

## **The Power Sleep<sup>1</sup>: on Chinese students and innovation**

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**This article examines enduring concepts about 'the Chinese' that were first established in the eighteenth and nineteenth centuries and became part of international eugenics discourse. While recognising an ambivalence in the literature – which variously identifies Chinese technological genius or an 'intellectual turbidity' ascribed to nature and/or nurture – we trace the legacy of prejudice in contemporary global debates about the Chinese capacity to innovate. As educators UCL must face up to this legacy.**

*Chineseness, Race, Pedagogy, Eugenics, Power Sleep, Innovation*

When I (Lo) had just arrived in the UCL fold 15 years ago, as part of the contract for fledgling lecturers I had to take an MA Teaching and Learning module at the Institute of Education. I was not very engaged with the course (probably to my detriment), until I read an article on the Reading List which set me on fire... The article suggested that Chinese learners, exclusively, had a kind of incapacity to do the reflective learning considered the sole route to 'innovation'. I wrote an impassioned polemic in response, the only A that I pulled in on that course.

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<sup>1</sup> The racial characterisation of a nation's capacity for sleep is evident if one googles images for 'sleeping Chinese' <http://goo.gl/5CGsYc> OR 'sleeping English' <http://goo.gl/uZSs1l>

I was gripped by a vision of that author teaching a class of silent young Chinese girls – educated in didactic instructional style and taught undying Confucian respect for teachers – who had not yet found their voices, or had that enviable ability to catnap in class (now called a 'power sleep'), and foolishly supposing their behaviour was evidence that Chinese students had no independent critical faculties.

Now I can't find that particular article, or the essay, so I might have imagined it all! But I remember various theories about the nature of Chinese innovation that I articulated then. And in any case it doesn't matter, because this image of Chineseness itself is in the ether, along with lots of other old chestnuts about what Chinese – or 'Confucian heritage culture' (CHC)<sup>2</sup> students – are, or aren't, can or can't do.<sup>3</sup> A quick Google for 'Chinese learning style' yielded 60,400 results.<sup>4</sup> And in a speech just this March, USA Vice-president Joe Biden asserted:

China — and it's true — is graduating six to eight times as many scientists and engineers as we have. But I challenge you, name me one innovative project, one innovative change, one innovative product that has come out of China.<sup>5</sup>

How did this perception become so embedded in our – all of our – imaginations?

The problem lies with how easily interpretations draw on assumptions about nature rather than nurture, and in practice how assumptions about both overlap. The neat binary contrast

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<sup>2</sup> See J. Wang, 'Confucian Heritage Cultural Background (CHCB) as a Descriptor for Chinese Learners: The Legitimacy', *Asian Social Science* 2013, 9, 10: 105–113; T. Thi Tuyet, 'Is the Learning Approach of Students From the Confucian Heritage Culture problematic?', *Educational Research for Policy and Practice* 2013, 12, 1: 57–65.

<sup>3</sup> A few examples: S. Chan, 'The Chinese Learner – A Question of Style', *Education & Training* 1999, 41.6, 7: 294–304; S. Joy and D. A. Kolb, 'Are There Cultural Differences in Learning Style?', *International Journal of Intercultural Relations* 2009, 22, 1: 69–85; T. Lubart, 'Cross-Cultural Perspectives on Creativity', in J. C. Kaufman and R. J. Sternberg eds., *The Cambridge Handbook of Creativity*, New York, Cambridge University Press, 2010, 265–27; R. E. Nisbett, *The Geography of Thought: How Asians and Westerners Think Differently... and Why*, New York, The Free Press, 2003; S. Lau, A. N. N. Hui and G. Y. C. Ng eds., *Creativity: When East Meets West*, Singapore, World Scientific Publishing Co., 2004; R. M. Abrami, W. C. Kirby and F. W. McFarlan, 'Why China Can't Innovate', *Harvard Business Review* 2014, 92, 3: 107–111; N. A. Kwang, *Why Asians Are Less Creative Than Westerners*, Singapore, Prentice Hall, 2001

<sup>4</sup> Search done 4 November 2014. Without quotation marks, the number of hits rises to almost 50 million.

<sup>5</sup> 'Biden: Name me one innovative product from China', *Chicago Sun-Times*, 28 May 2014, accessed on 4 November 2014.

becomes more complex the more you look at it. I'm an historian, so have to build an historical context for this.

The jury has been out for centuries on the matter of 'the Chinese capacity for invention': opinion has oscillated, with, at one extreme, the exotic accounts of Westerners travelling to Asia in the Age of Discovery, who marvelled at Chinese technology, their pottery, their tea, their use of botanicals. Here is Jacob de Bondt (1598–1631), a Danish Surgeon General with the Dutch East India Company, eulogising medicine with needles:

The results (with acupuncture) in Japan which I will relate surpass even miracles. For chronic pains of the head, for obstructions of the liver and spleen, and for pleurisy, they bore through with a stylus made of silver or bronze and not much thicker than the strings of a lyre. The stylus should be driven slowly and gently through the above-mentioned vitals [the liver and the spleen] so as to emerge from another part, as I have seen in Java.<sup>6</sup>

Seventeenth- and eighteenth-century Jesuit reports of China's meritocracy had a direct influence on French Enlightenment thinkers and on people promoting revolution in France. For Voltaire, a lifelong sinophile, China was 'une nation qui passe pour être la plus sage et la mieux policée de l'univers'.<sup>7</sup>

Meanwhile on the other side of the divide, Voltaire's fellow encyclopaedist Diderot regarded the much-lauded stability and tolerance of Chinese society and government as a double-edged sword – evidence that the Chinese lacked intellectual curiosity, and the ability and impulse to innovate. He concluded his entry on Chinese philosophy in the *Encyclopédie* with the damning pronouncement that the Chinese 'in short lack the genius for invention and discovery which is displayed so brilliantly in Europe today...'

[...] en un mot, qu'ils n'ont pas le génie d'invention & de découvertes qui brille aujourd'hui dans l'Europe: que s'ils avoient eu des hommes supérieurs, leurs lumières auroient forcé les obstacles par la seule impossibilité de rester

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<sup>6</sup> J. de Bondt, *Historia Naturalis et Medica Indiae Orientalis* (1658), Book V, 'Certain miraculous works of Nature which future medical researchers must investigate further'. As quoted in G. Lu and J. Needham, *Celestial Lancets: a History and Rationale of Acupuncture and Moxa*, London, Routledge, 2002, 270. For a discussion of the early modern European vogue for Chinese science and technology, see R. Bivins, *Acupuncture, Expertise, and Cross-Cultural Medicine*, New York, Palgrave, 2000.

<sup>7</sup> Voltaire, *Lettres philosophiques; Derniers écrits sur Dieu*, G. Stenger, ed., Paris, Flammarion, 2006, Letter 11, 122.

*captives; qu'en général l'esprit d'orient est plus tranquille, plus paresseux, plus renfermé dans les besoins essentiels, plus borné à ce qu'il trouve établi, moins avide de nouveautés que l'esprit d'occident. Ce qui doit rendre particulièrement à la Chine les usages plus constans, le gouvernement plus uniforme, les lois plus durables; mais que les sciences & les arts demandant une activité plus inquiète, une curiosité qui ne se lasse point de chercher, une sorte d'incapacité de se satisfaire, nous y sommes plus propres, & qu'il n'est pas étonnant que, quoique les Chinois soient les plus anciens, nous les ayons devancés de si loin.*<sup>8</sup>

The German philosopher Herder went further: he famously described the Chinese empire as 'an embalmed mummy, painted with hieroglyphics and wrapped up in silk, its inner circulation like the life of a creature in hibernation'<sup>9</sup>.

This perceived inferiority was biologised by missionary doctors who observed a 'degeneration of the Chinese race'. In their wonderful and outrageous *The Diseases of China*, Jeffreys and Maxwell sum up their long experience as medical missionaries: 'Our aim is to present... the special diseases...[of] this Empire... with constant and special reference to their modifications as brought about by the hygienic habits and racial peculiarities of the people of China'.<sup>10</sup> In their opinion 'China has long been known as the world's largest storehouse of physical freaks'<sup>11</sup> and 'tumours are a sort of specialty of China'.<sup>12</sup>

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<sup>8</sup> D. Diderot and J. le Rond d'Alembert eds., *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers*, ed. Robert Morrissey, University of Chicago, ARTFL Encyclopédie Project, Spring 2013, Vol. 3, 'CHINOIS, Philosophie des', accessed 4 November 2014.

<sup>9</sup> J. G. Herder, *Ideen zur Philosophie der Geschichte der Menschheit* [1787], Part 3, Book 11, in Herder, *Sämmtliche Werke*, Bernard Suphan ed., Berlin, Weidmannsche Buchhandlung, 1909, 13.

<sup>10</sup> W. H. Jefferys and J. L. Maxwell, *The Diseases of China, Including Formosa and Korea*, Shanghai, A.B.C. Press, [1910] 1929, vii.

<sup>11</sup> *ibid.*, 303.

<sup>12</sup> *ibid.*, 451.

CHAPTER XII.

DISEASES PECULIAR TO CHINA.

**Freaks.**—China has long been known as **the world's largest storehouse of physical freaks**, and we are familiar with the expressions, Chinese giant, Chinese dwarf, and so on, and remember a good proportion of Chinese freaks in our home dime museums and circuses. This is probably owing to the simple fact of the four hundred millions to choose from. We have no grounds for supposing that there is any special reason for peculiar development along these lines. A contributing factor to the presence of Chinese "curios" in foreign shows is the well-known delight which the Chinese themselves take in their freaks, and the fact that they get them together in travelling exhibits for their own edification and amusement. As we write, there is at the present time in Shanghai such a troupe on exhibition for which a fairly large entrance fee is charged. The two chief attractions are a truly enormous hydrocephalus and a boy without legs. **McGinty**, the well-known dwarf who travelled with various circuses throughout the world, is now a man well on in life and permanently resident in Shanghai, his occupation being the amusement of guests at the Astor House, where he dresses as a porter and "chin-chins" the globe trotters. He comes to the Hospital occasionally for treatment, or to introduce a friend.



FIG. 126.—McGinty, a well known Chinese dwarf, at fifty years of age. (By Jefferys.)

We have been struck with the unusually large proportion of **limbs with accessory digits**, the commonest deformity being the accessory thumb, which occasionally grows at right angles to the carpo-metacarpal joint. A nurse in one of our hospitals has a double thumb, the twins

Figure 1: W. H. Jefferys and J. L. Maxwell, *The Diseases of China*

The American missionary Arthur H. Smith devoted his international bestseller, *Chinese Characteristics* (first published in Shanghai in 1890) to illustrating Chinese incapacities, seamlessly eliding nature and culture so that they mutually reinforce each other in constructing the figure of the ineducable oriental. The characteristics that Smith identified

include lack of hygiene, insincerity, contempt of foreigners, 'absence of nerves' and 'intellectual turbidity'.

Smith opines that the Chinese language itself, its lack of gender-specific pronouns and tenses to indicate time, renders it incapable of conveying intellectual ideas and so induces intellectual and spiritual torpor<sup>13</sup>, just as the Chinese climate causes somnolence...

We are not about to complain that the Chinese language cannot be made to convey human thought, nor that there are wide ranges of human thought which it is difficult or impossible to render intelligible in the Chinese language (though this appears to be a truth), but only to insist that such a language, so constructed, invites to 'intellectual turbidity' *as the incandescent heats of summer gently woo to afternoon repose* [our italics].<sup>14</sup>

In other words, he is alluding to 'the power sleep', that extraordinary after-lunch ten minute doze from which students wake up refreshed and ready for the world. Elsewhere in his book, Smith explicitly evokes an image of a slumbering army of potentially threatening Chinese: 'It would be easy to raise in China an army of a million men – nay, of ten millions – tested by competitive examination as to their capacity to go to sleep across three wheelbarrows'.<sup>15</sup>

Smith reflects common late-nineteenth and twentieth century assumptions of environmental determinism that were used to justify imperialism and racism, and he heralds the emerging 'scientific' hierarchies of nature that set the scene for eugenics.

Historical explanations have picked up on this question of Chinese incapacity for innovation in different ways. In the 1850s Marx and Engels explored notions of an 'Asiatic mode of production' and 'Oriental Despotism', which became linked to non-developing societies.<sup>16</sup>

Joseph Needham, in his early work, indicted China's 'bureaucratic feudalism' of 2,000 years: the agricultural exploitation of peasants by the civil service through tax collection for state-

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<sup>13</sup> The notion of the stultifying effects of the Chinese language and script has not gone away. See W. C. Hannas, *Encounters with Asia: Writing on the Wall: How Asian Orthography Curbs Creativity*, Philadelphia, University of Pennsylvania Press, 2011.

<sup>14</sup> A. H. Smith, *Chinese Characteristics*, Shanghai, North China Herald, 1890, 131.

<sup>15</sup> *ibid.*, 114.

<sup>16</sup> For discussions of the Asiatic Mode of Production (AMP), see for example L. Krader, *The Asiatic Mode of Production*, Assen: van Gorcum, 1975; T. Brook, ed., *The Asiatic Mode of Production in China*, Armonk, M. E. Sharpe, 1989.

organised defence and public works, did not, he argued, encourage innovation.<sup>17</sup> Gathering an international team of collaborators to realise the monumental *Science and Civilisation in China* series, Lu and Needham framed what has come to be called The Needham Question: Why were Chinese brilliant at invention but not abstract thinking?<sup>18</sup> Why did they not have anything equivalent to the 'Enlightenment' or to a 'Scientific' or 'Industrial' Revolution? Or why, in the eighteenth century, did things happen in Europe so that it pulled ahead in mathematically based modern science? But I am inclined to agree with Mark Elvin who, writing an envoi to that extraordinary and long-lived project, argues: '[H]ow the flower of science grew from one heap of intellectual compost and not from the other needs more discriminating analysis than... anyone yet... offers.'<sup>19</sup>

One of our problems as educators of young Chinese in the UK is that our students have also inherited prejudices about their own 'civilisation'. Many of the greatest twentieth-century Chinese reformers, childhood heroes of our current student population, themselves believed in the degeneration of the Chinese race. For example, Lu Xun 鲁迅(1881–1936), probably China's most famous revolutionary author, was a great admirer of Arthur Smith's *Chinese Characteristics*, which he first encountered in Japanese translation during his student days.<sup>20</sup> Lu Xun studied Western science and medicine in Japan in the German medical system which was permeated with eugenical ideas.<sup>21</sup> At the time he was hoping to contribute to the health of the Chinese nation as a physician. But he changed his mind, apparently after watching

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<sup>17</sup> J. Needham, 'On Science and Social Change' (first published in 1946), in *The Grand Titration, Science and Society in East and West*, London: George Allen & Unwin, 1969, 123–53; see also J. Needham, K. G. Robinson and Ray Huang, *Science and Civilisation in China*, Vol. VII, Part 2, *General Conclusions and Reflections*, Cambridge, Cambridge University Press, 2004.

<sup>18</sup> M. Hanson, 'Needham's Heavenly Volumes and Earthly Tomes', *Early Science and Medicine*, 2007, 12: 337–364.

<sup>19</sup> M. Elvin, 'Vale atque Ave', in Joseph Needham et al., *Science and Civilisation* Vol. VII, Part 2, *General Conclusions and Reflections*, Cambridge, Cambridge University Press, 2004, xlii.

<sup>20</sup> L. Liu, *Translingual Practice: Literature, National Culture, and Translated Modernity, China 1900–1937*, Stanford, Stanford University Press, 1995, Part 1, ch. 2, 'Translating national character: Lu Xun and Arthur Smith', 45–76.

<sup>21</sup> B. Andrews, *The Making of Modern Chinese Medicine, 1860–1960*, Vancouver, University of British Columbia Press, 2014, 146. At the end of the century the Japanese government sponsored doctors to study in Austria and Germany. This resulted, for example, in a society for racial hygiene in Japan, founded by the German-trained physician Nagai Hisomu (1876–1957), see J. Robertson, 'Eugenics in Japan: Sanguinous Repair', in A. Bashford and P. Levine, eds., *The Oxford Handbook of the History of Eugenics*, Oxford, Oxford University Press, 2010, 430–448.

newsreel of the Russo-Japanese war, revolted by the apathy of the Chinese farming people he saw standing by while their territory was annexed. In the preface to his first short story collection, *Nahan* 呐喊 (Call to Arms), he shockingly comments:

The people of a weak and backward country however strong and healthy they might be, could only serve to be made examples of or as witnesses of such futile spectacles, and *it was not necessarily deplorable if many of them died of illness*. The most important thing, therefore, was to change their spirit.<sup>22</sup>

He finally chose literature and philosophy over medicine as the most powerful means to change the spirit of the people. But his hopes for cultural reform were mixed up with a belief that modernisation could not be achieved without strengthening Chinese bodies. This belief was shared, for instance, by Hu Ding'an 胡定安 (1898–?), German-trained director of the Nanjing Health Bureau.<sup>23</sup> Lu Xun had been reading Chinese translations of Darwin, T.H. Huxley's *Evolution and Ethics* (survival of the fittest), and Herbert Spencer, and he concluded (in many articles that ironically coincided with the rise of the Hitler Youth) that China was a sick nation.<sup>24</sup> In one early article, he declares provocatively: 'My fellow countrymen, to whom servility has become second nature, will degenerate day by day through natural selection through apes, birds, shellfish, seaweed and finally to a lifeless thing.'<sup>25</sup>

Pre-existing notions of race in China would have meant that the imagination of Lu Xun and his contemporaries was fertile territory for European ideas about national character and eugenics.<sup>26</sup> 'If he is not of our race, he is sure to have a different mind', says the fourth-century

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<sup>22</sup> Preface to *Nahan* 呐喊 (Call to Arms), 1923. Translation quoted from Lu Xun, *Selected Works*, tr. X. Yang and G. Yang, Vol. 1, Beijing, Foreign Languages Press, 1980, 35.

<sup>23</sup> Hu studied Public Health at Berlin University under Alfred Grotjahn (1869–1931), influential advocate of social hygiene and eugenics; see Y. J. Chung, 'Eugenics in China and Hong Kong: Nationalism and colonialism, 1890s–1940s', in Bashford and Levine 2010, 261; H. L. Lei, *Neither Donkey nor Horse: Medicine in the Struggle Over China's Modernity*, Chicago, Chicago University Press, 2014, 354, 136; see also Zhou Xun, 'Fitness and Modernity in Late Nineteenth and Early Twentieth Century China', in V. Lo, ed., *Perfect Bodies: Sport, Medicine and Immortality, Ancient and Modern*, London, British Museum Press, 2014, 143–156.

<sup>24</sup> See, for example, J. R. Pusey, *Lu Xun and Evolution*, Albany, SUNY Press, 1998.

<sup>25</sup> In 'Zhongguo dizhi lüelun' 中国地质略论 (A Brief Introduction to the Geology of China), published in *浙江潮 Zhejiang chao*, October 1903, under the pseudonym 索子 Suozi. Translation quoted from Andrews, *The Making of Modern Chinese Medicine*, 248.

<sup>26</sup> F. Dikötter, *The discourse of race in modern China*, Stanford: Stanford University Press, 1992; especially Chapter 1, 1–30, 'Race as culture: historical background'; on intellectual influences on Lu Xun and his contemporaries, see V. Schwarcz, *The Chinese Enlightenment*, Berkeley: University of California Press, 1986. For a summary of the history of eugenics in late-Qing and Republican China, see Y. J. Chung 2010.

BCE chronicle *Zuozhuan* 左传<sup>27</sup>. It was and remains common in all parts of the sinophone world to hear talk of racial hierarchies.

While writing that essay for the Institute of Education fifteen years ago, I was spending a lot of time at the Needham Research Institute, the home of the Needham project and the *Science and Civilisation in China* series. The work on Chinese innovation done by Joseph Needham, his last wife Lu Gwei-djen 鲁桂珍, and their team has been popularised piecemeal. We all now know that the Chinese invented printing, gunpowder and the nautical compass – Francis Bacon's three markers of modernity that 'changed the face and condition of things all over the globe: the first in literature; the second in the art of war; the third in navigation'<sup>28</sup> (although it is often imagined the Chinese used gunpowder only for fireworks). And we know that the magnetic compass, paper and movable type were in use in China well before they were in Europe – all part of what Mark Elvin claims as the 'astonishing riches of practical invention'<sup>29</sup> that emanated from what we can identify as the 'Chinese geographical' or perhaps a definable 'cultural' area.<sup>30</sup>

Be afraid! The 'sick man of Asia' has woken refreshed from his power sleep. As Christopher Cullen, former director of the Needham Research Institute, pointed out on *In our Time*, we seem to have a problem with seeing China in anything but current terms, so that very shortly we will be looking for the historical reasons for China's success in all these areas of innovation, rather than its failure, as it becomes the world's largest economy and investor in science research over the next 5–10 years.<sup>31</sup>

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<sup>27</sup> *Fei wo zulei, qi xin bi yi* 非我族类，其心必异. Translation from Dikötter, *The discourse of race in modern China*, 3. The translation of *zulei* with the modern English term 'race' is open to debate; for a critique, see P. Goldin, 'Steppe Nomads as a Philosophical Problem in Classical China', in P. L.W. Sabloff ed., *Mapping Mongolia: Situating Mongolia in the World from Geologic Time to the Present*, Philadelphia, University of Pennsylvania Press, 2011, 236, 10.

<sup>28</sup> F. Bacon, *The New Organon*, Lisa Jardine and Michael Silverthorne, ed. and trans., Cambridge, Cambridge University Press, 2000, 100.

<sup>29</sup> M. Elvin 2004, xxiv.

<sup>30</sup> A. L. Heinrich, *The Afterlife of Images: Translating the Pathological Body Between China and the West*, Chapel Hill, Duke University Press, 2008; Dikötter 1992, Ch. 1.

<sup>31</sup> 'In our Time: The Needham Question', *BBC Radio 4*, first broadcast 19 October 2006, accessed 4 November 2014.

Yet sections of the Chinese government<sup>32</sup>, Chinese educationists<sup>33</sup>, and Chinese business circles are all still gripped by beliefs about the Chinese incapacity to innovate and are funding solutions to the perceived problem. Still, in large part, this is the legacy of early twentieth-century eugenic and racial degeneration theories shared at home in China and abroad.

So can Chinese innovate? We should be embarrassed to ask this question.

What does this have to do with UCL?

Nowadays the debate is more respectably framed in a discourse of culture, of nurture rather than nature, and is oriented towards reforming pedagogical styles to encourage Chinese inventiveness. But as teachers, we must remain vigilant about any assumptions that essentialise, that nationalise, 'Chinese' capacities for learning. Faced with what are frequently complex issues with language and expression, or unfamiliarity with voicing 'an argument' UCL style, or public performance anxieties, it is all too simple to fantasise about general Chinese problems with innovation. The familiar tropes of the dead weight of Chinese history, paternalistic hierarchies and the enduring influence of the ten-centuries-old imperial examination system easily slide into a suspicion that, actually, culture is an expression of an immutable nature.

Arthur Smith's caricature of a sleeping army of torpid Chinese stultified by rote learning is grotesque, but it still has echoes in the global imagination. There may be difficulties negotiating UCL's academic cultures for any cohort of foreign students, with some features related to their own national education systems. But not unlike Arthur Smith, we are often deluded by styles of expression into reading essays and dissertations superficially. We must beware of seeing our 2000 Chinese students as a uniform army (sleeping or otherwise), rather than individuals with unique problems requiring both cultural investment and individualised solutions. Our students who identify themselves as Chinese come from vastly different places

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<sup>32</sup> See 'China's Twelfth Five Year Plan (2011–2015) – the Full English Version', British Chamber of Commerce in China, accessed 30/11/2014.

<sup>33</sup> See W. Pang and J. A. Plucker, 'Recent Transformations in China's Economic, Social, and Education Policies for Promoting Innovation and Creativity', *The Journal of Creative Behavior* 2012, 46, 4: 247–273.

on the mainland of China, from Taiwan, not to mention South-east Asia, and then there are all those ABCs and BBCs<sup>34</sup> as we call ourselves. Assumptions about racial or at least cultural hierarchies still shape perceptions of ability in educators and learners alike. I'm not an expert in education theories, let alone the History of Eugenics, but I can recognise that UCL and IOE urgently need to invest more in research that helps us to challenge our assumptions about nature and nurture, and about national, cultural and individual characteristics. So here's looking at you.... UCL!

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<sup>34</sup> American Born Chinese and British Born Chinese.