| Portugal | 45.0 | 54.2 |
| Greece | 35.5 | 52.3 |
| Germany | 39.4 | 51.0 |
| Spain | 33.2 | 50.7 |
| Italy | 33.1 | 47.3 |
| Czech Republic | 35.8 | 41.9 |
| Poland | 29.9 | 31.3 |
| Russia | 26.9 | 25.1 |

| ANGLOSPHERE | 2003 | 2016 |
|---------------------------------------|-------------|-------------|
| | % | % |
| New Zealand | 44.5 | 58.2 |
| United Kingdom | 36.9 | 57.1 |
| Australia | 36.9 | 54.9 |
| Canada | 39.0 | 53.0 |
| United States | 23.3 | 37.1 |
| LATIN AMERICA | 2003 | 2016 |
| | % | % |
| Chile | 52.7 | 61.7 |
| Argentina | 39.2 | 45.3 |
| Mexico | 39.6 | 42.3 |
| Brazil | 27.2 | 32.5 |
| MIDDLE EAST & NORTH AFRICA | 2003 | 2016 |
| | % | % |
| Saudi Arabia | 34.5 | 76.8 |
| Egypt | 32.7 | 51.7 |
| Israel | 39.9 | 50.7 |
| Turkey | 16.3 | 22.2 |
| Iran | 24.2 | 20.8 |

| ASIA | 2003 | 2016 |
|---------------------------|-------------|-------------|
| | % | % |
| Singapore | 35.0 | 62.8 |
| Pakistan | 28.2 | 49.3 |
| Thailand | 48.7 | 40.7 |
| Malaysia | 36.6 | 38.4 |
| Taiwan | 17.5 | 29.8 |
| Japan | 18.9 | 27.9 |
| South Korea | 25.1 | 27.0 |
| China | 15.3 | 20.3 |
| India | 18.1 | 17.4 |
| SUB-SAHARAN AFRICA | 2003 | 2016 |
| | % | % |
| South Africa | 40.0 | 52.1 |

Science includes some social science.

Source: Author, based on data from NSB (2018), Table A5-42

In a network analysis of global science Caroline Wagner and colleagues (2015) find that ‘the current growth of international collaborations’ appears not to reinforce the national competition model. It ‘puts into question the relationship between science and the state’. In the last three decades this relationship has shifted (pp. 11-12). ‘We see the growth of international collaboration as decoupling from the goals of national science policy’ (p. 3). Wagner and colleagues find that there are two main patterns in national science systems. In about two thirds of systems, the global science system is primary in shaping networked activity. In the other countries, the national network

is the primary determinant. 'The more internationally connected the scientific workforce of a nation, the more likely it is that the national agenda is being set de facto at the global level' (p. 9). Further, 'international cooperation is particularly advantageous for less advanced countries' (p. 12). They gain easy access to the whole field of cooperation. The global network can be crossed in no more than three steps. Strong nations and universities do not gate keep. Science is an open network.

Glonacal perspective

In conclusion, what are the implications of the commentary in this paper for research and scholarship in higher education studies? Three areas are now discussed.

The first implication is about perspective in higher education studies. Recent developments in the conditions of higher education have underlined the 'glonacal' argument first published sixteen years ago (Marginson and Rhoades, 2002). Higher education is simultaneously active in the three structural domains of global, national and local. Activity is carried by agents – often the same agents – in each domain. Effective strategies by universities and governments combine and synergise these three lenses, that are also three domains of action. But more thought should be given as to how this happy conjunction is achieved. In a recent paper in *Higher Education* Jonathon Friedman (2018) interviewed in four leading research universities in UK and US. University leaders and faculty exhibited a routine internationalism. Yet their collective mindset was shaped by 'a form of everyday nationalism' and this appeared to be the bedrock position, the default perspective, especially in conditions of role confusion. If this finding suggests the glonacal argument – university leaders move between the different lenses - it also suggests a strategic incoherence. This kind of mentality could give ground to populist pressure, refusing the global dimension and its obligations, when the nationalist button is pushed. The capacity to work in all three domains is impaired, not assisted, by a fragmented perspective.

This suggests the need for two intellectual moves beyond glonacal. First, a rigorous critique of methodological nationalism, the assumption that the nation is the spatial horizon of meaning (Shajahan and Kezar, 2013). This is still a radical step in higher education studies. For example, most of the mainstream discussion of 'internationalisation' is trapped in methodological nationalism and treats global phenomena even with the weight of, say, the global research network, as marginal to nations. The critique of methodological nationalism is essential not only to understand higher education but for practical reasons. Individual states on their own are no longer the appropriate units for resolving a range of issues, especially where large-scale externalities are involved (Held and Maffettone, 2016b, p. 123), as in the case of the free flow of knowledge, and the free passage of persons. Second, the explicit embrace of cultural cosmopolitanism as a central aspect of higher education. This follows from higher education's large and heterogenous local student population, the volume of cross-border people traffic, and the multiple character of

disciplinary knowledge and perspectives. There has been surprisingly little research on global toleration, on how to relate to the diversity of cultures, compared to the extensive research and policy formation in relation to national diversity and multiculturalism (Held and Maffettone, 2016a, p. 14).

At the same time, some tools of global analysis are overdue for more critical treatment. Discussion of networks, which is readily biased cognitively towards flat structures based on equivalent units, needs to be more determinedly linked to focus on hierarchy, issues of control and identification of winners/losers. There is something teleological about much of the talk of networks and flows, which emphasises flows per se rather than the content of flows. This feeds into imaginings of globalisation as structurally 'inevitable', as agentless. But globalisation is not always increasing, in every domain. The retreat from cross-border supply chains, FDI and even the multi-national company has made that clear. Likewise, in higher education and research, cross-border connectivity can reduce as well as increase. Through the last three thousand years of history cross-border connectivity has ebbed and flowed.

Spatial reworking

The second implication concerns spatial thinking. In higher education studies it has become necessary to build in a stronger awareness of spatiality in two respects. First, the use of the 'city', especially the global city, as a unit of analysis, alongside the hitherto primary units of study which are the 'institution' and the 'national system'. Perhaps one reason why the university/city nexus is under-developed in practice, being more implicit than explicit, is because this nexus is neglected in the scholarly imagination and empirical research. Yet the conjunction between urban environments and higher education is central to the sector.

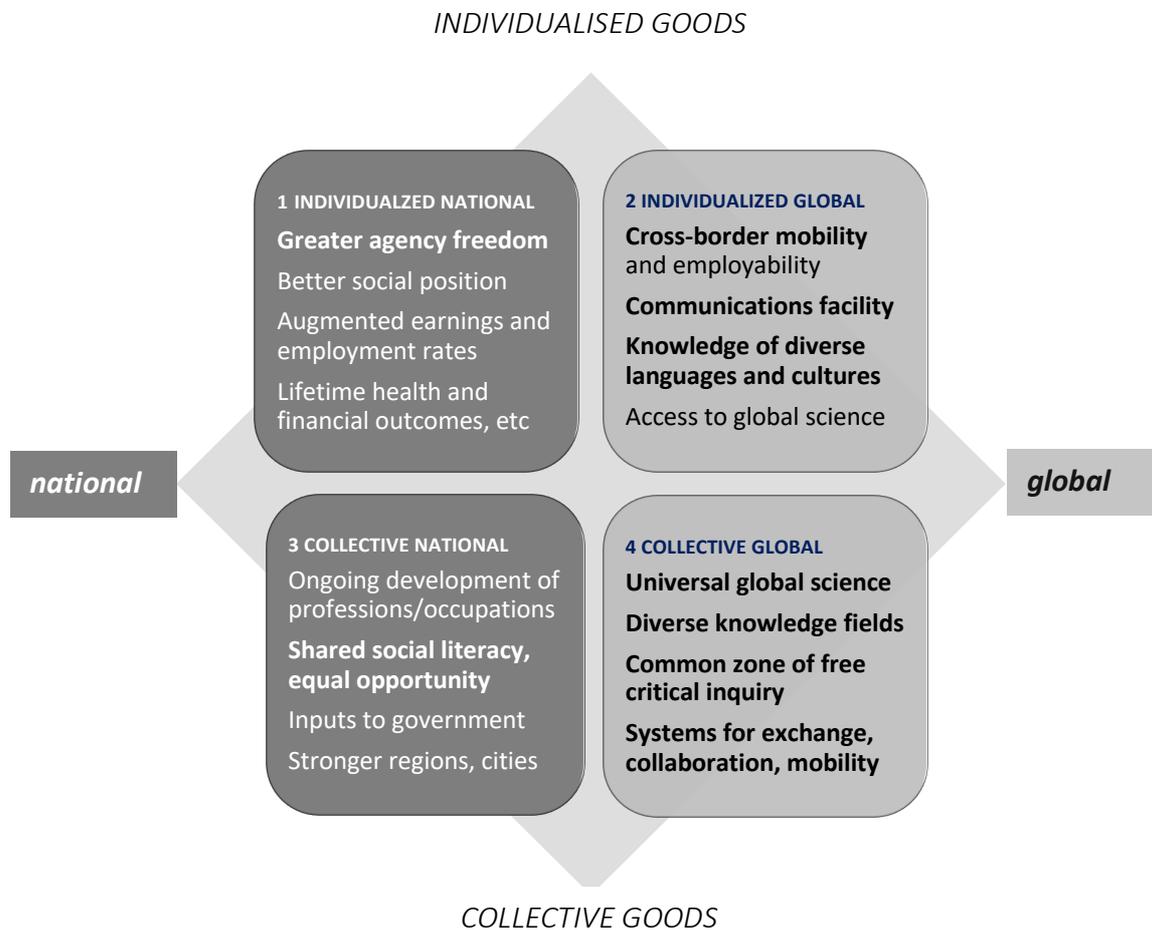
Second, work on inequality also needs to be rethought. Globalisation drives inequalities into spatial forms - not just by generating the dimension of cross-border inequalities but by the way globalisation patterns national inequalities. Global cities empty economic and social value out of large geographic zones within countries. In those zones, higher education is often more underprovided and harder to access than it is in the global cities. Yet in the emptied-out zones, higher education institutions can be a key to regeneration and social inclusion (and not only as portals for young people escaping to join the global economy!)

Tracking the broader contributions of higher education

The third implication is about the need to move beyond neo-liberalism in defining what higher education is and what it does. There is a need to develop research tools and data that unpack the outcomes of higher education, individual and collective, on a broader basis than the outcomes suggested by human capital theory: employment outcomes and consumer satisfaction. If not, the growing tendency to focus singly on 'employability', while neglecting the many other contributions of higher education and research, might fatally undermine higher education. Higher education does not exercise the main power over individual outcomes. Family background and social capital are more important. In high participation systems, in which the stratification of higher education comes to resemble that of society, and many graduates can achieve only average incomes at best, universal employability is impossible. But the implication of the human capital narrative is that if universal employability is not achieved, higher education is to blame.

There have been interesting attempts to capture the multiple outputs of the sector (see Figure 5). In economics, Walter McMahon (2009) summarises the then existing range of studies of the outcomes of higher education, using a coherent Samuelson public and private goods framework. McMahon focuses on those public goods that can be represented in terms of shadow money values received by individual graduates. Arguably, this downplays the collective impact of the sector. In philosophy, Gert Biesta (2009) defines higher education as having the three roles of *qualification*, which includes skills and knowledge for work; *socialisation*, preparation for citizenship; and *subjectification*, meaning the preparation of self-actualising individuals, human subjects.

Figure 6. Examples of individualised and collective contributions of higher education
(common goods in **bold type**)



Source: Author

Marginson (2018a) expands on subjectification in a 2017 lecture at the UCL Institute of Education, on ‘higher education as self-formation’. Here self-formation is also defined to include self-investment in the student’s own economic and social advancement. The argument also emphasises that student self-formation is immersed in knowledges.

In sociology, Mitchell Stevens, Elizabeth Armstrong and Richard Arum (2008), correctly arguing that ‘higher education lacks an intellectually coherent sociology’ (p. 128), suggest that the sector has four heterogeneous functions. *Sieve* for sorting and stratifying the population, a function that the philosopher Biesta did not mention but the three sociologists see as primary. *Incubator* for the development of competent social actors, which combines Biesta’s processes of socialisation and subjectification. *Temples* for the legitimating of official knowledge. And finally, *hubs* for connecting multiple institutional domains. This is suggestive, but there are many more specific outcomes under each heading.

Arguably, the preceding studies have been weaker on the collective outcomes of higher education than individual outcomes and have paid little attention to the global dimension (Marginson, 2018b; 2018c). Yet in research, in constituting a worldwide zone of free academic conversation, and in providing a global system of mobility, networked higher education systems produce common benefits on the global scale. At the same time, these benefits, like all outcomes of higher education, can look different through the lens of one or another culture. For example, the expansion of global science is a more ambiguous good in Spanish-speaking countries than in English-speaking countries. Therefore cross-border comparison of the common good outcomes of higher education is essential, and from multiple country viewpoints. Comparison not for the purpose of judging or rank ordering, but to enable differentiation, and differentiation from more than one point of view. Out of these processes a sparser but more genuinely generic set of categories can be developed.

One of the most important of all common goods in higher education is the worldwide space of free inquiry that is sustained by joined up practices of academic freedom and of independent-minded universities. (The term 'independent-mindedness' is used rather than 'autonomy' because the latter is too readily steered). This means developing the agency freedom of persons, disciplines and institutions. It means maintaining higher education and research as counter-majoritarian, as a public sphere and/or the incubator of critical new social ideas (depending on the political culture), while communicating this position more effectively and in the common interest. Active practices of academic freedom. The work of independent institutions conscious of their social missions and contributions. This is higher education's ultimate response to the capricious challenge of authoritarian populism.

References

- Academic Ranking of World Universities, ARWU (2017). Shanghai Jiao Tong University Graduate School of Education.
<http://www.shanghairanking.com/index.html>
- Barr, C. and McIntyre, N. (2018). Revealed: immigration rules in UK more than double in length. *The Guardian*, 27 August.
- Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability*, 21 (1), pp. 33-46.
- Bourguignon, F. (2015). *The Globalization of Inequality*. Translated by T. Scott-Railton. Princeton: Princeton University Press.
- Cantwell, B., Marginson, S. and Smolentseva, A. (eds.) (2018). *High Participation Systems of Higher Education*. Oxford: Oxford University Press.
- Friedman, J. (2018). Everyday nationalism and elite universities in the USA and England. *Higher Education*, 76 (2), pp. 247–261.
- Held, D. and Maffettone, P. (2016a). Introduction. In D. Held and P. Maffettone (eds.), *Global Political Theory* (pp. 1-21). Cambridge: Polity Press.
- Held, D. and Maffettone, P. (2016b). Legitimacy and global governance. In D. Held and P. Maffettone (eds.), *Global Political Theory* (pp. 117-142). Cambridge: Polity Press.
- Held, D., McLew, A., Goldblatt, D., and Perraton, J. (1999). *Global Transformations: Politics, economics and culture*. Stanford: Stanford University Press
- Higher Education Statistics Authority (HESA), UK (2018). Data on students.
<https://www.hesa.ac.uk/data-and-analysis/students/where-study>
- Ignatieff, M. (2018). Academic freedom and the future of Europe. *CGHE Working Paper* 40, July. London: ESRC/HEFCE Centre for Global Higher Education.
- Inglehart, R. (2018). Can democracy save itself? *Foreign Affairs*, 97 (3), pp. 20-28.
- Inman, P. (2018). Social mobility in richest countries 'has stalled since 1990s'. *The Guardian*, 15 June.

Kanbur, R., Wang, Y. and Xhang, X. (2017). The great Chinese inequality turnaround. *VOX CEPR Policy Portal*.
<https://voxeu.org/article/great-chinese-inequality-turnaround>

Kivela, A. (2012). From Immanuel Kant to Johann Gottlieb Fichte – Concept of education and German idealism. In Siljander, P., Kivela, A. and Sutinen, A. (eds.) (2012). *Theories of Bildung and Growth: Connections and controversies between Continental educational thinking and American pragmatism* (pp. 59-86). Rotterdam: Sense Publishers.

Leiden University (2018). *CWTS Leiden Ranking 2018*. Centre for Science and Technology Studies, CWTS.
www.leidenranking.com

Leydesdorff, L., Wagner, C. and Bornmann, L. (2014). The European union, China, and the United States in the top-1% and top-10% layers of the most-frequently cited publication: Competition and collaborations. *Journal of Informetrics*, 8, pp. 606-617.

Lund, S. and Tyson, L. (2018). Digital technology and the future of trade. *Foreign Affairs*, 97 (3), pp. 130-140.

Marginson, S. (2018a). *Higher Education as Self-Formation*. Inaugural Professorial Lecture at the UCL Institute of Education.
<https://www.ucl-ioe-press.com/books/higher-education-and-lifelong-learning/higher-education-as-a-process-of-self-formation/>

Marginson, S. (2018b). The new geo-politics of higher education. *CGHE Working Paper 34*, April. London: ESRC/HEFCE Centre for Global Higher Education.

Marginson, S. (2018c). Private/public in higher education: A synthesis of economic and political approaches. *Studies in Higher Education*, 43 (2), pp. 322-337.

McMahon, W. (2009). *Higher Learning Greater Good*. Baltimore, MD: The Johns Hopkins University Press.

Mead, W. (2018). How American democracy fails its way to success. *Foreign Affairs*, 97 (3), pp. 10-19.

Milanovic, B. (2018). Chinese income distribution in 2002-3 and 2013. *globalinequality* blog.
<http://glineq.blogspot.com/2018/03/chinese-income-distribution-in-2002-3.html>

National Science Board, NSB (2018). *Science and Engineering Indicators 2018*.
<https://www.nsf.gov/statistics/2018/nsb20181/assets/nsb20181.pdf>

Organization for Economic Cooperation and Development, OECD (2017). *Education at a Glance, 2017*. Paris: OECD.

Piketty, T. (2014). *Capital in the Twenty-first Century*. Trans. A. Goldhammer. Cambridge, MA: Belknap Harvard University Press.

Popov, V. and Jomo, K. (2017). Are developing countries catching up? *Cambridge Journal of Economics*, 42, pp. 33-46.

Reuters (2018a). Two-thirds of world population will live in cities by 2050, says UN. *The Guardian*, 17 May.

Reuters (2018b). Hungary to stop financing gender studies courses: PM aide. August

Rossi, U. (2017). *Cities in Global Capitalism*. Cambridge: Polity.

Runciman, D. (2018). *How Democracy Ends*. London: Profile Books.

Sassen, S. (2001). *The Global City: New York, London, Tokyo*. 2nd Edition. Princeton: Princeton University Press.

Schill, M. (2018). Turning the tide on the ebbing of public trust in higher education. *University World News*, 515, 20 July.

Shahjahan, R. and Kezar, A. (2013). Beyond the 'national container': Addressing methodological nationalism in higher education research. *Educational Researcher*, 42 (1), pp. 20-29.

Stevens, M., Armstrong, A. and Arum, R. (2008). Sieve, incubator, temple, hub: Empirical and theoretical advances in the sociology of higher education. *Annual Review of Sociology*, 34, pp. 127-151.

Stiglitz, J. (2013). *The Price of Inequality*. Penguin: London.

Trow, M. (1973). *Problems in the Transition from Elite to Mass Higher Education*. Berkeley, CA: Carnegie Commission on Higher Education.

United Nations Educational, Social and Cultural Organization (UNESCO). (2018). UNESCO Institute for Statistics data on education. <http://data.uis.unesco.org/>

Vogel, E. (2011). *Deng Xiaoping and the Transformation of China*. Cambridge: The Belknap Press.

Wagner, C., Park H. and Leydesdorff, L. (2015). The continuing growth of global cooperation networks in research: A conundrum for national governments. *PLoS ONE*, 10 (7): e0131816. doi:10.1371/journal.pone.0131816.

World Bank (2018). Data and statistics.
<http://data.worldbank.org>

Xie, Q. and Freeman, R. (2018). Bigger than you thought: China's contribution to scientific publications. *NBER Working Paper* No. 24829.
<http://www.nber.org/papers/w24829>

Zha, Q. (2011). Is there an emerging Chinese model of the university? In R. Hayhoe, J. Li, J. Lin & Q. Zha (2011). *Portraits of 21st Century Chinese Universities: In the move to mass higher education* (pp. 451-471). Hong Kong: Springer/Comparative Education Research Centre, The University of Hong Kong.