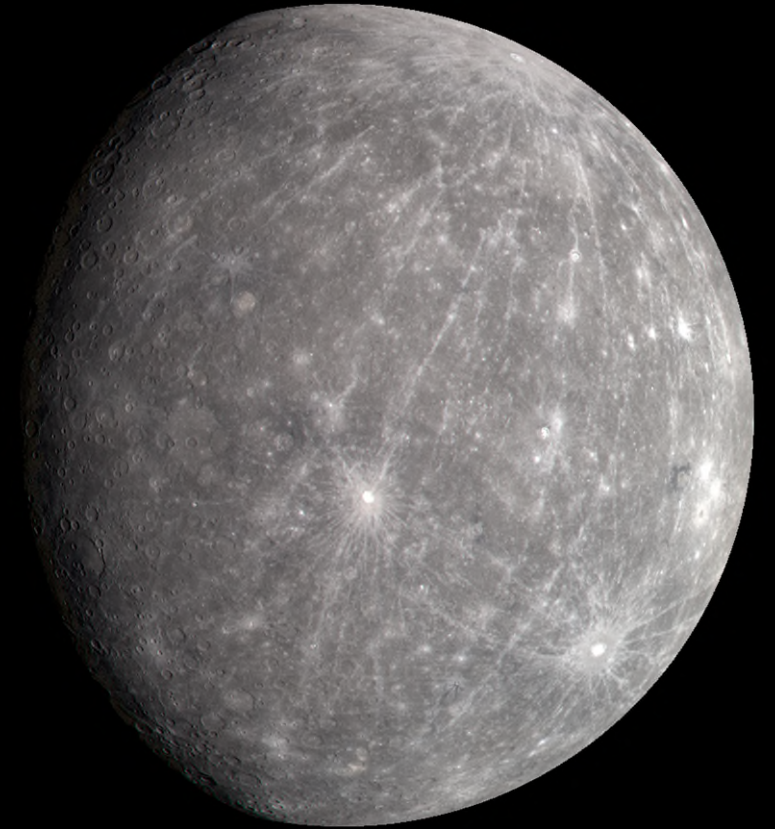


# HIGHER EDUCATION AND GEO-POLITICS

Remarks by Simon Marginson

- 1. Pax Americana and higher education*
- 2. The US-China split and research*
- 3. Populism and geo-politics*



“Hey, hey Woody Guthrie, I wrote you a song  
Bout a funny ol' world that's a-comin' along  
Seems sick an' it's hungry, it's tired an' it's torn  
It looks like it's a-dyin' an' it's hardly been born”

~ Song to Woody, Bob Dylan, 1962

# I. PAX-AMERICANA AND HIGHER EDUCATION

- Internet founded in 1989 and initially dominated by US users including universities
- Pax-Americana geo-politics after 1991
- Eroding hegemony of Pax Americana after mid 2000s – remains dominant in ‘the West’ but less so worldwide, though it continues to pattern higher education and science



# RAPID EVOLUTION OF THE GLOBAL COMMUNICATIVE SPACE AFTER THE BEGINNING OF THE INTERNET IN 1989



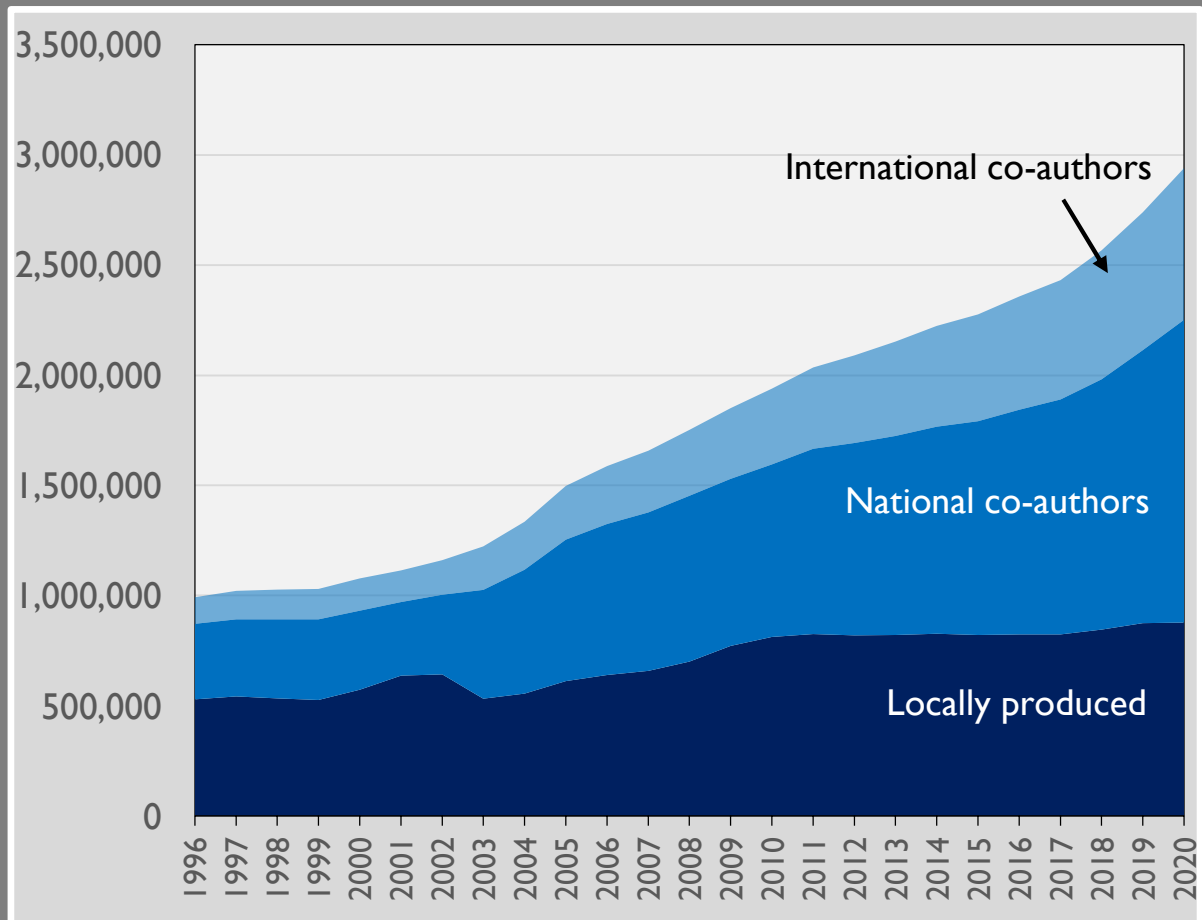
- Emerging networked science system patterned by US-American faculty norms of academic freedom and open collegial collaboration between scientists, in the manner of civil society rather than state regulated activity, but shaped also by unequal resources and assumptions of Anglo-American cultural superiority

# ANGLO-AMERICAN DOMINATED GLOBALIZATION OF HIGHER EDUCATION AFTER THE EARLY 1990S

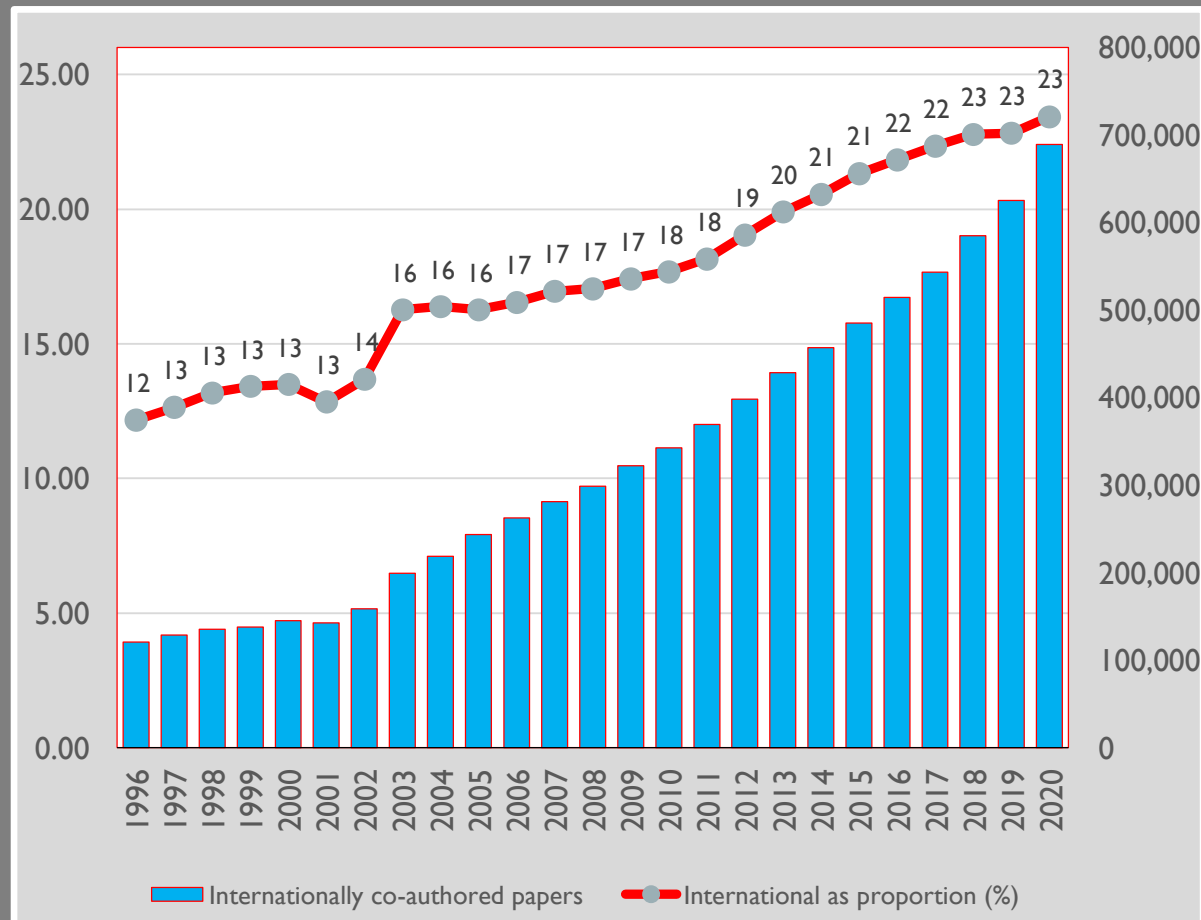
- Massive worldwide growth of higher education and science since mid 1990s in which US norms and models ('World-Class Universities') played a key role.
- Each university visible to all others. Global rankings normalise the Anglo-American science university. Emerging systems selectively adopt US faculty norms
- Networked global science system (though with many exclusions), paper growth of 5.15% per year, a quarter of papers now internationally co-authored
- World-spanning online education and MOOCs, again with US origins and based on freely broadcast content developed by universities not states



# NUMBER OF SCIENCE PAPERS IN SCOPUS, BY TYPE OF COLLABORATION, WORLD: 1996-2020 - NATIONAL SCIENCE BOARD



# NUMBER AND PROPORTION OF INTERNATIONALLY CO-AUTHORED PAPERS, WORLD: 1996-2020 - NATIONAL SCIENCE BOARD



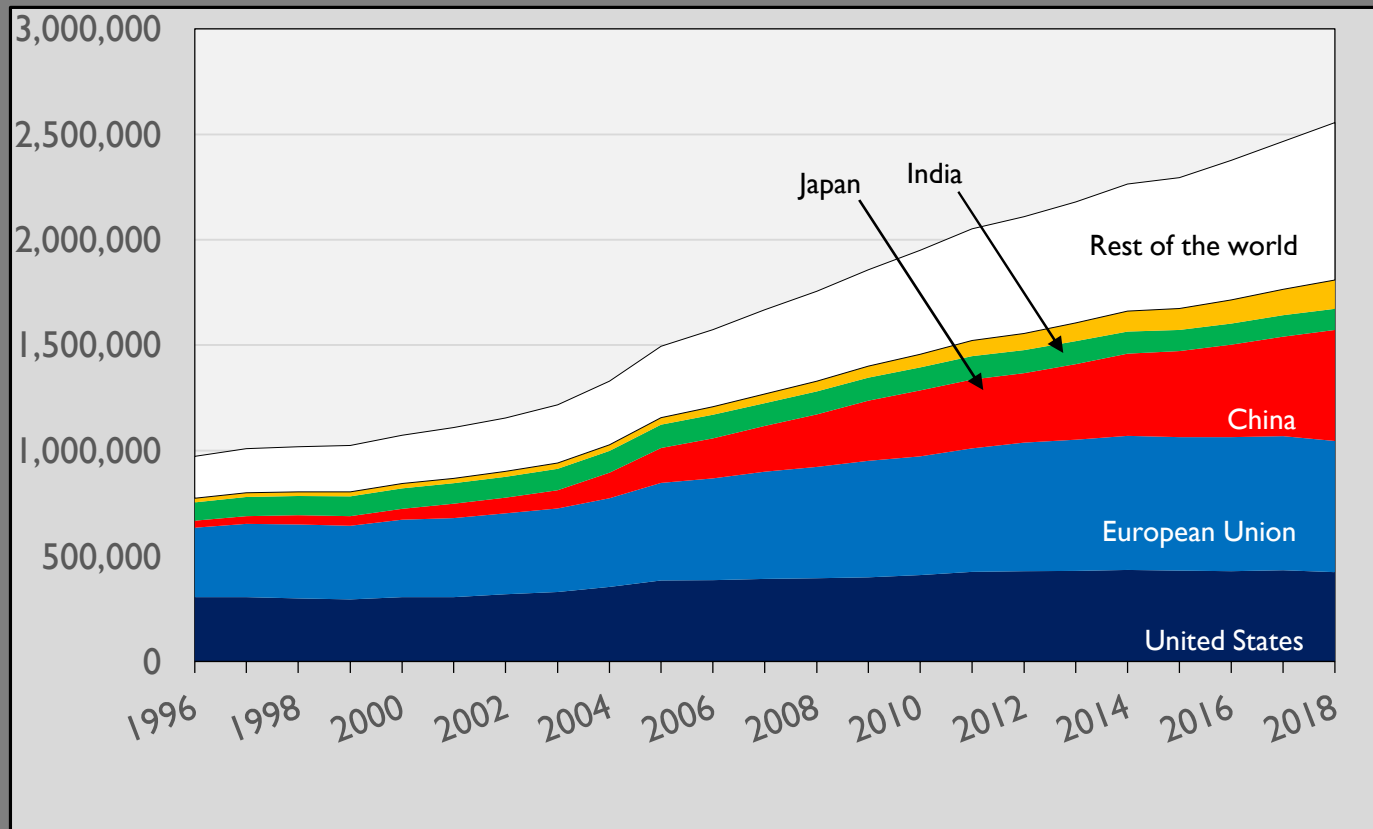
## 2. THE US-CHINA SPLIT AND RESEARCH

- China has American assistance in developing its own science, via visits, doctoral training, collaborative projects, co-authored papers, benchmarking academic units etc but does not become 'like us'
- Great growth of Chinese science and international collaboration
- US turns hostile to collaboration – Trump's China initiative (2018), confirmed by Biden government, cites national security and intellectual property ('spying', 'stealing')
- In other Western countries, security services claim blanket regulation and veto in relation to China collaborations



# CHINA HAS USED NATIONAL CAPACITY BUILDING AND INTERNATIONAL COLLABORATION, ESPECIALLY WITH US, TO ADVANCE BOTH ITS NATIONAL AND GLOBAL SCIENCE

Number of science papers in Scopus, by large nation/region, world: 1996-2018



Countries with which China had over 5,000 joint papers in 2018

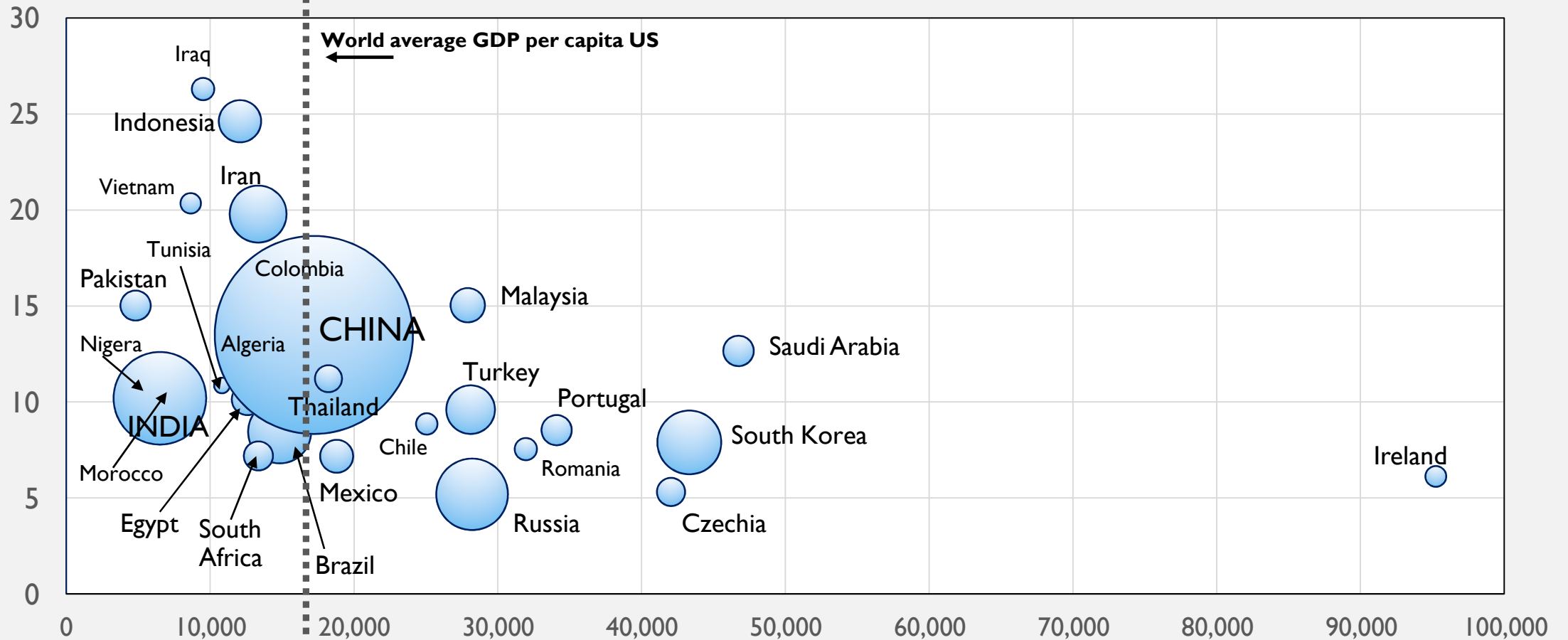
Country pair	Joint papers	1996 = 1.00
China-USA	55,382	26.10
China-UK	14,763	21.74
China-Australia	13,138	46.42
China-Canada	9,449	18.75
China-Germany	8,206	14.03
China-Japan	8,024	9.47
China-Singapore	5,563	46.00
China-France	5,472	19.83

# FAST GROWING SCIENCE SYSTEMS IN THE PERIOD 2000-2020

NATIONAL OUTPUT OF SCIENCE PAPERS GREW FASTER THAN THE WORLD AVERAGE RATE OF 5.15% PER YEAR BETWEEN 2000 AND 2020 - COMPARED TO WORLD AVERAGE GDP PER CAPITA PPP (US \$17,083 IN 2020)

Science systems with 5,000 papers or more in 2020. Scopus data, fractional counting (NSF 2021). Current price GDP, PPP = purchasing power parity (World Bank 2022).

Growth  
p.a.(%)  
science  
papers



GDP per capita PPP in US dollars 2020



# TOP UNIVERSITIES IN STEM RESEARCH, LEIDEN RANKING

(1) PHYSICAL SCIENCES & ENGINEERING, (2) MATHEMATICS & COMPUTING: PAPERS IN TOP 5% BY CITATION RATE: 2016-2019

University	System	Physical sciences & engineering
<b>Tsinghua U</b>	CHINA	909
<b>MIT</b>	USA	683
<b>Zhejiang U</b>	CHINA	622
<b>Nanyang TU</b>	SINGAPORE	566
<b>U Science &amp; T.</b>	CHINA	556
<b>Harbin IT</b>	CHINA	545
<b>Stanford U</b>	USA	541
<b>Shanghai JT U</b>	CHINA	513
<b>Xi'an Jiaotong U</b>	CHINA	512
<b>Huazhong U S&amp;T</b>	CHINA	502
<b>Harvard U</b>	USA	487
<b>National U</b>	SINGAPORE	455
<b>U Calif., Berkeley</b>	USA	449
<b>Peking U</b>	CHINA	444

University	System	Maths & computing
<b>Tsinghua U</b>	CHINA	292
<b>U Electronic S&amp;T</b>	CHINA	275
<b>Harbin IT</b>	CHINA	269
<b>Huazhong U S&amp;T</b>	CHINA	231
<b>Xidian U</b>	CHINA	221
<b>Beihang U</b>	CHINA	215
<b>MIT</b>	USA	205
<b>Zhejiang U</b>	CHINA	194
<b>Southeastern U</b>	CHINA	193
<b>Nanyang TU</b>	SINGAPORE	187
<b>Shanghai JT U</b>	CHINA	178
<b>Northwestern P. U</b>	CHINA	164
<b>Wuhan U</b>	CHINA	161
<b>Beijing IT</b>	CHINA	159

# THE U.S. CHINA INITIATIVE AND RACIAL PROFILING

‘Scientific discovery, which is fundamentally borderless, is being politically bordered. Geopolitical tensions between the United States and China have spilled over into academic science, creating challenges for many scientists’ ability to fully engage in research and innovation’

– Jenny Lee and Xiaojie Li, *Racial profiling among scientists of Chinese descent*, 2022

<https://www.committee100.org/wp-content/uploads/2021/10/C100-Lee-Li-White-Paper-FINAL-FINAL-10.28.pdf>

‘Within the U.S., the survey results point to a consistent pattern of racial profiling, as perceived by Asian scientists: Chinese, Chinese American, and other Asian groups report far greater racial profiling from the U.S. government, difficulty in obtaining research funds, professional challenges, and fear and anxiety that they are being surveilled by the government, compared to non-Asians... this research confirms that a chilling effect is indeed taking place throughout the scientific community, particularly among those of Chinese descent, including U.S. citizens... scientists are limiting their existing and future collaboration with China.’ (p. 24).

### 3. POPULISM, GEO-POLITICS OF SCIENCE AND ACADEMIC FREEDOM

- Open global science regime in fundamental jeopardy. 'Securitisation' takes priority over collaboration, university autonomy, academic freedom. States and their security sector now making decisions about science and inhibiting some links. Individuals stigmatised on the basis of national origins or links
- Science problematised by fossil fuel lobbying, populist attacks
- Growing right wing populist attacks on universities, especially in US ('cancel culture', anti-CRT rhetoric, anti-tenure bills in Republican Texas, Wisconsin, South Dakota, Louisiana, Florida)
- Brexit takes UK universities out of Horizon research in Europe
- CEU banned in Hungary, Russian universities close up





# Weathering the storm: Harnessing technology as a force for good

Diana Laurillard

Professor of Learning with  
Digital Technology

UCL Knowledge Lab

[www.researchcghe.org](http://www.researchcghe.org)



Economic  
and Social  
Research Council



Research  
England

# Harnessing technology as a force for good

The header features a dark red background with a white line-art pattern of icons. These icons include a brain, a star, a plus sign, a pencil, a laptop, an apple, a hand, a computer monitor, a house, and another brain, symbolizing the intersection of technology, education, and social progress.

1. Progress on many of the UN SDGs has reversed since the pandemic
2. HE develops new knowledge about science and social science
3. We could do much more to develop professional knowledge from research
4. Technology could enable us to act at scale to meeting the major global challenges
5. Help researchers engage with their professional end-users to meet the critical global challenges

# University missions fit the UN SDGs

From the top 20 universities in the world:

- “... to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century (MIT)
- “establish a high level of global consciousness and an international vision, ... work together to solve common problems facing humankind” (Peking)
- “... world-class research and education... which benefit society on a local, regional, national and global scale... committed to equality of opportunity, to engendering inclusivity... (Oxford)
- “... engaged with the wider world and committed to changing it for the better... for the long-term benefit of humanity” (UCL)

# The pandemic has wiped out recent progress on SDGs

- Goal 1 Poverty: An additional 120m people were **pushed back into extreme poverty** in 2020
- Goal 4 Education: **101m more children fell below** m which over the last 20 years had reduced to 'only' 4
- Goal 6 Water: In many countries, COVID-19 has actu **engagement** in water resources management throu
- Goal 7 Energy: In Africa, the **number of people with** 2020 after declining over the previous six years.
- Goal 13 Climate: Notwithstanding a global pan **climate action**, with a focus on adaptation

In her powerful summary of the lessons from the pandemic, Roberta Malee Bassett, the global lead for tertiary education at the World Bank, details **the students who are most vulnerable, due to access, disability, location, and socio-economic group, for whom the move to online education has left them even further behind their privileged peers**

University science and social science underpins the actions to achieve the SDGs

We do little professional development to support new professional practices

# Could HE do more?

CPD offered per year by UK universities: 1,079,011 days

Only 9/24 Russell Group universities in top 20

*[HESA 2020/21]*

- one 5-day course per year for 215,000 people for a working population of 30m
- less than half the number of civil servants alone

## How to demonstrate support for impact



We ask you to consider impact when you apply for Economic and Social Research Council (ESRC) funding.



# Harnessing large-scale online technologies

With Eileen Kennedy, UCL Knowledge Lab

## 'The transformational potential of MOOCs'

Initial analysis that they are not viable for students except as supplements

Focused on researching the experience of professionals learning online

Developed a 'co-design' Theory of Change for accountable impact of research

Design-Based Research projects on 'massive open online *collaborations*'

## 'Realising the potential of MOOCs for the role of HE in professional development'

Investigating the value to professionals in terms of Wenger's Value Creation

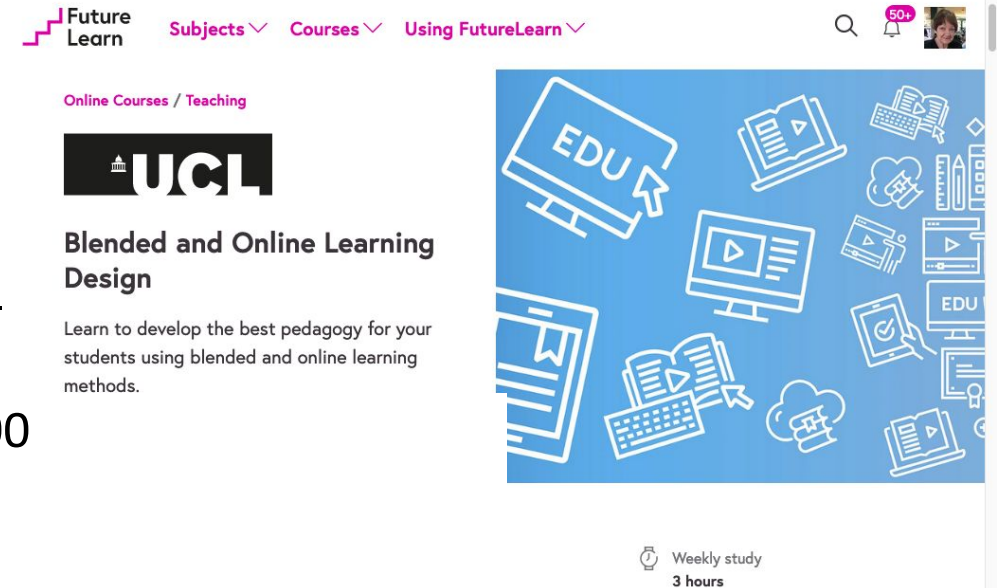
Framework: Immediate, Potential, Applied, Realised, Reframing

# Is it worth creating MOOCs for professionals who need our research outputs?

## Cost of creating a MOOC (10 hours over 3 weeks)

<https://www.futurelearn.com/courses/blended-and-online-learning-design>

Developing videos, articles, exercises, on platform	£18,000
Cost per run for Mentors	£2,000
Total for 12 runs	£42,000
Total learners	10,000
With marketing to attract more learners, say	50,000
and 5% paying £54 upgrade, income would be	£135,000



Future Learn Subjects Courses Using FutureLearn

Online Courses / Teaching

**UCL**

**Blended and Online Learning Design**

Learn to develop the best pedagogy for your students using blended and online learning methods.

Weekly study  
3 hours

# What would be the benefits?

## **To HE research**

Wider dissemination research outputs, hence broader impact on outcomes

Wider impact leads to more funding

Engagement of knowledgeable professionals in feedback back on implementation

Contributions from the wider workforce to research

## **To the public good**

The realized and reframing value of the new concepts and skills for 10,000s influencers

40% learners come from LMICs

Progress on mission statements that is public, accountable and collaborative for the many

NOT like social media that is public, unaccountable, and driven by the wealth of the few

Acceleration of the painfully slow progress towards the UN SDGs

# Harnessing technology as a force for good



Technology enables us to act at scale to meeting the major global challenges

Help research engage with professional end-users in innovative practices

As a force for good it is public, accountable, and collaborative for the many