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Higher education, economic inequality and social mobility: implications for emerging East Asia

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Abstract. Higher education systems in the Chinese civilizational zone (East Asia) are rapidly improving in quantity and quality, associated with the growth of middle classes and absolute social mobility. But are they contributing to more equal opportunities between students with different backgrounds, and greater relative social mobility? The article reviews the case of the United States, where expansion of the middle-class growth and social mobility via education in the 1950s/1970s was followed in the 1980s and after by a marked increase in inequality in incomes and higher education, and less social mobility. Will this same reversal occur in China and Korea?

Keywords. higher education; participation; educational equality; social mobility; United States; China

1. Introduction

In discussion of higher education, the terms ‘participation’ and ‘equity’ are often joined. Yet in practice they diverge. Participation in higher (or tertiary) education¹ is increasing rapidly in most countries. Higher education is becoming more socially inclusive. Yet is the increase in social inclusion contributing to more equal societies, in the sense that the social backgrounds of young people are less influential than before? Are equalising higher education systems broadening the base for upward social mobility—or are the chances of poor students entering the elite little or no better than before? The growth of middle-income nations is leading to less inequality *between* countries, but *within* two thirds of countries, incomes are becoming more unequal (Milanovic, 2011); and amid the World-Class University (WCU) movement (Salmi, 2009), many higher education systems are more vertically stratified, with a larger ‘stretch’ in status and resources between top universities and other higher education institutions (HEIs). Elite universities tend to be dominated by students from advantaged backgrounds, blocking potentials for greater social mobility, though their social composition varies from case to case.

This article explores the intersection between education growth, and social and economic equality/inequality, focusing on the dynamics of on one hand the United States, on the other hand the fast-emerging systems of higher education in the Chinese civilizational zone (‘East Asia’), focusing primarily on China itself, with some remarks about South Korea. The discussion is informed by the economic history approach of Thomas Piketty in *Capital in the 21st Century* (2014), and the notion of education as a positional good, whereby the education system functions as a system of social selection in which opportunities are allocated between families (Marginson, 2016). This raises questions such as: Does social inequality inhibit equal access to higher education? Does inequality in the higher education sector contribute to the larger pattern of social inequality; and more sharply, is higher education responsible for the growing inequality in many countries? At this time, there is a lack of sufficient data on social mobility in China and elsewhere in East Asian countries, including the role of higher education in social equality/inequality and social mobility, with which to reach definite conclusions. The article is essentially speculative and aimed at encouraging discussion.

¹ ‘Tertiary education’ in the standard UNESCO and OECD data sets (UNESCO, 2015; OECD, 2014a) includes both Type 5A degrees of three years or more and shorter Type 5B programs of two years fulltime equivalent, for example in North American community colleges. In this article ‘higher education includes all Type 5 programmes, i.e. it follows the North American usage.

Section 2 considers the growth of participation on a worldwide and comparative regional basis, noting trends since 1970 in East Asian systems, which provides the backdrop for discussion of the relationship between participation and social equality/inequality. Section 3 and 4 discuss economic inequality, the dynamics of social mobility and higher education in the OECD nations and the United States, noting the surge in income inequality in the United States since 1980. To what extent is the higher education system implicated in the dramatic increase in inequality? Recognising that all national cultures differ to at least some extent, but also that one historical trajectory may be suggestive for others, what can we learn from the American experience? Section 5 returns to East Asia. It discusses the distinctive social dynamics of higher education in the East Asian setting, with the main discussion about inequality and stratification in China. Section 6 provides summary conclusions.

2. High participation systems (HPS) in higher education

In the last two decades there have been two major changes in the worldwide higher education setting: the accelerating growth of participation, especially since the mid 1990s; and the WCU movement and spread of research capacity across more and more countries.

2.1 Worldwide participation growth

In 1970, 10.0 per cent of the world school leaver age cohort enrolled in tertiary education of two years or more. Higher education was mostly a small elite sector, with most graduates becoming professionals or managers. The Gross Tertiary Enrolment Ratio (GTER) exceeded 15 per cent of the school leaver age cohort in only 19 nations in 1971, led by the United States mass higher education system, with a GTER of 47.0 per cent. Two generations later mass education was the global norm, with 32.9 per cent of the school leaver age cohort entering higher education, and graduates working in a wide range of occupations across and down the labour markets. No less than 102 countries had a GTER of 15 per cent and the GTER exceeded 50 per cent in 51 countries, led by South Korea at 98.4 per cent (UNESCO, 2015).

Table 1²

Gross Tertiary Enrolment Ratio (GTER) by world region: 1970, 1980, 1990, 2000 and 2013

	1970	1980	1990	2000	2010	2013
	%	%	%	%	%	%
World	10.0	12.3	13.6	19.0	29.3	32.9
North America and Western Europe	30.6	38.5	48.6	60.0	76.9	76.6
Central and Eastern Europe	30.2	30.4	33.9	42.8	67.9	71.4
Latin American and the Caribbean	6.9	13.3	16.9	22.8	40.9	43.9
East Asia and the Pacific	2.9	5.1	7.3	15.4	27.3	33.0
Arab States	6.0	9.9	11.4	18.6	25.5	28.1
Central Asia	n.a.	24.4	25.3	22.0	26.7	26.1
South and West Asia	4.2	4.5	5.7	8.7	17.4	22.8
Sub-Saharan Africa	0.9	1.8	3.0	4.4	7.7	8.2

Source: Table prepared by author, using data from UNESCO, 2015.

The regional data in Table 1 tell the story. Since 1990 the world level GTER has increased at a rate of 1 per cent a year, surging in all regions except Central Asia. High Participation Systems (HPS) of higher education are the new normal, no longer confined to North America, Western Europe, Russia, Australasia and Japan. The surge in enrolment has affected nearly every emerging nation with a GDP of over \$5000 USD per head (Marginson, 2016). This does not mean that all those who enroll receive a tertiary education of equal standard, or of adequate quality. High education is stratified, between and within countries; in resources, status and quality of learning; from research-intensive universities to ‘diploma mill’ colleges.

The growth of participation has been accompanied by the spread of research capacity. In many countries, policy focuses on building or enhancing WCUs, research universities strong enough in cited science papers to figure in global rankings (ARWU, 2015). WCUs are now necessary to modern states, but the WCU movement is accompanied by the under-funding and/or under-managing of mass higher education in many countries. A range of expedients have emerged for fostering cost-shared participation: tuition regimes in public HEIs despite negative effects on social access; unregulated private sectors with under-qualified staff and poor upward transfer rates, for example India, Brazil and the Philippines; devolution to for-profit providers, despite their poor completion and employability record in the US (Mettler, 2014); and teaching-lite forms of distance and online learning, such Mass Open Online Courseware (MOOCs) in place of institutional education. These expedients have the potential

² n.a. = data not available.

to enhance vertical social stratification in higher education, with a bifurcation between middle-class dominated WCUs and large mass higher education sectors of limited value. Only in countries that keep vertical stratification within bounds and fund mass public education adequately can higher education make a broad-based contribution to social mobility.

2.2 East Asia

Aggregated regional participation in East Asia and the Pacific is driven by trends in China. As Figure 1 indicates, the GTER in China was very low in the 1980s in comparative terms, at only 2-3 per cent, but growth accelerated from the late 1990s, with both state-sanctioned supply and middle class demand increasing very rapidly. The national GTER was almost 30 per cent in 2013 (UNESCO, 2015). In Beijing and Shanghai regions it exceeds 60 per cent, though it is below 20 per cent in Yunnan and Tibet (Yang, 2014). All other systems in East Asia,³ aside from Vietnam, have GTERs above 50 per cent. Figure 1 sets down trends in participation by Asia-Pacific country. Continuous data are not available for all systems for all years. UNESCO does not recognise Taiwan but its GTER is second highest in the region, behind only South Korea (CIA, 2015). Data are not provided by Singapore but its GTER is similar to that of Hong Kong SAR. The GTER is a ratio between total enrolments and the school leaver age cohort. In systems with net inward student migration or significant mature age enrolments the ratio increases. South Korea has exceptionally high age cohort participation plus mature age students, pushing the ratio over 100 per cent in some years.

The focus on WCUs has been especially important in East Asia. China, Japan, South Korea and Singapore have all implemented substantial investment programs, which have been generally successful in lifting global research performance (Altbach and Salmi, 2011). East Asia also uses horizontal systemic diversity. South Korea and Taiwan have binary systems, with technical and academic universities. South Korea and Japan each have a small number of high status private HEIs, with the bulk of enrolments in mass private sectors. Growth in China is mostly in second and third tier public HEIs. In 2014 the creation of a new sector of 600 vocational HEIs was announced (Postiglione, 2014).

³ In this paper 'East Asia' refers to the higher education systems with a heritage in Chinese civilisation, i.e. Korea, Japan, Singapore, Vietnam and all of the Chinas.

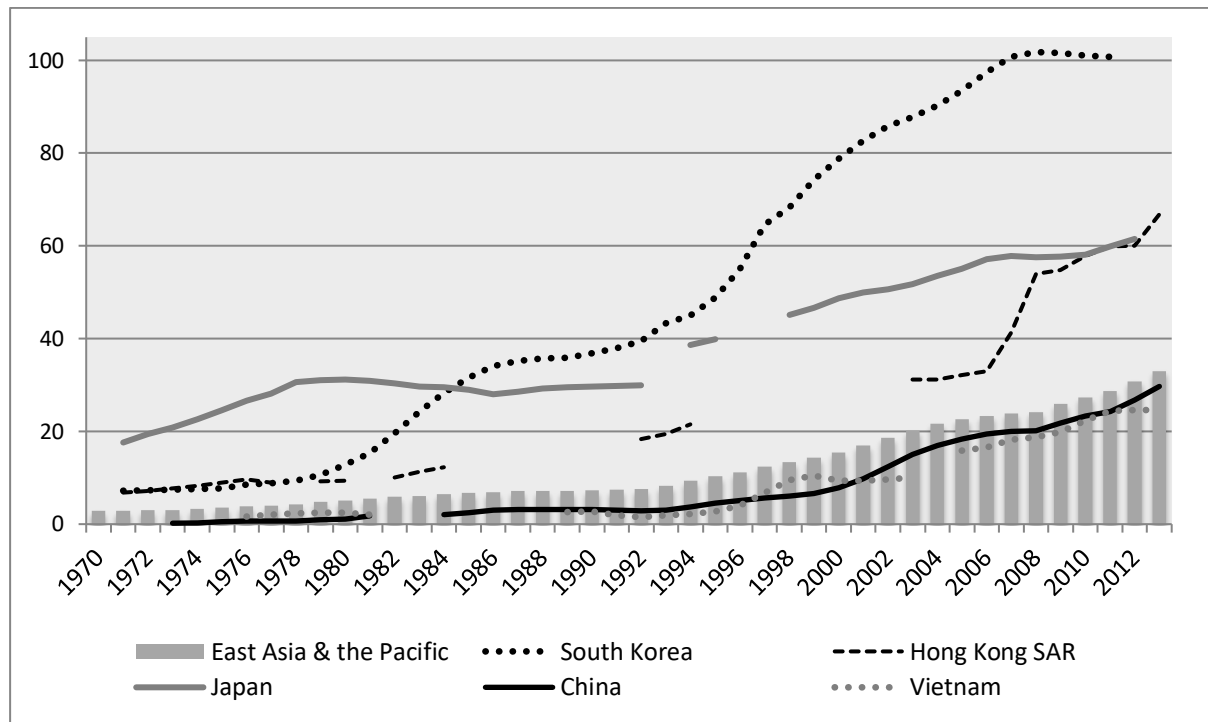


Fig. 1. Growth of participation in East Asia: Gross Tertiary Enrolment Ratio (%), 1970-2013⁴
Source: Prepared by author using data from UNESCO, 2015

Regardless of system shape, all East Asian higher education has become more socially inclusive and in that respect more equitable. But educational equity is also about social equality of opportunities and the scope for upward social mobility via success in education. Is higher education in East Asia contributing to more equal societies? To begin to answer that question, sections 3 and 4 consider the dynamics of economic inequality and social mobility.

3. Economic inequality, social mobility and higher education

3.1 Income inequality

In *Capital in the 21st Century* (2014) Piketty measures trends in incomes and wealth and theorises the drivers of inequality. Income inequality is a compound of inequality of income from labour and inequality of income from capital in the form of property, dividends and

⁴ Gaps in graph are missing data years in UNESCO series.

financial holdings. Most people earn the majority of their income from labour. At present only the top 0.1 per cent of highest income recipients in Western Europe and the US gain the majority of their income from capital. Both labour and capital income are affected by taxation policy, which can increase either income equality or inequality.

Societies vary in the extent of income inequality, as Table 2 shows. Late 19th century Europe and Japan, and the US today, were/are highly unequal (Piketty, 2014, p. 322). In such societies a large share of income and wealth is pulled to the top of the social pyramid and the middle class struggles. In contrast, in many countries in the 1960s and 1970s, including the US and Japan, there was much less income inequality. The Nordic (Scandinavian) countries still have a relatively high income equality today. However, in most countries the shares of both wealth and income in the hands of the top 10 per cent, top 1 per cent, top 0.1 per cent and top 0.01 per cent, are rising at present—that this, most countries are experiencing a large-scale transfer of income from most of the population to the wealthiest members of society. The proportional increase in income share is largest for the rich 0.01 per cent (p. 319).

There are two kinds of high inequality society. One is a quasi-aristocratic society in which inherited capital is crucial, rather than work, and social selection in higher education makes little difference. The other way is ‘a “hypermeritocratic society” (or at any rate a society that the people at the top like to describe as hypermeritocratic)’. This is again a very inegalitarian society, but the peak of the income hierarchy is dominated by very high incomes from the labour of ‘super-managers’, not inherited wealth (Piketty, 2014, pp. 264-265, also pp. 276-278). Higher education has a subordinate role in such a regime in that it helps to select people into high-income earning tracks in business and the business service professions. Contemporary America is the outstanding example of this kind of society.

Table 2

Income shares of top 1 per cent and bottom 50 per cent, Europe and USA, various years

	Europe 1910 High inequality	Scandinavia 1970s/1980s Low inequality	Europe 2010 Medium inequality	USA 2010 High Inequality
TOP 1%				
share of labour income	6%	5%	7%	12%
share of capital income	50%	20%	25%	35%
share of total income	20%	7%	10%	20%
BOTTOM 50%				
share of labour income	n.a.	35%	30%	20%
share of capital income	5%	10%	5%	5%
share of total income	20%	30%	25%	20%

Source: Adapted by the author from data in Piketty, 2014, especially pp. 247-249

The OECD (2015) publishes annual data on national Gini coefficients for income, one measure of inequality. In 2012 Denmark's Gini coefficient for net income after government taxation and transfer payments was a low 0.249. The Nordic countries had four of the six lowest Ginis in the OECD group. The Netherlands and the German speaking countries were also in the more equal half of the OECD table, with Germany at 0.289. The Gini coefficients for the United Kingdom (0.350) and the US (0.390) were the highest of the OECD countries where data were available. South Korea's was 0.307. There were no Gini data for Japan.

3.2 Social mobility

The extent of social mobility varies between countries. Social mobility takes two forms. *Absolute social mobility* is the incidence of rising social positions. It can be increased either when the size of the middle class grows (there are more total opportunities and so more people are rising), or when low socioeconomic status (SES) background people replace high SES people (the holders of the existing opportunities change). The first event is more common than the second. Note that the second event means an advance in *relative social mobility* as well as absolute social mobility. Relative social mobility is the odds of a low SES background person succeeding, compared to the odds of a high SES person succeeding. When relative social mobility advances, the structure of society has become more equal.

Corak (2012) compares nations' social mobility in terms of the incomes of parent and child. Mobility is measured by the 'intergenerational elasticity in earnings' (IEE), the percentage difference in earnings in the child's generation associated with the percentage difference in the parental generation. 'An intergenerational elasticity in earnings of 0.6 tells us

that if one father makes 100 per cent more than another then the son of the high income father will, as an adult, earn 60 per cent more than the son of the relatively lower income father' (p. 2). Corak plots nations' Gini coefficients for post-tax income inequality against their IEEs. The line of best fit suggests a clear association between high-income inequality (high Ginis), and high IEE, meaning relatively low social mobility. Corak notes also that societies with high inequality have high private rates of return to graduates (p. 18). Nordic (Scandinavian) Denmark, Norway and Finland all have an IEE of less than 0.20. Nordic high mobility is grounded in egalitarian values which support low income inequality, modest rather than average high rates of return to degrees, modest differentials of quality in higher education, and universal free access to good quality institution. Germany is at 0.32, Japan 0.34, France 0.41 and the US with a high 0.47 has relatively low social mobility (p. 10).

Historical observation suggests that two different sets of conditions encourage high social mobility—(1) moderate or high growth in the economy and in the size of the middle class, combined with low social inequality, as in the Nordic countries today (Valimaa, 2011); or (2) high economic growth and growth in the middle class, plus moderate social inequality, as in China, Singapore or South Korea today, or the United States in the 1950s/1970s. Growth in the size and weight of the middle class facilitates absolute mobility and it may also loosen relative mobility, especially if inequality is low. In both scenarios (1) and (2) higher education plays a significant role, but that role can vary, from simply reflecting the opening of opportunities elsewhere, to enhancing equal opportunity by the way education is organised.

3.3 Social mobility and higher education

Social mobility is affected at several points of the education continuum: early learning, school achievement, the transition to higher education, the stratification of higher education, and what happens in the passage from higher education to graduate labour. The stratification in higher education, plus the pattern of social access to high value student places, helps to determine how socially equal are the opportunities available. When modest economic growth is combined with highly unequal income distribution, and middle class families dominate high value places in a stratified higher education system, absolute social mobility is constrained, and there is no prospect of improving relative social mobility via higher education.

In higher education the main intrinsic limit to social equality of opportunity is the persistence of irreducible differences between families in economic, social and cultural resources. Government can partly compensate for economic differences but cannot eliminate

the contribution of the family through cultural capital and social networks (Mountford-Zimdars and Sabbagh, 2013). Comparing 11 European countries, Triventi (2013a) finds that ‘individuals with better educated parents have a higher probability of attaining a degree from a top institution, of a higher standard, and with better occupational returns’ (p. 499). The effects of social background on graduates’ occupational outcomes vary by country in four areas: the extent of educational growth, the social selectivity of education, institutional connections between higher education and labour market, and ‘the degree of institutional stratification in higher education’ (Triventi, 2013b, pp. 47-48). Unequal family background is more determining there is a great difference between top and bottom HEIs in the value of participation. All else being equal, socially advantaged families are better at using educational structures to advance their position, for example gaining access to selective universities (Shavit, et al., 2007; Lucas, 2009; Jerrim, et al., 2015; Marginson, 2016). The more powerful is family background in deciding children’s destiny, the less scope there is for the bright, hard-working child from a poor family to become successful via higher education. The larger the determining role of prior social inequalities, the less scope there is for social mobility.

Social outcomes are primarily shaped by economic resources and social power, and inequalities are reproduced from generation to generation—unless government, and an education system with egalitarian intent, intervene to even up social opportunity. At best, along with high quality egalitarian early learning and schooling, higher education helps to enhance relative social mobility by bringing many students from poorer backgrounds into the professions. However, the scope of higher education to create equality of social opportunity should not be overstated (any more than its capacity to generate economic productivity and prosperity should be overstated). Higher education is not the most potent force in social equality/inequality and social mobility. Wage and salary fixation, and government taxing and spending, are all more important; and in societies such as those in Nordic Europe where higher education makes a difference it does so in conjunction with these other elements. It appears that the role of education in social allocation—its scope to make a difference by enhancing absolute and relative social mobility—varies between countries and over time.

What do the data say about the role of higher education in social mobility? The OECD measures intergenerational social mobility in higher education by comparing the odds of enrolling in tertiary education for two groups of 20-34 year olds in 2012—those with at least one parent who attended tertiary education, and those neither of whose parents attended. On this measure, intergenerational mobility is again high in the Nordic world and low in the US. Americans from tertiary educated families were 6.8 times as likely to access tertiary education

compared to those from non-tertiary families, a similar ratio to England (6.3). Scandinavia ranged from Finland (1.4) to Denmark (3.0). In South Korea mobility was the highest at 1.1. It was lower in Japan at 5.1 (OECD, 2014a, p. 93). Blanden (2013) confirms that Nordic countries exhibit relatively high mobility, whether the intergenerational measure is income or education. She also notes that social mobility is negatively correlated to economic inequality, and positively correlated to national spending on education.

4. The American experience

4.1. From meritocracy to plutocracy

The experience of the United States after World War II provides an instructive contrast between a time of relatively low inequality when education played an important role in determining opportunities and advancing mobility (the 1950s/1970s), and a time of relatively high inequality when education's role in facilitating mobility diminished (the 1980s-present).

In Europe and America wealth holdings at the top of the class structure were partly emptied out by World War I, the Great Depression, and World War II. The long thirty years of economic growth from 1940 onwards, together with the strong and democratizing role of government legitimated by Roosevelt's New Deal in the US, the war and postwar society building, fueled the rise of many new families into the middle and upper ranks of society. The norms were progressive income tax, welfare states, and the turn to social justice in response to the challenge of the communist bloc. Salaries were relatively equal. The 'patrimonial' (property holding) middle class expanded (Piketty, 2014, pp. 260-262) and expanding higher education became the gateway to the expanding professions. For a time, unique in human history, inherited wealth was the lesser form of private capital; outweighed by the capital people created in their lifetimes, saved and invested in property (p. 381).

In the United States the turning point was the Ronald Reagan presidency of 1981-1989, which sharply reduced taxes paid by high income earners, and broke union power in the 1981 air-traffic controllers' strike, triggering salary dispersion and declining minimum wages. Piketty notes that between 1980 and 2010 in the US the income share held by the top 0.1 per cent rose from 2 per cent to nearly 10 per cent. Saez (2013) points out that the income share of the top 1 per cent at 22.5 per cent in 2012 had almost returned to its 2007 level, the highest since 1928, and the income share of the top 0.01 per cent, excluding capital gains, was the

highest since 1916 (pp. 7-9). The blow-out in managerial salaries was much more a price effect than an education effect (Hanley, 2011; OECD, 2014c; Stiglitz, 2013). It derived from de-unionisation, performance-pay regimes and tax cuts. The top income tax rate was lowered from 70 per cent under Carter to 28 per cent under Reagan, raised by Clinton to 39.6 per cent, falling to 35 per cent under Bush, and moved back to 39.6 per cent under Obama. Meanwhile the incomes of the bottom 90 per cent stagnated or declined. Mettler (2014) describes ‘the rise of plutocracy’, whereby ‘lawmakers are responsive to the needs of powerful industries and wealthy households, and less so to those of the vast majority of Americans’ (pp. 45-46). What then has happened in the equality of opportunity-focused American higher education system?

4.2 Higher education and American inequality

The rapid growth of American economic and social inequality is taking place in a society in which formal participation in higher education is very high. If education produces human capital, which determines marginal productivity, and marginal productivity determines salary levels—which is what human capital theory (Becker, 1964) argues—then income inequality must be due to education-determined inequalities of skills and productivity.

But in the real world, higher education seems decoupled from the surge in top American incomes (Piketty, 2014, p. 330, also p. 315). Human capital theory cannot explain the major variations in graduate incomes over time; nor differences between earnings, and income distribution, in countries with similar education (p. 308). Nor can it explain variations in income between graduates with the same educational results but different social backgrounds. It is not responsible for the sharp rise in inequality and it has also failed to check it. American higher education seems to reproduce not change social inequality. One reason is that US higher education is highly stratified by international standards (Roksa, et al., 2007) and it has become more stratified in the last two decades (Davies and Zarifa, 2013), and its peak institutions are overwhelmingly dominated by high income families (Soares, 2007, p. 167; Jerrim, et al., 2015). In addition, federal financial support for low SES students has declined, and state budget cuts have forced up the cost of tuition in the public sector (Mettler, 2014).

While the US GTER has risen above 85 per cent this aggregate figure conceals high stratification and high drop-out rates. American higher education is still important in distributing opportunities within the middle class but opportunities to be middle class are no longer growing. Meanwhile higher education, and its potential to make a difference, are less potent at the top and bottom ends of the family income distribution. The superior earnings of

wealthy Americans derive more from access to super-salaries and inherited wealth than higher education, despite the networks, meritocratic legitimation and prestige consumption the latter provides. The US Ivy League is associated with the rich but the rich do not have to associate with the Ivy League: 19 per cent of the children of high-income professional families, and 36 per cent from other high-income families, attend no college (Soares, 2007, pp. 173-179). At the bottom end of society, higher education is decreasingly affordable and its attractions have declined, due to growing income inequality at work, rising tuition costs, declining capacity to pay, and doubts about the value of non-selective HEIs in a highly stratified system. Hoxby and Avery (2013) find that the *vast majority* of high achieving low-income school leavers—students in the top 4 per cent of the age group in grades and test results, of whom there are 25,000-35,000 each year—do not even apply for the selective colleges they can readily enter. The researchers call this ‘under-matching’. These high achieving students should be prime candidates for upward mobility. The meritocratic idea has broken down on a large scale.

Degree completion and access to top universities are both highly differentiated in social terms. In the US in 2013, of persons in the top family income quartile, 77 per cent completed college by 24 years old. This had almost doubled since 1970, when the proportion was 40 per cent. In the bottom family income quartile, the graduation rate had increased from just 6 per cent to 9 per cent in the same 43 years. In the second bottom quartile it rose from 11 to 17 per cent (The PELL Institute, 2015). Four in five people in the bottom SES half of the population, complete degrees late, graduate below degree level, drop out, or never enroll. Like American society, American higher education is a prime case of high participation and weak equity. American social stratification and educational stratification form an inter-dependent system. The relationship is not symmetrical—socially unequal educational outcomes appear to be more a result of the larger American inequality, rather than a cause of it. The drivers of the exceptional US income inequality are not higher education and merit, but class and power.

5. Higher education and equality/inequality in East Asia

5.1 Dynamics of the growth period

The article now returns to the rising higher education systems in the Chinese civilizational zone in East Asia. (It will not address Japan, where world-class higher education and research were established earlier, and Vietnam, which is as yet too poor for the take-off to occur).

China, South Korea, Taiwan and Singapore are significantly different in some ways, notably in their political systems, but in the period of dynamic growth of higher education they share certain features in common. The question underlying the article is—are the rising East Asian societies destined to follow the US pattern in which a period of relatively high social mobility, in which higher education was central, gave way to a period high economic and social mobility and more narrow social mobility? This question is explored here primarily in relation to inequality and stratification in China, with some discussion of South Korea. Space does not permit an exploration of all four instances of rising East Asia.

With the GTER exceeding 50 per cent in all the rising East Asian systems except mainland China, and likely to reach 40 per cent in China by 2020, higher education is moving to a majority role in social allocation for each young person age cohort. The middle class is expanding rapidly, especially in China (Kharas and Gertz, 2010). Since the 1980s, China, Korea, Taiwan and Singapore have seen great growth in absolute social mobility. In these respects, East Asia is more like the US was in the 1950s/1970s than is the US in the 2010s.

However, schooling and higher education across East Asia today are also in some respects stronger and more integral to society than they were in 1950s/1970s America. First, East Asian states typically take a comprehensive responsible for lifting educational performance, and have also accelerated spending on R&D even faster than did the US in the 1950s/1960s. Second, families in the Chinese civilizational zone have an exceptional commitment to educational cultivation, and investment more time and money in education than elsewhere. This includes low SES families as well as the middle class (Marginson, 2013). In South Korea households meet 73.0 per cent of the cost of HEIs while in Japan the proportion is 65.5 per cent (OECD, 2014a, p, 245). In all systems there is extensive family investment in ‘shadow schooling’ (Bray, 2007), meaning private tutoring and extra classes. The combined effects of state and family explain the exceptional performance of all East Asian systems in the OECD’s international comparison of the learning achievement of 15-year olds, the Program for International Student Assessment (PISA). The top seven systems in PISA mathematics are all from East Asia. PISA scores are not only very high in mean terms but evenly distributed with little low achievement, which facilitates equality of opportunity. Whereas at world level 23.1 per cent of students are in the bottom PISA category, Level 1, for mathematics, in East Asia Level 1 ranges from 3.8 per cent of students in Shanghai to 12.8 per cent in Taiwan (OECD, 2014b). This relatively low social stratification in cognitive achievement partly compensates for the high social stratification in access to elite HEIs.

The fact that education is especially central to life in East Asia—and the fact that it augments potential productivity at work—does not mean that it is *the* key to social equality/inequality, or even that it necessarily creates social mobility in its own right. The historical record suggests that the growth of absolute social mobility was not primarily driven by higher education or even necessarily facilitated by higher education in the early stages. The growth of economies and middle classes mostly preceded that of higher education. The pattern has varied. In China, as in the ‘Japanese miracle’ thirty years before, participation in higher education did not climb rapidly until almost two decades of high economic growth. On the other hand, in South Korea, educational participation was relatively high from the mid 1980s, and its growth coincided with the economic takeoff.

5.2 Higher education and society in South Korea

In fact Lee and colleagues (2012) claim that education has been a central factor in the high growth period in Korea. They point out that ‘Korea... has managed to combine rapid economic growth and moderate inequality levels’ (p. 1). The period of rapid development was characterized by relatively equal income distribution (p. 2). There was little change in the Gini coefficient between 1965 and 1993, though the Gini has moved moderately upwards in the last two decades (p. 3). As in Europe after World War II, when the emptying out of the great fortunes freed up room at the top of society, the destruction of assets during the Korean War, in conjunction with land reform and regional development strategies, and the spread of education, facilitated the development of a meritocratic nation with high social mobility (pp. 8-9). ‘With basic education almost universally available, most Koreans were able to take part in and benefit from the industrialization process’ (p. 23). Lee and colleagues (2012) note that Korea has the highest total public and private expenditure on education as a percentage of GDP of any industrialized country in the world.

It must be added that, while Lee and colleagues (2012) see education as instrumentally linked to both high economic growth and moderate levels of social inequality in South Korea, that these causal relationships are asserted rather than proven.

5.3 Higher education and society in China

In China the 2002 Party Congress committed to making the majority of Chinese people middle class (Goodman, 2014, pp. 26-27); and higher education, equated with ‘cultural’

distinction, has become a principal definer of social status (p. 183). The party-state fosters the idea that graduation from higher education is the point of entry not only to administrative careers but the middle class in general (p. 111). This seems to position higher education as the primary social allocator. However, access to elite higher education in China, while regulated by competitive examinations and the merit principle, is more determined by parental influence than anything else (p. 121). This resembles social stratification elsewhere, based on parental income, social and cultural capital. At the same time, parental influence and social capital are shaped by position in relation to the party-state, especially party membership (p. 70).

Attendance at an elite HEI is as important in conditioning social outcomes in China as in the US. National government has done much to build the elite sector through the 211 and 985 funding programmes. Yang (2010) finds that the distribution of student loans favors students in selective institutions. Government takes a primarily merit-based approach to support, which tends to favour top universities (p. 568); and while poor students in selective universities benefit the most from student loans (p. 565), not enough low SES students go to elite HEIs. The children of party-state cadre are more favored than are low-income students (p. 567). The balance of research suggests that attendance at elite HEIs enhances both social status and income, with the status effect is confirmed more strongly. Hartog and colleagues (2010) detect an income effect associated with attending a top 100 university; and Li and colleagues (2012) find that initial rates of return associated with elite HEIs are 11 per cent higher after controlling for ability, major, HEI location and family. On the other hand, Loyalka and colleagues (2012), and Hu and Vargas (2015), find HEI tiers have little income effect separate from student background. These studies mostly focused on early salary returns. Long-term income outcomes may be more favourable to elite HEIs. Hu and Vargas (2015) find that elite university graduation signals a greater probability of becoming a manager. While STEM and Law are associated with income advantages, all disciplines are associated with higher status.

In *Class in Contemporary China* (2014) Goodman notes that in China, social power and status determines life outcomes, rather than property ownership or income (pp. 29-30, p. 183). The political sphere is determining in relation to the market economy (Goodman, 2014, p. 178) and partly drives social power. Political and economic elites are not coterminous but intersect and overlap (p. 82). Zhao (2012) agrees that status, not market-generated income, is determining, opening the way to job and income. Goodman also remarks that social assets are reproduced in families. 'Class in China is best understood in terms of the intergenerational transfer of compound inequalities of wealth, status and power, rather than solely in terms of ideas of class and stratification drawn from the experience of socio-economic development

elsewhere' (Goodman, 2014, p. 7). Wealth, political power and status reinforce each other (p. 183), like Bourdieu's different capitals, weakening intergenerational social mobility (p. 187).

Here then is the social paradox of modernizing China. Despite the interruption of inter-generational transfer of wealth, status and educational advantage in the 1966-1971 Cultural Revolution; and the vast processes since that time of accelerated growth, modernization and urbanization, the migration from country to city, and the great growth in the middle class, China remains a country that naturally tends to 'low social mobility and high intergenerational transfer of privilege and disadvantage' (Goodman, 2014, pp. 32-33, also p. 187). If economic growth and middle class formation slow down in China, reducing the growth of absolute social mobility, the present openness of Chinese society could become severely attenuated. In that context higher education could amplify rather than modify prior social inequalities. To this point there is little evidence that higher education improves the odds ratios, relative social mobility for students from poor backgrounds. This is an important area for longitudinal research. More data are needed also on trends in the social composition of elite HEIs.

There are two social binarisms that reproduce stratification and weaken social mobility. Both interact with educational participation and achievement, particularly in elite HEIs. These are the insider/outsider distinction in relation to the party-state, and the urban/rural distinction. A person's relationship with the party-state plays a key role in determining access to and success in careers, and affects housing and education (Goodman, 2014, p. 52). The party-state is a system of stratification of opportunity distinct from more traditional stratification based on family wealth or parental education. Though in future the two kinds of stratification may converge, at present they open different routes for advancement that only partly intersect. This does not advance social equality but it creates plurality in mobility. Nevertheless, to be outside the party-state network is to experience significant disadvantage. The deeply entrenched advantages of urban residents (Gustafsson, et al., 2011; Treiman, 2012) are sustained by China's system of registration based on residence. It is difficult to change residential classifications after leaving the rural area, limiting the entitlements of migrant workers and their families to services such as schooling. Treiman (2012) describes China as a dual-class society along urban/rural lines with implications for access to education, health care, housing and retirement benefits (p. 33). Urban residents benefit from cumulative advantage (p. 36). The urban/rural gap has remained constant for 60 years (p. 33). A rising tide has lifted all boats, and that the rural areas have shared in the benefits of economic growth; but from 1996 to 2008 the surge in incomes in urban areas was double that in rural areas (p. 42).

Both of these binary distinctions intersect with the fast growing higher education system. Higher education has become normal to the administrative middle class; that is, for party-state functionaries as well as the professional middle class (Goodman, 2014, p. 185). These effects tend to compound. ‘Educational credentials and party membership both significantly enhance perceived social status’ (Zhao, 2012, p. 443). Party members with college educational qualifications are four times as likely as party members without college qualifications to become leading cadre. Education also articulates the urban/rural distinction:

Arguably, educational differentials are at the root of virtually all forms of socioeconomic inequality, affecting not only the kinds of jobs people are able to secure, the income they are able to earn, and their material standard of living, but also health, happiness, family size, childrearing practices, and opportunities for self-fulfilment ... Thus, the rural–urban gap in education is likely to drive many other forms of rural–urban inequality (Treiman 2012, p. 38).

Urban/regional educational inequalities, and educational inequalities between urban-based families classified as urban and rural, are a research issue of growing importance.

6. Conclusions

Like the US, the Chinese civilizational zone has distinctive social and educational dynamics (Marginson, 2013) and these differ in some respects from those of North American and Western Europe. (East Asian societies also differ from each other, with stratification seemingly less well entrenched in Korea than in China). This suggests caution in relation to expectations that East Asian nations will follow American historical trajectories.

In English-speaking countries and Western Europe, the contribution of higher education to relative social mobility appears to be maximised under certain conditions. Condition one is that funding is largely from public sources, reducing the scope for families to use unequal economic resources to gain an advantage in education. Condition two is that institutional stratification is relatively ‘flat’, as in the cases of the Nordic, Dutch and German-speaking countries, where all degrees have significant value and the leading universities do not attract extensive investment in private advantage, as in the US. Condition three is that the private sector of higher education plays a modest role, reducing the potential for social differentiation

based on the private/public sector divide, as happens in the UK through high fee independent private schooling (Dorling, 2014), and the US Ivy League universities in higher education. However, these assumed conditions do not necessarily hold in East Asia.

The example of South Korea suggests that it is possible to have relatively high social mobility, and relatively stratified higher education along with high private investment and private sector provision. Stratified, privatized Korean higher education does not block social equality or mobility to the degree it would in Europe or North America because of compensating features integral to the East Asian state and education. First, family commitment to self-betterment through education is strong and universal in Korean society. Nearly all school students achieve cognitive development high by international standards, and all families invest privately, not just middle class families as in the US. Second, educational institutions are staffed by well prepared professionals and autonomous educational practices are robust, creating room for hard-working poor students to succeed. Third, state regulation partly compensates for status differentials and unequalizing competition—it ensures that public higher education is of adequate standard, and private education constitutes neither exceptional opportunities at scale nor poor quality mass education. Fourth, as Lee and colleagues (2012) note, the state evens up infrastructure and opportunities through policies on labour markets and regional development.

Korea does not have to follow the American narrative. Perhaps there is a larger danger that China will do so, given what appears to be a stronger reproduction of stratification than is the case in Korea. This is partly due to the deeply entrenched rural/urban divide, and partly because of the impact of the party-state as a social (as distinct from a political) apparatus. The party-state has the political means at its disposal to broaden social mobility, and this is one of the recurring policy themes; but in the present period, the generational transfer of party authority at the top is one of the means whereby social inequality is being reproduced.

In sum, whether China and Korea move towards greater inequality and lesser social mobility depends primarily on two factors. First, on the larger patterns of social and economic inequality—on whether China and (less likely) Korea move towards the US scenario of high inequality, low middle class growth and attenuated mobility; whether like Japan they stop halfway along that track (perhaps this is the most likely outcome in most of East Asia); or whether they develop more open societies, as in Northwestern Europe. Korea has the best chance of achieving the last. Second, on the way stratification is managed within higher education. Much depends on whether the high status WCUs lead systems in which quality is vigorously pursued at every level; or WCU-building absorbs all the energy and attention,

leaving mass higher education relatively poor in status and resources, with its degrees carrying little status and unable to substantially lift enough graduates. Here the problem is not so much the presence of high quality elite HEIs—Korea at present shows that this is not incompatible with an egalitarian society with high mobility—but the quality of the HEIs below the top. The key to enhancing long-run equality is to strengthen the second and third tier HEIs without diminishing WCU research power. This is the strategy of creating greater equality of value by levelling upwards, as in the Netherlands system, rather than levelling down. The Netherlands combines a broad layer of research universities exceptional by global standards—none very dominant—with a good quality second sector with a reputation for supplying employable graduates. Germany has a similar dual structure in which both kinds of HEI are strong.

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