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**Inevitably global, inevitably national, increasingly conflicted, and hope of the world: Higher education and science in the age of Trump, Brexit and Le Pen**

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**[Opening slide]**

* [Preliminary greetings]

**[Outline of keynote: Higher education and science in the age of Trump, Brexit and Le Pen]**

* I took on task of summing up ‘where we are at, across the world, with the massification and globalisation of higher education’, but that has become a reflection also on the new nativism and racism, the meanings and impacts of the Trump presidency in general and for higher education, and the interplay of on one hand inequality and class, and on the other hand borders and identity politics.

**[1. Growth of role and reach]**

* First, the remarkable expansion of the role of higher education

**[Growing number of universities with over 10,000, 5000 and 1200 papers in Web of Science: 2006-09 to 2012-15 (Leiden University data)]**

* Global comparisons and competition through research rankings
* Policy emphasis on science and technology as source of innovations
* Increased public investment in research in many countries, especially East Asia and Singapore, Saudi Arabia, Brazil
* More than 50 countries now have indigenous science systems with their own doctoral training in at least some disciplines
* Spectacular increases in countries where investment in research has risen sharply, and growing number of universities at each level of volume in the table. Thus in 2006-09, 25 universities published more than 10,000 research papers in Web of Science, six years later in 2012-15, there were 50 such universities

**[Gross Enrolment Ratio tertiary education (GER, %): World, North America/Western Europe, 1971-2014]**

* Take off after mid 1990s, outstrips growth of population and economy
* Associated with urbanisation, which has now passed the level of half the world’s population, and growth of the middle class
* At world level, accelerated growth common to all world regions except Central Asia
* Growing by 1% a year, which is 20% in 20 years
* By 2013, 56 national systems had achieved participation rates of 50% and another 56 had achieved between 15% and 50%, with only 42 national systems, mostly in very poor countries below 15%
* Well over half of that participation at degree level – about a quarter of all young people can be expected to enter degree programmes in their life times
* This does not mean everyone completes their degrees, or the funding is adequate, or all participation is of equivalent value

**[Comparative tertiary-level participation: GER and the Clancy Index for OECD countries]**

* Still significant differences between countries. Here are the OECD countries, using a measure of participation devised by University College Dublin sociologist Pat Clancy, which takes not just enrolment rates but completion rates into account
* But the point is that the participation rate is exceptionally high by historical standards

**[Potentials of more educated and knowledgeable society]**

* This is very positive development and marks the success of higher education in developing into a central institution of modern society
* We can see in this fulfilment of education’s imagined mission in Bildung, in the formation of persons as rational actors, steeped in advanced communication and knowledge, committed to the mutual improvement of human society through their interaction in the public sphere

**[Research finds that people with tertiary education, on average …]**

* And this is not an empty or nebulous ideal. We know that higher education is formative, it changes people, it makes them more competent in communication and cooperation, more tolerant of difference and diversity, less nativist, with higher levels of confidence and agency freedom. More international in outlook and with a greater capacity for personal mobility both social and geographic
* And it does this on a scale far greater than imagined by Kant, Rousseau and von Humboldt
* Let me expand on the point about freedom and mobility. The OECD’s *Perspectives on Global Development 2017: International migration in a shifting world* (2016) contains data comparing the cross-border mobility of people with, and without, university degrees. Among those without degrees the tendency to move across borders is correlated to income. As income rises people had more scope for mobility. The capacity for mobility appears to be economically determined. However, among those with university degrees the pattern is different. First, at a given level of income, those with degrees are much more mobile than those without: in other words, higher education helps to democratise mobility (provided higher education itself is accessed). Second, for those with degrees, as income rises, above a modest threshold of income there is little change in potential mobility. That is, the propensity to move becomes income inelastic. Strikingly, this suggests that because higher education helps graduates to achieve greater personal agency, it weakens the limits created by economic determination and class. Degree level education constitutes greater personal agency, freedom, in its own right.

**[Level of education and interpersonal trust, OECD 2014]**

* The 2012 OECD survey of adult skills also reported that people’s willingness to trust each other increases with the level of education. People with tertiary education were more likely to trust others than those with just upper secondary or lower secondary education, a finding that held after statistically accounting for differences in gender, age and income.
* While the level of solidaristic interpersonal trust in many countries is low, in the Nordic countries it reaches close to 50% among the tertiary educated.

**[Level of education and political connectedness, OECD 2014]**

* On the question of whether people feel they have an effective connection to the political system, the OECD found that in most countries that sense of political connection was twice as high among the tertiary educated as among those with only lower secondary education
* Again, the common thread in these findings is that the tertiary educated have greater relational confidence and personal agency.

**[2. Contested globalisation + economy/culture split]**

* so tertiary education, led by degree programs in higher education, is achieving its modern mission on a scale beyond imagining an generation ago
* but it is doing so in an economic, social, cultural and political setting which is volatile, changing and not always favourable to that mission
* In exploring that setting let’s look first at trends in globalisation, meaning, in the most basic sense, global integration and cross-border convergence
* Trends in globalisation are uneven and a split has developed between trends in the economic and cultural spheres
* Global integration in communication and culture, continues to roll out, as does the one-world system of academic knowledge in research, as I discussed

**[Economic globalisation losing momentum]**

* But the original driver of much of 1990s globalisation, the growing weight of multinationals and the formation of world markets in a liberal trading environment, might be faltering
* The economic retraction to national level trend pre-dates Trump and Brexit
* On the face of it this combination of trends might look positive
* The globalisation we often like, notwithstanding the homogenisation it brings with it—the closer worldwide integration of education, culture, knowledge and people on the basis of a common humanism, the Kantian ideal—continues, while the economic globalisation, which brought many problems, such as the undermining of living standards and product regulation, and vapid world brands—is slowing down. Good, we might say

**[Growing tensions between national public goods and global public goods in higher education?]**

* but it is not so simple. The wavering of world economic integration has facilitated nation-bound state agendas, weakened the pooling of sovereignty and the modest trends to regional and global governance, and contributed to the fracturing of a sense of common global interest that is more needed than ever. Perhaps this shows that in building a sense of common interest, we have relied too much on capitalist economies and currency and not enough on political processes, but that is the world we are now in
* Though it varies from country to country, significant elements in both national elites and national electorates no longer have a stake in international cooperation and this has facilitated to rise of nativism and the politics of anti-migration
* Global interest and nation-bound interest do not always coincide. People mobility in all forms, especially long-term migration, is on the fault-line between national and global. There is an unresolvable tension between the right to cross-border mobility—the right to go anywhere—and the right to national control at the border.
* In Europe this tension is exacerbated by a Middle East in flames and regional conflict, environmental collapse and the absence or break-down of viable state structures in parts of Africa, and by urban terrorism and the politics of security. The United States has a long border with a Mexico in which the state is failing, poverty seems endemic and much of the north of the country is wracked by drug violence
* Even without those inflammatory elements, the inherent tension between global rights and national sovereignty affects the mobility in higher education of both faculty and students and from time to time this tension shows itself
* One example is the continuing closure or part closure to foreign academic appointments, in many national systems. Countries in Europe vary markedly in their degree of openness and closure to merit-based mobility
* Another example is non-EU international student policy in the UK. By commercialising international education the UK has created a major export industry, one that also provides for rights of global mobility and generates other public good benefits through diverse engagement in more cosmopolitan universities. However, migration resistance in the UK electorate has forced the government to promise a major reduction in net migration, which is difficult to achieve. International students are temporary rather than permanent migrations but are included in the net migration count, and the Prime Minister has left them in the count because they are the easiest category to cut. A reduction of 30-40% in non-EU international student numbers has been on the table for a year. This has not been implemented yet but the regulation of student visas is unfriendly, and postgraduate work rights have been largely closed up. The government long supported this with data on international departures which implied a high rate of overstay by graduates. Figures like100,000 a year were bandied about. There’s more than one kind of fake news in the world. These data were recently revised and the government now acknowledges that at least 97% of graduates depart on schedule. But the government still has not removed international students from the migration count.
* International student policy in the UK parallels the more important policy on Brexit. Both policies indicate that in the more fractured global setting, neoliberal economic logic does not always apply. It can be trumped by bounded nationalism and nativism. This is a difficult setting for internationalised higher education institutions.

**[3. Shifting global geo-politics]**

* At the same time, the problems of Europe and North America are not shared everywhere
* In Asia, the size of the middle class in three of the world’s most populated nations—China, India and Indonesia—is growing with remarkable speed. Urban development is rapid and a driver of the advance of education.
* Economic globalisation continues to be seen in positive terms by most Asian governments. The government of China is less positive about communicative globalisation, though up to now the momentum for the internationalisation of higher education, especially research and science, has been maintained
* Rising Asia, especially rising China, poses a fundamental long term challenge to American global hegemony, especially but not only in East and Southeast Asia. So far there is no sign that the United States will consciously make the shift to power sharing with China, let alone move in the direction of a multi-polar world.

**[China champions open global markets]**

* A sign of the shifting balance is that China has taken up the role of champion of the global order in relation to economic globalisation, the role assumed by 1990s America, though China’s globalisation is primarily confined to economics

**[Investment in R&D, selected countries]**

* In research and higher education the shifting balance is spectacular. China has grown participation from 2% to 40% in one generation and now has the largest student population in the world. South Korea enrolls nine young people in ten. Participation is now growing rapidly also in India, pushing towards 30%, though mostly in small poor quality private colleges
* In research, in the Chinese civilizational sphere, China, Japan, South Korea, Taiwan and Singapore are building an R&D zone already much larger than the combined weight of Europe and the UK.

**[Number of science papers 2005-2014: USA, China, other East Asia]**

* It is now widely known that the total published scientific research in East Asia exceeds the United States and that China is poised to overtake American production in quantity terms during the next decade.

**[High citation papers, in top 10% of research field, in maths and physical sciences, 2012-2015 (Leiden data)]**

* What is less widely known is that in quality terms, in some though not all fields, China has achieved equivalence with the United States, in English language science, a phenomenal achievement
* The main priorities for research investment are the Physical Sciences and Engineering, including Mathematics and Complex Computing. These fields underpin strategic national development in communications systems, transport, urbanization, military hardware and advanced manufacturing
* The table lists the universities that lead the production of top research papers—high citation science—in these priority areas. China has more than half of the world’s top 15 universities in research on Mathematics and Complex Computing. Tsinghua is well ahead of all others with Singapore’s Nanyang University of Technology second. The highest placed American university is MIT which is fifth
* In the larger Physical Sciences and Engineering cluster, Berkeley and MIT are one and two but China has five of the top 15, the same as the United States
* Note that the two Singapore universities are each top 15 in both discipline clusters
* However, universities in China and the other East Asian countries are weaker in Biological and Life Sciences, and much weaker in research in Medicine, Psychology and the Social Sciences. The humanities are also comparatively neglected. From the viewpoint of the Kantian or Humboldtian university, the achievement is unbalanced

**[4. Social and economic inequality]**

* So East Asia and Singapore are booming in higher education and science, most other Asian countries are growing student numbers at a rapid rate; while at the same time, globalisation is patchy and contested, and national/global tensions are evident. Higher education is also affected by the growing social and economic inequality.

**[Income shares top 1% and lower 50%]**

* World poverty is reducing and inequality between countries has reduced. Inequality within two thirds of countries is increasing
* In many countries, stratified higher education systems, in which the elite universities are dominated by the affluent middle class, are implicated in worsening inequality
* A new wave of automation threatens to further hollow out the middle class
* Low wage incomes have fallen sharply in the US though holding up better in Europe
* Income inequality just keeps rising. No one has a solution, not within the framework of neoliberal fiscal policies, at least. Income inequality is increasing even in the Nordic world, though these countries retain their commitment to social solidarity, relatively flat income distribution and high quality universal public services

**[Most people see higher education, not stratified societies, as driver of graduate outcomes]**

* Most people see higher education as responsible to graduate outcomes, and this includes the inequalities between graduates from different social backgrounds
* The human capital myth, that higher education determines employability and salary levels—rather than being part of a cluster of influences and often not the most important—shapes expectations of institutions
* As participation expands while economic inequalities increase, the gap between expectations and performance can only grow, especially in mass higher education
* But performance measures like the UK Teaching Excellence Framework are locking higher education closer to those expectations

**[*slide with no heading, on inequality*]**

* In high participation higher education systems, all middle class families, and many other families, compete for the most favourable universities and professional degrees. Arguably, it is harder for a student from a poor family to enter a top university when the participation rate is 50% than when it was 15%
* Research on social mobility and stratification suggests that the only countries where social mobility through higher education is clearly advancing are those such as China where both the middle class and higher education are growing rapidly
* In countries with high inequality, including high rates of return to graduates—which signifies a large gap between the earnings of graduates and non graduates—the potential for mobility is inherently limited. High vertical stratification between institutions, in resources and status, makes matters worse
* The core idea that higher education is the key to more equal societies has faltered, whether equality is understood in terms of social opportunities, or social outcomes. At best, in the Nordic countries, relatively ‘flat’ and well resourced, inclusive higher education systems help to sustain the commitment to equality, but the tax structure, wage determination and the overall mix of public services are more important
* So we don’t create social justice, at least not by ourselves (though we are part of creating a potentially just society). But we do create –or augment—agency in students and graduates, capability on a massive scale, and many of the people whose agency we help to form are from families that did not have access to the augmented agency in previous generations
* However, higher education in some countries democratizes agency more effectively than it does in others

**[The extreme case? Social inequality in achieved college degrees, USA, 1970/2013]**

* In less egalitarian societies, perhaps the extreme case of higher education contributing to inequality is the American system.
* By age 24, the vast majority of students from families in the top income quartile have a college degree. Their position has improved significantly since 1970. At age 24 less than 15 per cent of students from families in the bottom half of the income distribution have college degrees and in the 43 year data period, the proportion of bottom quartile students with degrees advanced only for 6% to 9%

**[5. Trump and the new politics]**

* On top of fragmented globalisation and growing inequality we now have the new politics, the Trump era. This is not a bizarre aberration, it connects to the deep-seated nation/global tensions, and tensions generated by inequality and frustrated economic and social aspirations, and it could be transformative

**[Not the modernity that Immanuel Kant signed up for]**

* The new politics raises many concerns. One is the funding of national electoral campaigns by off-shore corporations with deep pockets, and cyber-intervention by foreign governments
* Another is the subversion of democracy by data mining companies that use the store of data on each person’s likes, desires and fears, and social media techniques for individualising messages, so that voter can be manipulated by pressing exactly the right emotional buttons
* The more general concerns are the increasing preponderance (on both political Right and political Left) of sectional identity politics and the concurrent weakening of a sense of the common interest; the trenchant attacks on science and expert judgment; and the degrading of public discourse
* In the United States, the public sphere as reality television has already partly replaced the Kantian public sphere of reasoned policy debate

**[Politics as reality television]**

* John Harris of The Guardian remarks that people’s exceptions are already low
* ‘In that context, even if he achieves next to nothing, the spectacle of a president endlessly provoking the liberal establishment, speaking to the prejudices of his electoral base, and putting on the mother of all political shows, has an undeniable appeal’

**[“And if everything is a circus…”]**

And if everything is a circus, who cares about the bread?’

**[Not a diversion from ‘real government’, a new kind of real government]**

‘Social media are dissolving the connection between everyday experience and political argument to the point that the latter often seems to take place in its own self-sealed universe, purely as an ever more hysterical kind of entertainment. And from that, no end of awful political consequences could follow’

**[“… what if it has gone, and there is no way of getting it back?”]**

‘We have a whole lexicon – rhetoric, presentation, ‘spin’ – for the supposedly ephemeral aspects of politics, as if beneath them lurks the noble stuff to which we can somehow return. But what if it has gone, and there is no way of getting it back?’

**[5. Trump and the new politics]**

* And again, higher education is implicated. Not just because Kantian rationality and public reason are central to its identity, more negatively, because of its socially differentiating character. As higher education expands the border between participation and non participation, which is also a border between mobile cosmopolitan agency and bounded agency, becomes more significant
* As participation expands, those *not* entering higher education are worse off than they were before. Why should they love higher education? The common public benefits are not apparent to them in their private domain, and education and graduates signify their exclusion. Better to debunk higher education, degrees and knowledge. Trump taps into this effectively, as did the Leave campaign in the Brexit referendum, and as does Orban in Hungary.

**[Higher education and political polarisation in the November 2016 US Presidential election]**

* In the Presidential election, the best predictors of how people would vote were not income or class, they were ethnicity (‘race’), whether they lived in large cities (in which case they voted for Clinton) or in small towns and rural areas (in which case they voted for Trump, and educational level—whether or not they attended college. Trump openly celebrated the ‘uneducated’ during the campaign.

**[Brexit and educational level, June 2016 referendum]**

* Likewise in the case of Brexit. The predictors were first, whether people lived in large cities, or small towns and rural areas, and second, whether they had degrees.
* These factors are related. Like global connections, degree holders tend to concentrate in cities. In the UK, 26% of degree holders supported Brexit, but 78% of people without qualifications. Young people, the most educated generation in UK history, more at ease with mobility and multiple identity, overwhelmingly voted for the UK to remain in the EU. Opinion polls also show that young people have little negative concern about migration

**[EU and UK higher education]**

* The UK higher education sector was overwhelmingly opposed to Brexit. In university towns voting for Remain was as high as 80%
* Arguably the weakening of ties between UK higher education and the rest of Europe marginally weakens the capacity of non-UK European institutions, and impairs the EHEA and ERA as global projects, but threatens to be catastrophic for UK. Unlike most of the UK the university sector was thoroughly integrated into Europe, especially through the research programs and through personnel recruitment. I know that in my own research centre, in open selection of postdoc researchers, seven of the eight positions have been won by non-UK EU citizens

**[7. Flow-ons for higher education]**

* So let me move to conclusions.
* The deepest problem facing the higher education sector are that the two core rationales which have sustained its many social missions—that of modernisation in the form of Bildung and the rational public sphere, and that of the highway to meritocratic social mobility—are now in question. The first is fundamentally undermined by the new politics, which has set itself against not only the extension of higher education but expertise and science. The second is constrained by the limits of what near universal systems can achieve, and undermined by growing inequality and institutional stratification in many countries. Arguably, stratification has more pernicious effects on social equality than do tuition charges
* At the same time we have allowed ourselves to be boxed in by human capital theory and ‘employability’, which promise a grand social role for us but augment the legitimation problem. To achieve a more measured, balanced understanding of the relation between education, work and social outcomes will be difficult
* Legitimation problems play into public funding problems
* And in many though not all countries, attenuated public funding, plus the strong social drive to expand opportunities, has led to over-reliance on private and for-profit institutions (generating inevitable quality problems), under-funded public institutions like the community college sector in the United States, and poor, fragmented system design. In the majority of systems, research-intensive universities are travelling much better than mass higher education institutions. Weak mass institutions, public or private, further undermine Bildung, social mobility and employability.

**[8. Final thoughts]**

* So the rebuilding of the public compact of higher education is essential. In most countries, though not all European countries, this requires a shift in the private/public balance with greater focus on the common public benefits created by higher education. Defining and measuring the collective benefits of higher education—to the extent they can be measured—is essential to this shift
* There is some hope that the UK is now moving away from isolationism and even a tiny possibility that the Brexit referendum will be overturned. But we cannot pin all our faith on better political weather, which like all weather is a chancy thing
* It is essential to move forward rather than backward on the core matters of our work and identity that society has entrusted us to uphold and advance. In this we have many potential allies, because we have contributed to the lives of many. I mean the open knowledge system and global cosmopolitanism, the value of science and of public reasoning about culture and society, social inclusion, social equality, the value of face-to-face learning in real institutions, the central role of states and public investment in building coherent multi-task higher education systems
* And of course institutional autonomy, relative though it is to the public interest, and academic freedom.
* We need more public intellectuals to advance these values. I believe this is a task that we all can share.

**[Thank you]**

* Thank you for listening and I hope we have a little time for discussion.