University of Oxford 31 October 2016

Diversity within high participation systems of higher education

Simon Marginson
UCL institute of Education / University College London

Higher education systems are continually evolving. The sector is shaped by three broad tendencies that combine in various ways.

[**World GDP, population and tertiary enrolment, 1970-2012 (1970 = 1.0)]**

The first tendency is partial global integration and convergence between national systems, or 'globalization'. The second is the intensification of competition between institutions and the adoption of business-like features, 'marketization', under the auspices of neo-liberal policies. The third tendency is mass scale growth, 'massification'. More is written about globalization and marketization than massification. Yet massification is monumental in scale and the most universal of the three.

[Regional Gross Tertiary Enrolment Ratios, UNESCO]

Global convergence touches some national systems more than others. Marketization has reshaped higher education in the English-speaking countries but in many other systems tuition remains free or low costs and business models play a modest role. However, almost every higher education system, everywhere, in countries in which national income is more than about $5000 US per capita—and some with less than$5000 US—are experiencing or have experienced massive growth in participation. In one third of all higher education systems across the world more than 50 per cent of the school leaver age cogort is enrolled in some form of 'tertiary' education according to the definition ised by the UNESCO Institute of Statistics. In countries that reach the 50 per cent mark inclusion expands towards 100 per cent.

[High Participation Systems of Higher Education]

In a cross-country project that I share with colleagues from the United States, Canada, Ireland, Norway, Finland, Poland, Russia and Japan we call these 50 per cent plus systems 'high participation systems'. We are in the later stages of preparation of a book on high participation systems. I want to draw on that work today to discuss the dynamics of *diversity* within national systems, one of four generic studies in that book.

[Vertical and horizontal diversity in systems]

In an early and influential treatment Birnbaum (1983) distinguishes between 'diversity', meaning variety in terms of specific characteristics of HEIs, and 'differentiation' or diversification, movement towards increasing diversity. He also distinguishes external diversity between institutions in a system from internal diversity within them. Birnhaum uses several variables to record difference between HEIs and establish categories: size; legal foundations; sector of control (state or private sector); disciplinary program, degree level, services, procedural differences in teaching or research; climate and values; and differences in the student body including age, sex and ethnic origins. Other scholars add reputational diversity, perceived differences in status or prestige; and also mission, the social purposes or roles of institutions.

An important distinction is between vertical and horizontal diversity. For Teichler (1996, p. 118) vertical diversity distinguishes HEIs by 'quality, reputation and prospective status of graduates'. Horizontal diversity refers to 'the specific profile of knowledge, style of teaching and learning, problem-solving thrust'. Horizontal diversity can also include differences in mission, governance or internal organizational culture. Today I will use the term 'diversity' to refer to horizontal variety in higher education. I use 'stratification' for the vertical dimension of variety between institutions.

[Stratification]
Let me say something about stratification, though it is properly the subject of another paper. Horizontal differences in the missions, profiles or nomenclature of HEIs can be practised also as vertical differences. This can include use of the title 'university' though this is eclectic across public and commercial institutions. The weightiest distinction between HEIs derives from comparisons of research intensity. Research activity affects mission, and is so important in higher education, and aspects are so readily measured and calibrated, for example in research evaluation, rankings and competitive funding rounds, that the research/non-research distinction always has positional implications.

In the high participation systems project we concluded that as participation expands there is a secular tendency to greater stratification (though this can be countered by government regulation and funding). As Bourdieu notes, higher education systems tend towards bifurcation between high-demand elite HEIs that enjoy social standing and conduct themselves more autonomously, and lower demand, lower status institutions that are necessarily more heteronomous, responding to state and/or student market. As systems expand, places in elite HEIs shrink as a proportion of total places, competition for entry into the elite segment intensifies and fine differences between institutions, in student selectivity, research intensity and/or price etc., are magnified. In those countries in which equivalence between institutions in resources, institutional status and the value of credentials is an objective of policy, as in the Nordic world, governments must work harder to maintain that equivalence. In expanding systems, governments following the marketisation project can more readily utilise differences in mission and outcomes to informally calibrate and legitimate the market.

[Coverage of paper]
However, stratification is not the main focus today, which is systemic diversity, meaning horizontal differences in institutional mission, classification, type, form and activity profile, including the structural diversity in legal foundations, governance or authority, as in public and private sectors. There is also the question of how identified difference is understood. Birnhaum's measure of diversity is simply the number of types divided by the total number of HEIs. Wang and Zha (2015) identify three structural notions of diversity. Systems are more diverse if they include a greater number of institutional types, if the distribution of HEIs between the main institutional types is more evenly weighted, and/or if there is greater distance in kind between the institutional types.

Today I will speak in largely generic terms about diversity. But I am mindul of the layers of empirical observation, and synthesis of observations, that underlies the generalizations emerging from our high participation systems project. At any time, systemic diversity is impacted by a range of local factors such as regional access and development; national factors such as government policies, funding mechanisms,

research competition; and international factors such as cross-border competition and ranking. In many countries, diversity has also been changed by neoliberal policy and regulation. National systems vary in the extent of horizontal diversity, vertical stratification and both. This includes inherited variations in the balance between specialist and comprehensive institutions. The competitive unitary systems in UK and Australia exhibit modest horizontal diversity and are ordered in a steep but informal hierarchy differentiated by research and student selectivity. Nordic and German-speaking systems use primarily horizontal diversity in binary systems though informal vertical differentiation is gaining ground and in some systems there are mergers across older binary lines. Other systems such as the United States, China, Russia and parts of Latin America are vectored by both horizontal and vertical differentiation. Some countries housed most of their research inside unviersities, some in specialist academies and laboratories. Russia and China attached specialist HEIs to specific ministries in domains such as health, defence and transport. Regional and local HEIs played varying roles in massifying systems, with differing levels of autonomy. In the two largest systems in China and the United States, which exhibit complex national and local variety, institutional classifications order an explicit hierarchy, while managing a mission differentiation that has horizontal as well as vertical implications.

Today I will reflect on the prior scholarship on diversity, and then move to the actual existing diversity in high participation systems (HPS) of higher education.

[The research and scholarship

1. **Does diversity foster growth? Or, does growth lead to greater diversity?**
2. **Does market competition foster diversity (and hence also growth)? Does market competition directly foster growth (and perhaps also diversity)?]**

I'll turn now to the research and scholarship. Most of it is preoccupied with two main questions. As often in social science research the objective is a general causal relation between two complex mega-variables and so both lines of casuality are in play. First, the search for a general causal relation between growth and diversity, for example by mapping diversity in an individual national system over time, as growth proceeds, or by combining statistically-based analysis of various national systems (e.g. Shavit et al., 2007). Second, attempts to find whether—or to demonstrate that—market competition in higher education is associated with greater horizontal diversity between institutions or alternately, with less horizontal diversity between institutions. In this case all three of growth of participation, marketization and diversity are in play.

Note that in the second set of questions the independent variable is the market not the state, though across the world the state is more ubiquitous in higher education than the market. This reflects the leading role of American scholars in the discussion, and in many countries preoccupation with the pros and cons of marketization in the sector.

Research on the first question or pair of questions, the relation between growth and diversity, has been unsatisfying. In individual national systems there are too many contextual factors in play affecting the patterning of diversity, including differences in historically inherited forms, political culture, state policy and regulation, not to mention policy contingency, to derive a robust quantitative relation between expansion and diversity of provision that will hold up across time and space. For example, some HPS

are more engaged in neoliberal marketization than are others. Complex historical and environmental factors cannot be effectively modelled by multi-variate analysis. The outcomes of such studies are inconclusive, or unduly shaped by the selection of cases.

[The market diversity hypothesis]

Perhaps it is partly because of this lacuna that discussion of diversity has been hi-jacked by debate about the 'market diversity hypothesis'. This hypothesis functions as a taken-for-granted norm in Anglo-American policy. It also has plenty of critics. Discussion of it has dominated the literature on diversity in higher education. Advocates of the market diversity hypothesis took the initial running but arguably, in the last two decades the sceptics have had the better of the argument. The problem though is this discussion is not really about diversity. The diversity debate is a proxy for the marketisation debate.

The market diversity hypothesis functions variously as unquestionable assumption, and site of investigation. The hypothesis is that all else being equal, market competition in higher education tends to both facilitate and enhance diversity of institutional mission and type. Advocates of the hypothesis also claim that all else being equal, the growth of participation leads to greater diversity, provided that that government steps back and allows market competition free play; as if HEIs emerge, evolve and specialize in response to diverse needs in the manner of retail services. Other and related contentions are that under conditions of market competition, growth is fauclitated and this fosters diversity, and greater diversity fosters further growth. Institutional diversity is said to increase the range of choices available to students, better match their needs to educational programs via the supply/demand conjunction, and respond to diverse labour markets (e.g. Birnbaum, 1983). A common variant of that argument is that the coexistence of elite and mass higher education, providing variety in price and access, facilitates growth overall (e.g. Palfreyman and Tapper, 2008).

In studies animated by the market diversity hypothesis the worldview is not always made explicit, but there appears to be a meta-assumption at the base of thought, a trinity of related virtues: market competition, diversity and growth. Market competition is the starting point, providing favourable conditions for the other virtues. Research in this tradition sets out to reproduce the meta-assumption in its findings. It looks for illustrations of the synchrony of market competition, diversity and growth. When the virtuous relationship fails to appear this is blamed on undue intervention by the state, which is external to the trinity. The remedy is to clear the state away, deregulation. Within this rhetorical frame the original assumption, the market diversity hypothesis, is protected from refutation on the basis of actual existing cases. The advocates and critics of the market diversity hypothesis tend talk past each other rather than with each other.

[American discussion]

The market diversity hypothesis emerged in the United States in the work of Birnbaum and others. In his work on the transition from elute to mass higher education Trow in 1973 argued that growing diversity was natural to growing systems, though it could become stifled by government regulations. Almost as a footnote, he noted, as previously identified by Riesman (1958)—in a point anticipating institutionalist narratives about isomorphistic patterns—'the tendency for institutions to converge towards the forms and practices of the most prestigious models of higher education, a tendency that operates independently of government control' (Trow, 1973, pp. 51-52). Here, Trow

stated, academically controlled higher education was hostile to the subversive richness of markets (p. 52). Remarkably, in his insightful and influential essay Trow failed to consider the point that markets can also generate homogeneity of mission and type.

In the US historical variations between states and in private sector HEIs have produced a complex mix of research and doctoral universities, elite liberal arts colleges, lesser public universities, public community colleges, for-profit corporate colleges, vocational education and on-the-job training. The Carnegie classifications hierarchy is also functional, with missions distinctions between tiers. Except for the distinction between doctoral universities and liberal arts colleges, both elite sectors, the distinctions between tiers are steeper (less 'flat') than distinctions within tiers. However, same tier HEIs compete with each other and are routinely ranked. This variety of types, which in the US has become associated also with the idea of higher education as a system-market, is seen (at least at home) as central to the virtues of American higher education. Institutional diversity is frequently positioned as an innate good based on a set of related assumptions about student choice, functional specialization and the engagement of higher education with society.

The US was also the first high participation higher education system. This first mover advantage coupled with American geo-political preponderance turned the narrative joining market, diversity and growth into a global education policy norm. However, the actual existing American institutional diversity developed long before not just 50 per cent participation but 10 per cent participation and also predates the ideology of the system market. Historically, diversity was not the outcome of either massification or market competition. That still leaves room for an alternate virtuous circle narrative, that decentralized competition and diversity became the condition of growth. Nevertheless, growth to near universal levels has occurred in several systems that do not exhibit American style decentralized diversity, including Finland and South Korea, that have closer government control over mission types, and less variety overall. Further, while an American style multi-origin, multi-form, semi-decentralized system has evolved in other countries, such as Brazil and India, these did not exhibit tendencies to accelerated growth until very recently. This suggests that contextual factors other than diversity or market ideology, such as national wealth, a burgeoning middle class, economic modernisation and the need for meritocratic forms of social legitimation, are needed to explain the emergence of high participation in the United States.

Certainly, the next generation of American researchers afterTrow and Birnbaum, looking at patterns of diversity between states and over time, often generated findings that questioned the market diversity hypothesis. Even Birnbaum had found that from 1960 to 1980 the range of institutional types did not increase and 'dedifferentiation' might have occurred, though he hypothesised that this was an outcome of government planning and regulation. Morphew in 2000 identified 'the tendency of diverse groups of institutions to grow more homogeneous over time as similar degree programs are adopted by institutions with seemingly different missions and resources' (p. 58), and a concurrent tendency to systems more homogeneous by mission. Eckel in 2008 identified two tendencies: homogenisation of mission and enhanced stratification. Johnston in 2010 noted that for the most part, in the process of growth US HEIs did not specialize on the basis of sub-markets or niche markets. Instead they tended to 'broaden or widen, rather than narrow or focus their positions' (p. 15). There was a widespread

tendency for institutions to accumulate size and function in which internal diversity was increased but external diversity diminished. HEIs broadened their social reach through the upward drift of largely teaching HEIs to the research domain, and the downward drift of research HEIs into mass teaching and applied research, sometimes by creating new branch campuses that were more teaching-oriented and less research intensive, elbowing out the potential roles of non-university institutions. In some states there was also an upward drift of community colleges to degree programmes.

[UK, Australia and Europe]
Outside the US, after 1990 there was a growing scepticism about the market diversity hypothesis. It was tested in the UK and Australia, where unitary competitive systems were established in place of regulated binary structures, amid policy rhetoric about the fostering of diversity. Both systems came to largely consist of HEIs with a common teaching/research mission ordered in a steep informal status hierarchy regulated by research intensity, resources and student selectivity (Fulton, 1996; Marginson and Considine, 2000), with low horizontal diversity (MEEK, 2000; Marginson and Marshman, 2013). While the state enforced common missions and it continued to shape institutional behaviour, providing one explanation for homogeneity of mission, it was apparent that market forces also fostered imitation and convergence. Higher education did not function like an orthodox economic market (e.g. Marginson, 2013). In a study of mimetic institutional convergence in Australia, at a time when system normalisation coincided with rapid enrolment growth, Meek (2000) concluded that: 'Institutions in direct competition with one another are more likely to emulate each other's teaching and research programs than to diversify in order to capture a particular market niche.'

In parts of continental Europe, with its historically varied structures, binary and specialist configurations were also reworked, a process that continues. Most scholars reached conclusions that contrasted with the first generation American literature. First, government was not a prima facie suppressor of diversity. Its potential was ambiguous. Regulation often tended to homogenise misisons, and iron out local idiosyncracies, but policy could also deliberately structure variety into systems. These possibilities were evenly balanced. Market forces tended to foster conformity with standard norms, but when associated with corporate deregulation market competition could expand the scope for self-defining initiative. Teichler (2008) found that under the influence of American higher education, ranking and the 'World-Class Universities' movement vertical stratification had become more important. When both stratification and horizontal diversity were included overall institutional diversity had increased, but horizontal diversity on its own had probably diminished (pp. 351-352).

[van Vught quote]
Van Vught (2008) noted that the sources of homogenisation were academic conformity and government regulation, but states could facilitate diversity on a planned basis, citing the case of Hong Kong (p. 165). He argued that government expectations for marketization reform, that it would lead to distinctive products and strategies were inevitably disappointed. Why is it that when free to determine their own strategies HEIs prefer to imitate each other rather than innovate in response to the consumer-student? Because higher education is an 'experience good' students can only judge its quality after they have been enrolled (p.167). Hence HEIs are driven not by consumers, but by competition with each other for institutional reputation and prestige, and for the best

students, faculty, research contracts and endowments (p. 168). Competition based on reputation is naturally conservative, leading to the minimization of risky innovations.

[But is market diversity (for or against) really the point?]
These findings in both European and more recent American literatures are convincing. Though competition does not always foster mimetic behaviour—take for example the original, competition-driven and successful global strategy of the Singapore universities—amid increasing competition, the tendencies to convergence are too strong to ignore. However, is this really the main point about diversity? The market diversity hypothesis, for or against, has long held centre stage. But in itself, does it generate the most fruitful line of research into the actual character of systems?

[A more relevant question]
The dominance of the market diversity debate indicates not its profound relevance to the diversity issue but the tenacious hold of marketization narratives in both the policy imagination, and the agendas of the critics of policy. But the preoccupation with refuting (or defending) the market diversity myth has long been unhelpful, blocking a more nuanced and empirically grounded consideration of diversity in HPS. Likewise, to pose the problematic as 'what is the one-to-one causal relation between growth and diversification?' is another *cul de sac*, given that a definitive answer is impossible.

A more relevant question is 'what systemic and institutional configurations are typical of higher education in the HPS era, and why?' What forms, homogenized or diversified, are present? With that answered, the secular tendencies in the relationship between growth and horizontal diversity can be investigated, identified and discussed.

[Systemic and institutional configurations]
Growth, the prestige of the research university form, and in marketized systems competition, all placed pressure on inherited binary systems, single mission HEIs and other kinds of regulated horizontality. At first examination the worldwide picture is complex. In some systems there is a convergence of institutional type with obvious negative effect on external diversity. In some jurisdictions reforms have increased external diversity. In some cases new institutional forms have emerged to address new demands or roles within HPS, mergers have established not just larger but different institutional types, and old boundaries between sectors are blurred by hybrid forms that increase internal as well as external diversity. Federal and regional factors are associated with variations that cut across other factors (Carnoy, et al., forthcoming). There are new cross-border forms aof single institution and multi-institution alliances. In short, diversity within systems and institutions is vectored by an evolving mix of functional and hierarchical elements. However, in the nine countries in our High Participation Systsms study, primary lines of development are apparent.

The main features of the organizational environment that bear on diversity of institutional mission and type are threefold and inter-connected. First, the rise of the multiversity, the large comprehensive research university, to a more dominant role within systems, together with growth the size and scope of individual multiversities. Second, an overall reduction (with some national exceptions) in the role of semi-horizontal binary sector distinctions and single-purpose institutions. Is there overall decline in diversity in the horizontal sense? I think 'yes', except for relatively peripheral

on-line forms and in some countries, the growing role of for-profit private sectors. Third, growing internal diversity within the comprehensive multi-purpose institutions. These three features of the landscape, or rather their extension and enhancement, were not always present historically, but can be understood as secular tendencies in current higher education systems. I suspect that these three secular tendencies will show in any high participation system of higher education where they can freely emerge.

[The multiversity]

First, the increasing dominance of the large comprehensive research multiversity. The multiversity has become more dominant in two related ways. The large multipurpose research university has normative power, increasingly as the sole ideal model of HEI, and also its material weight within national systems has grown. The latter has several manifestations. In national systems, a larger proportion of the system's activity, resources and status is concentrated in multi-disciplinary multi-purpose research universities, or multiversities. Research-intensive multiversities are elevated further above other institutions—the 'World-Class University' movement in many systems signifies that trajectory. Below the genuinely research-focused universities is another layer of comprehensive multi-purposes institutions that now more often carry the title 'university'. In their comperehensive character these institutions mirror the research multiversity. Their prestige is more fraught. The title 'university' no longer carries the guarantees it did. Yet status decline is not the whole story. By adopting multiversity forms instituions in the lower-middle layer of degree granting HEIs partly protect themselves from downward pressures on the value of massifying higher education.

The multiversity tends to include or absorb other institutional forms; and it also exhibits a broader range of single institutional configuration and considerably greater internal complexity and diversity than did the predecessor research universties. As systems grow the average size of the research multiversities tends to increase, often markedly, as does that of the less prestigious research-lite multiversities. In many systems, the multiversity becomes more autonomous and self-driving in the corporate sense, though mostly while remaining tethered to state policy and regulation.

In an early and brilliant summary of the emerging form in the United States, *The Uses of the University* (1963/2001a), Clark Kerr coined 'multiversity' to describe what the American research university was then becoming. Features of the multiversity were growth, aggregation of functions and activities, accumulation of social and economic status and resources, external extension and managed internal heterogeneity. It is powered by differing normative principles, , including inquiry and knowledge creation, transmission of ideas and values, pastoral care, community service, collegial fellowship and managerial efficiency. It is replete with competing internal interests and external stakeholders. It becomes ever more 'multi' via additional disciplines, fields of training, research agendas and funding, functions, activities, constituencies and personnel. It engages with business, the professions, the arts, government, cities and local communities. The expansion of systems to include the bulk of society is matched by expansion in the size, reach, complexity and connectedness of the central institution.

Kerr's corporatized multiversity became the global trend. The quasi-corporate form of executive led, strategy driven and performance managed institution is spreading everywhere. Governments support the downward transfer of responsibility and

regulated autonomy within the constraints of funding, accountability and audit and have discovered that the form is compatible with much variation in policy specifics, cultural contents and the extent of control. Clark in 1998 defined it as the 'entrepreneurial university'; Marginson and Considine in 2000 as the 'enterprise university'. The term 'World-Class University' (WCU) is unhelpful in analysis as it refers to relative quality—inclusion in the top 100, or 500—not absolute qualities. However, there is no doubt that the multiversity norm was more firmly globally patterned by the credible university comparison in the Shanghai Academic Ranking of World Universities (ARWU) in 2003 (Hazelkorn, 2015), and the more dubious Times Higher market research ranking in 2004, which later split into a commercial duopoly, Times Higher and QS. The template used by both ARWU and Times Higher deeply entrenched the large Anglo-American research university, comprehensive in science and publishing globally in English. This template has underpinned the state-fostered evolution of the leading 39 universities in the 985 group in China, the excellence initiative in Germany, the merger programme in France, and reforms in Japan, Korea and other countries (Salmi, 2009). Global ranking sustains an informal tier 1 of research multiversities positioned in the world top 100 or 200. Tier 2 is much larger, ranging downwards from research universities with nationally valued professional training in fields such as medicine, law and engineering, to primarily teaching-focused HEIs in Tier 3 whose strategy is grow, spread and market the title 'university', drawing a referred glory from the high status institutions. Mohrman, Ma and Baker in 2008 referred to the 'global research university' or GRU. Perhaps the term 'global research multiversity' has it right. It highlights internal heterogeneity as well as reach; it is independent of space, time and ideology; and it distinguishes the present institution from the smaller and less global elite universities prior to the communicative globalisation that began about 1990.

[Size and social power]

In high participation systems, the conventions of size have changed. At a given time all HEIs want to expand their social weight, and accumulation and aggregation are principal means of doing so, but in elite multiversities the need to sustain student selectivity and concentrate research activity, which is sustained everywhere by small groups of intellectual leaders, sets natural limits on expansion. What is striking is that this equilibrium is now fixed at a much larger scale, and managed growth is central to the strategies of many elite HEIs. Some continue to fix themselves at very small scale—for example in 2016 Caltech has 1001 first degree students and 1251 graduates. Princeton is small. But this is exceptional. Size is one of the principal tools of Harvard.

As van Vught (2008) states the multiversity is driven fundamentally by desires for social status and position, and we can add social effect, especially as manifest in social centrality and leadership. Hence the multiversity also wants to acquire public and private resources for the research, infrastructure, teaching programmes and services that underpin status. These twin objectives, status and resources, which produce each other, together explain the multiversity's accumulative logic and quasi-market hungers. The more functions, students, land and buildings, and research glory it acquires, the stronger is the gravitational pull of its status. Every advance of status triggers possible further resources. In this manner the multiversity is shaped between two contrary and compelling logics: the logic of selectivity, which generates status by increasing unit value, and the logic of aggregation of functions, reach and power. It is striking that institutional status is generated through both quantity and quality—on one hand

through accumulation/extension, and on the other hand concentration/intensification. These logics are heterogeneous. Yet each needs the other. On one hand, high selectivity that is not coupled with social coverage leads to marginal influence. Note here that there is more than one way to social coverage: while Caltech has only 2255 student its research budget is the same as that of the University of Toronto with 86,709 students. On the other hand, broad social relations coupled with a level of growth that dissolves zero-sum prestige turns a research multiversity into a solely mass HEI.

Though every multiversity needs resources, the evolution of the multiversity is not governed primarily by economic scarcity. It is driven by the contrary logics of status intensification and status accumulation: quality and quantity. Institution by institution the two drivers, selectivity and aggregation, combine in varying ways. Some HEIs take both paths to status as far as possible. Others focus more on one. All follow selective or aggregative logics variously, in different parts of the operation: the multiversity form is sufficiently loose to permit that. This variation in strategies, along with variation in the contents of what is selective and aggregated, is key to the individual distinctiveness of the multiversity. There is much scope for choice. Yet both the drive to selectivity and the drive to aggregation of function are ultimately framed and constrained by the positional market in higher education. The accumulation of status via the multiplication of social reach is limited by the status of rival universities, which restricts the extent to which any HEI can expand its role without becoming so non selective as to lose status.

[Reconfigured systems]

In the main line of development, the structural reconfiguration of systems has the effect of making space for the enlarged and more hegemonic multiversity form. The system redesign that transfixed UK higher education 25 years ago and is still unfolding in the ongoing reduction of specialist HEIs, is an ongoing feature of many national systems. As noted, the general patterns are a shrinking in the social roles of non-university sectors, the absorption of specialist HEIs by larger multidisciplinary conglomerates, and the transfer of some separated research academy wortk into research universities.

A range of combinatory forms develop the size and reach of multiversities, including mergers, multi-site and cross-border institutions, and hybrid structures. As Johnston (2010) noted there is ‘upward drift’ to research university functions from HEIs positioned below, and a ‘downward drift’ of research universities to larger and more heterogeneous teaching and service missions. Increased degree-granting in American community college degrees are paralleled in the United Kingdom and Australia by the growth of degree programs in Further Education, and Vocational Education and Training, respectively, though as in the US the incidence is localised and limited overall. Internationalization and global activity are vary markedly between HEIs and are another primary source of distinctive identity (King, Marginson and Naidoo, 2011).

The absorption of specialists into comprehensives has proceeded further and with greater coherence in China than in Russia. In most countries designated sub-degree vocational sectors are maintained, though there are marked variations in their size and weight. Binary sectors at degree level have had mixed fortunes in the last 25 years. They have survidved in countries with strong knowledge-intensive manufacturing sectors such as Germany, Austraia, Switzerland, South Korea and Taiwan and newly created in China; while binary lines have dissolved or are fragmenting in UK, Australia, Ireland,

Denmark and Norway. Vocational second sectors are now more often designated as 'universities' than 'polytechnics', and some acquire a growing role in research. The term 'institute' provides alternate status to 'university' only in a few unambiguously leading HEIs such as MIT and Caltech in the United States. Variant sectors now mostly carry designations such as 'applied science university' or 'university of technology'.

These developments are the subject of numerous national research studies. (For example Maassen 2010 on the Netherlands; Pinheiro 2015 on Norway). A review by Pinheiro, Charles and Jones (2015) confirms the point that the last generation has seen the spread of a single organisational model, that of the comprehensive research university with an entrepreneurial bent. In Norway, convergence around this model has been facilitated by mergers and hybrid forms that combine previously separated missions, with policy borrowing and convergence across the joins. Convergence on the comprehensive university model is also associated with upward drift of lower level institutions towards degree programmes, for example in Canada (Jones, 2009).

[Diversity within the multiversity]

Both internally driven expansion and merger fostered more diverse missions inside multi-purpose HEIs.Consistent with the flexibility and diversity of the multiversity form, one feature of the HPS era is greater internal structural heterogeneity of HEIs. There are two kinds of combination—multiplicity, heterogeneous functions sharing a common container without losing their distinctiveness; and hybridity, whereby formerly heterogeneous functions are partly or wholly blended, a process that takes time and can be incomplete. The overall tendencies are growth of both size and ambiguity. In some countries mor ore agile and ambiguous structures are facilitated by a shift from state administration to site governance, and everywhere by the evolution of multi-site and multi-level management, information systems and devolved budgeting mechanisms.

The growing internal diversity of multiversities affects some or all of the range of missions, business activities, institutional forms and internal structures, the discipline mix, research activities, levels of study and range of credentials, the heterogeneity of the student body, links to stakeholders, cross-border relations, and forms of academic and non-academic labour. It also extends to more diverse financing arrangements and research activities. Of these manifestations of diversity two are especially important: the increased structural diversity of organizational and academic (departments or schools) units, including cross-disciplinary and problem solving research institutes, often linked to regional development roles or global challenges in research; and the increasing heterogeneity of student populations. Many of the larger multiversities take in a more diverse clientele than their predecessors. The diversification and inclusion of heterogeneous students is widely studied (Shah, et al., 2016); though there is less on how individual HEIs have changed in response to diverse educational needs.

[Diversity on the periphery of the multiversity]

The dominance of the multiversity is qualified in two respects: the growth of for-profit private sectors in some countries, and the fecund development of forms of on-line delivery. Each plays an important role in certain emerging countries. However, in high participation systems ,systems with over 50 per cent enrolment, both for-profit and online delivery play roles that are marginal to the established multiversities and the sub-research multipurpose institutions, though it seems that the margin has widened.

The exceptionalism of online and for-profits hints at their potential to subvert the multiversity. But neither has found a way to generate superior positional value—and arguably, it is the desire for social position that is the principal driver of growing popular demand for and participation in higher education.

In a minority of emerging systems such as Brazil, India and the Philippines the role of for-profit higher education is greater than this. However, reliance on a deregulated private sector as the principle medium for expansion has limits—it is unlikely to lead to a sustainable HPS in which the majority of HEIs minimally adequate for both families and employers. Countries that have chosen this path of development are likely to revert to the more ocnvetional strategy of building public HEIs as the principal system. There are signs that this policy transition is already taking place in Brazil.

Online pedagogy and/or assessment are widely used inside and outside formal higher education. There is much technological potential for free-wheeling diversity; and in policy circles online education is routinely seen as a mechanism for cheapening the unit cost of growing mass higher education provision. Yet solely online delivery has not established credentials with sufficient status to challenge onsite delivery—the most heavily subscribed MOOCs are those associated with Stanford, Harvard and MIT. Many HEIs have folded these MOOC programs into their own delivery. Online is a complement and supplement. Within classrooms or alongside, it is annexed by the multiversity.

[Conclusions]

Neoliberal policy and regulation have specific implications for institutional configurations and diversity. All else being equal, the combination of expanding participation and enhanced competition in neoliberal quasi-markets is associated with specific effects in relation to diversity, including (1) increased vertical differentiation of HEIs (stratification), (2) reduced horizontal differentiation (diversification), (3) increased convergence of missions through isomorphistic imitation, and (4) some growth in the role of private HEIs, especially for-profit institutions, though as noted this is constrained by the marginal role of for-profits in positional competition. When systems are rendered more competitive in quasi-markets, horizontal distinctions of mission often tend to become vertical. Formal market competition also heightens the tendency to strategic imitation rather than innovation. Global competition via research rankings further undermines binary sectors and specialist HEIs (which cannot figure in the rankings), and quickens mergers so as to concentrate research fire power. It is ironic that the markets expected to foster niche specialization have instead exacerbated the 'small is unbeautiful' syndrome and aggregation in order to create value. That is how positional competition works in this sector. This is not to say isomorphism is absent in social democratic systems. From an institution viewpoint the multiversity is shaped by the twin logics of aggregation and selectivity, and innovations must comply with the need to augment social reach and sustain brand value. Again, new missions that may change reputation carry risks, though the risks are greater under quasi-markets than social democracy. Global strategy is one of the few options for executive-led innovation that does not risk institutional status or compromise the research role.

Though the landscape varies by country, in the HPS era institutional higher education develops primarily by combination, including the gymnastic joining of heterogeneous parts, rather than the de-bundled missions and nimble specialization suggested by the

market imaginary. In larger, more inclusive systems there is greater stratification, on average less external diversity, horizontal merging into single HEIs (not always closely coupled), greater ambiguity and much more multiversity. Difference and specialization are contained within large multi-purpose HEIs welded together by name-brands. The logics of system development and institutional development have converged. Both system and HEIs, except the very exclusive, take in a growing portion of society, engage with more multiple stakeholders, and are more diverse inside. System and institutional governance are adept in holding difference within a common frame.

What is the overall verdict? As noted, Wang and Zha (2015) identify three structural forms of diversity. HPS are more diverse if they include more institutional types, if the distribution of institutions between the main types is more evenly weighted, and if there is a greater distance in kind between types. Though individual country patterns differ, it appears that overall in the HPS era the first two forms of diversity have decreased. Weaker non-university sectors and specialist HEIs suggests a reduction in types, and within the typology the large research multiversity is more dominant than before. On the other hand, the growth in for-profit higher education and diverse online provision, both of which in different ways vary sharply from convention, suggests greater diversity in the distance between institutional types. Yet they remain peripheral to the main game, which is the multiversity, ever expanding in role and reach