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"Everyone wants to be like Harvard" – or do they? Cherishing all Missions Equally[1]

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Abstract:

This paper aims to review the drivers of institutional diversity, and traditional higher education system frameworks which mirrored a simplistic understanding of knowledge creation and skill/labour market requirements. It then proposes a more differentiated approach of diversity appropriate for the 21st century and reflecting the complexity of knowledge production and concepts of research and scholarship, and the trend for universal higher education. On this basis, one may observe new models of higher education institutions emerging. The paper asks how these developments might help expand our understanding of diversity, and propose policy and institutional responses, looking at various examples internationally.

> Diversity has been identified in the higher education literature as one of the major factors associated with the positive performance of higher education systems (van Vught 2008: 154).
>
> Diversity is not necessarily desirable particularly if, in the name of differentiation of resources, one lets slide into penury those institutions which bear the brunt of mass teaching and learning whilst creating poles of excellence for the fortunate few. How does diversity of resources for instance, square with the notion of equality of access to public service across the national territory? (Neave, 2000: 19).

Multi-dimensional Diversity

Institutional diversity is seen as a basic norm of higher education policy because it best meets educational and societal requirements (Birnbaum, 1983). It is considered a "necessary consequence of the rapid growth in tertiary education enrolments and the movement of many tertiary education systems from elite to mass systems" and beyond (Santiago et al, 2008, 76). A diverse range of higher education institutions (HEI), with different missions, allows the over-all system to meet students' needs; provide opportunities for social mobility; meet the needs of different labour markets; serve the political needs of interest groups; permit the combination of elite and mass higher education; increase level of HEI effectiveness; and offer opportunities for experimenting with innovation. However, despite its prominence within the policy lexicon, pursuit of diversity (it is argued) is continually undermined by countervailing tendencies (Riesman, 1956; Birnbaum, 1983; Huisman, 1998; Meek, 1991; van Vught, 2008; Rhoades, 1990).

The lack of diversity or de-differentiation or isomorphism occurs because of a combination of market, policy and professional factors which contribute to increasing convergence or homogeneity within the higher education system leading to "academic" or "mission" drift. This process may occur when the "nature, number and distribution of organisations at any given time is dependent on resource availability and on competition within and between different species of organisations" (van Vught, 2007, 9). It may also arise if, for example, research is perceived by government, HEIs and/or the public as more highly valued than teaching, or if some institutions are portrayed as second- or third-class citizens. The image presented is of a hierarchically differentiated higher

[1] This is based on a presentation to the EAIR conference, Iceland, 2011. Thanks also to Siobhan Harkin, Brian Norton, Sybille Reichert, Jacqueline Smith and Elaine Ward for their helpful comments and suggestions at various stages in the development of this paper, and to participants at the Bologna Process Researchers Conference, Bucharest, 2011, and to Evin McCarthy for helping design the *Multi-Dimensional Diversity Framework*.

education system in which “institutions lower in prestige try to emulate higher status institutions (often the status of the university)” (Huisman, 1998, 92).

Globalisation and the quickening pace of competition, exemplified by the arrival and popularity of global rankings, can also contribute to this phenomenon by norming perceptions of prestige and excellence. Institutions and nations are constantly measured against each other according to indicators of global capacity and potential in which comparative and competitive advantages come into play. While government had often been a guarantor of diversity, these factors are driving governments to reify a particular higher education model; for many European countries, this has meant overturning policies which previously treated all HEIs equally. Indeed, this situation is often used to explain perceived poor performance in rankings:

> ...we have not concentrated funding on a few universities. Rather the policy has been to have many good universities but not many excellent ones (German government official quoted in Hazelkorn, 2011, 167)

The "world-class" research university, modelled after the characteristics of the top 100 globally-ranked universities, has become the panacea for ensuring success in the global economy. As a result, governments around the world have embarked on significant restructuring of their higher education and research systems; many HEIs have also revised strategies and policies to fit the image promulgated by rankings.

These developments expose a major and growing tension at the heart of higher education policy. The cost of pursuing the “world-class" model is straining national budgets just as the demands on and requirements for universal higher education are rising.

> We want the best universities in the world....How many universities do we have? 83? We're not going to divide the money by 83 (Nicolas Sarkozy, President, France, quoted in Enserink, 2009).

> European countries are going to have to become much more selective in the way they allocate resources. There are nearly 2,000 universities in the EU, most of which aspire to conduct research and offer postgraduate degrees. By contrast, fewer than 250 US universities award postgraduate degrees and fewer than 100 are recognised as research-intensive (Butler, 2007).

At the same time, the emphasis on research, which is given disproportionate weight in most global rankings, is forging a wedge between HEIs according to whether they excel in research or teaching. By preferring to concentrate resources in a few universities, governments are choosing to emphasize vertical and reputational differentiation between institutions, which is translated in policy terms into greater hierarchical differentiation between research (elite) universities and teaching (mass) HEIs. In so doing, diversity is portrayed as a one-dimensional concept with two rival characteristics: teaching and research. The policy tension arises because the pressures of and responses to globalisation and rankings are emphasizing elite forms of higher education, while the demands and needs of society and the economy are urging horizontal differentiation with wider participation and diversified opportunities.

In contrast to this narrow prism, the history of higher education suggests an alternative perspective in which diversity is more complex. The last decades have witnessed a transformation in the role, number and mission of higher education. Rather than institutions attended by a small intellectual or social elite, attendance is now more or less obligatory for the vast majority of people in order to sustain democratic civil society and most occupations. A distinguishing feature of this history is the way higher education has evolved over time to take on a diverse set of functions and niches within and between institutions (Clark (1978); indeed, some of the most well-known universities nowadays began life as much more modest institutions (Marcus, 2011). Describing the US system, Julius (2011) wrote:

> Small sectarian colleges educating clergy have become large secular universities; local teachers colleges have become regional and in some cases national universities. The land-grant institutions themselves have undergone a transformation unimagined by their founders: from colleges focused on finding cures to oak smut and better mining or agricultural techniques to international conglomerates with budgets in the billions elective admission standards, thousands of faculty...and branch campuses throughout the world.

Or “doctoral programmes…once rare or non-existent in many universities have expanded to their present scale only in recent decades and research as a major component of universities is a relatively modern phenomenon” (Skilbeck, 2003, 13).

Today, HEIs provide education from associate degree to PhD level, conduct research, participate in outreach initiatives, and are a source of innovation and entrepreneurship. They are emblems of nation-building; to some

they are the engine of the economy to others a critical partner in the ecosystem. Beyond imparting education, they are the source of human capital; act as a regional, national and/or global gateway attracting highly-skilled talent and investment, actively engaging with a diverse range of stakeholders through knowledge and technology transfer, and underpinning the global competitiveness of nations and regions. Many have medical schools, museums, theatres, galleries, sports facilities and cafes – all of which play a significant role in their community, city and nation. As a group, they sit within vastly different national context, underpinned by different value systems, meeting the needs of demographically, ethnically and culturally diverse populations, and responding to complex and challenging political-economic environments.

From the vantage point of the real-time observer, it may appear that HEIs have engaged in mission creep, but this may be due to the similarity of language. Adopting a longer timeframe illustrates that HEIs and systems have evolved in response to what Neave (2000) has called a further step in the democratisation of the "Humboltian ethic". Macro-level descriptors of teaching, research and service do a disservice to the diversity of educational ethos and pedagogy, research focus and fields of specialisation, student profile, engagement with stakeholders, etc.; as Clark says, "at best they function as useful ideologies that throw a net of legitimacy over diverse activities" (Clark, 1978, 242). In contrast to a time when institutional boundaries reflected a relatively simple understanding of society, knowledge systems and labour markets, as knowledge has become more complex and society more demanding, diverse higher education models have developed. The transformation from elite to universal higher education has given birth to multi-dimensional diversity.

This article aims to re-define diversity for the 21st century. There are three main sections. Part i provides an overview of the drivers of change in higher education, illustrating how the growing complexity of knowledge production and concepts of research and scholarship, and the trend for universal higher education has driven greater diversity. If new ideas/methodologies are produced by an array of knowledge producers ranging from curiosity-driven to use-inspired and from blue-sky to practice-led, should higher education reflect this wider diversity of perspectives? To what extent can this be portrayed as "mission evolution" rather than "mission creep"? Part ii presents a new approach for profiling diversity – one that seeks to illustrate the great complexity of the higher education landscape. Finally part iii asks: if the goal is institutional diversity – what are policies? Despite objectives to encourage greater diversity, public and policy discourse promotes a simplistic understanding. To what extent does the policy environment undermine its own goals? Do funding initiatives and assessment/evaluation schemes reinforce traditional definitions and differentiations? Does everyone really want to be like Harvard – or they do they just want to be loved? What policy or institutional practices could support a new direction for higher education?

When Systems and Institutions Evolve

i. Emerging missions and purpose

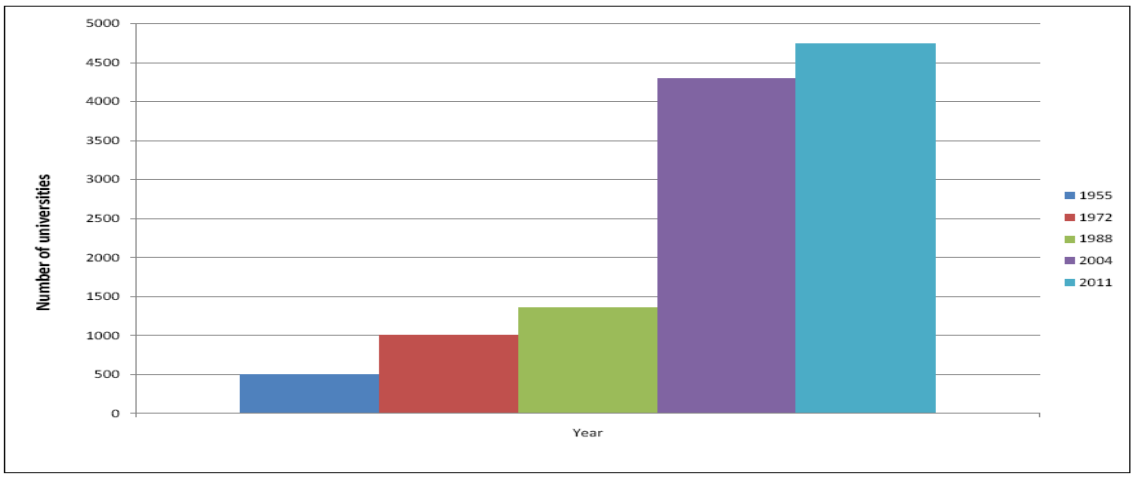
The first degree-granting university in Europe, and the world, was the University of Bologna (established 1088). Remaining aloof from commercial activity and focused primarily on the liberal arts, the early university nonetheless believed society would benefit from the scholarly expertise generated by the university. Over the next centuries, universities were created across Europe to help satisfy a thirst for knowledge, and provide the basis for resolving difficult problems. The modern European university was strongly influenced by the scientific revolution and Wilhelm von Humboldt (1767-1835, founder University of Berlin, 1810) and Cardinal John Henry Newman (1801-1890, inspiration for establishment of Catholic University, Ireland, 1852-58). While the latter saw the university as the place for teaching universal knowledge, the former viewed the university as a training ground for professionals underpinned by a close nexus between teaching and research.

About the same time, the US Morrill Act (1862) established the Land Grant University and created the first set of mass institutions. With their focus on the teaching of agriculture, science and engineering, it sought to meet the needs of a changing social class structure rather than simply concentrate on the historic core of classical studies. The American Graduate School of the early 20th century played a similar role for the next generation of scholar-researchers, albeit knowledge was still pursued for its own sake and research agendas were set by individuals. This began to change in the post-Sputnik era when the Bayh-Doyle Act (1980) signified the official shift of attention, with respect to university research, from curiosity-driven investigation to being an arm of economic development. At the same time, community colleges, with their origins in the early 20th century, began to "provide job training programs as a way to ease widespread unemployment" in response to the depression of the 1930s (Kasper, 2002-03, 15). These developments facilitated the massification of higher education and intensification of research, and marked the dismantling of the boundary between "town" and "gown".

While the US expanded and diversified its system, developments in Europe and elsewhere were slower, and tended to be regulated or engineered by the state which, with few exceptions, remains the primary paymaster. Vocational schools and colleges, polytechnics and new generation universities were established to cater for a

wider range of socio-economic and learner groups, educational requirements and rapidly expanding careers in "technical, semi-professional, and managerial occupations" (Trow, 1974, 124). Many emerged from the transformation of workingmen's or technical institutes. To contain institutional ambitions and costs, statutory instruments and other regulations were created to maintain differentiation, creating what is referred to as the binary system, while traditional universities continued to cater for a small number of elites and the growing middle class. In subsequent years, new educational models and arrangements including distance learning, franchising and over-seas campuses, alongside a proliferation of new private (not-for-profit and for-profit) institutions, emerged catering for specialist and socio-economically diverse learners of all ages. Figure 1 illustrates the extent to which the decades after 1970 marked a watershed in higher education growth across the OECD. Demand is continuing to grow (Vincent-Lancrin, 2008), and at least "one sizeable new university has to open every week" over the next decades (Daniel, 1996).

Figure 1: HEI growth in OECD countries 1955-2011



Source: IMHE/OECD, from *World List of Universities and other HEIs*, IAU, 1995, 1971-72, 1988-89, 2004; Universities Worldwide http://www.univ.cc/

Historically, the demarcation between institutional types was more pronounced; universities taught the classical canon of subjects, including philosophy, medicine and theology or *basic knowledge*, while Hochschule, etc. taught natural and engineering sciences or *applied knowledge*. As labour markets evolved, demand expanded and the social and commercial worlds impinged more and more on higher education, traditional universities have been unable to meet all the demands and requirements of the global knowledge society (Neave, 2000; Clark, 1983; cf. Geiser and Atkinson, 2010). Globalisation, the Bologna Process and more recently global rankings have all helped create a single world market for knowledge and talent. Professional education is no longer a feature solely of vocational institutions; rather, the number of such programmes has risen substantially in universities compared with traditional liberal arts type programmes which have declined absolutely (CFAT, 2011). Today, boundaries between classical and technological disciplines have blurred, leaving institutional nomenclature often owing more to political than accreditation concerns. The terms "unitary" and "binary" are similarly becoming out-dated. What was once decried as mission creep may more accurately be described as mission evolution (Guri-Rosenblit et al, 2007).

ii. Aligning knowledge production and higher education

In the elite system, higher education was about shaping the ruling class, while research was something conducted in a secluded/semi-secluded environment. Research was curiosity-driven and focused around pure disciplines in order to increase understanding of fundamental principles with no (direct or immediate) commercial benefits; as a consequence, research achieves accountability from within the academy and through peer-review (see Table 1). Gibbons et al (1994) called this Mode 1 knowledge production. As higher education evolves to being more or less obligatory for a wide range of occupations and social classes, it is increasingly a knowledge-producing enterprise rather than simply a people-processing institution (Gumport, 2000). The number of actors has grown alongside the breadth of disciplines and fields of inquiry in pursuit of understanding principles and solving *practical problems* of the modern world; thus, research achieves accountability through a mix of peer review and social accountability or Mode 2. In the universal phase, the inter-connectedness between higher education and society is further deepened; education is concerned with ensuring that the majority of the population has the knowledge and skills to adapt to rapid social and technological change. Research is co-

produced and exchanged, focused on solving complex problems through bi-lateral, inter-regional and global networks, not bound by either national, institutional or discipline borders. Mode 3 (author's own term) occurs when research "comes increasingly to the attention of larger numbers of people, both in government and in the general public, who have other, often quite legitimate, ideas about where public funds should be spent, and, if given to higher education, how they should be spent" (Trow, 1974, 91; Lynton, 1994). Mode 3 knowledge production achieves accountability via social and public accountability.

Table 1: From Elite to Mass to Universal Higher Education

	Elite	**Mass**	**Universal**
% relevant age cohort	0-15%	16-50%	Over 50%
Attitudes to access	*Privilege* of birth or talent or both	*Right* for those with certain qualifications	*Obligation* for the skilled working, middle and upper classes
Functions of higher education	Shaping mind and character of ruling class; preparation for elite roles	Transmission of skills; preparation for broader range of technical elite roles	Adaptation of "whole population" to rapid social and technological change
Curriculum and forms of instruction	Highly structured in terms of academic conceptions of knowledge	Modular, flexible and semi-structured sequence of courses	Boundaries and sequences break down; distinctions between learning and life break down
Institutional characteristics	Homogeneous with high and common standards; small residential communities; clear and impermeable boundaries	Comprehensive with more diverse standards; "cities of intellect" – mixed residential/commuting; boundaries fuzzy and permeable	Great diversity with no common model; aggregates of people enrolled but many rarely on campus. Boundaries weak or non-existent
Research and knowledge transfer	Pursuit of understanding of fundamental principles focused around "pure disciplines" and arising from curiosity, with no (direct or immediate) commercial benefits. Conducted by a limited number of research actors in a secluded/semi-secluded environment. Achieves accountability via peer-review process. **Mode 1** (Gibbons et al, 1994)	Pursuit of understanding of principles in order to solve practical problems of the modern world, in addition to acquiring knowledge for knowledge's sake. Broad range of research actors across breadth of disciplines/fields of inquiry. Achieves accountability via a mix of peer and social accountability. **Mode 2** (Gibbons et al, 1994)	Research is focused on solving complex problems via bi-lateral, inter-regional and global networks, not bound by borders or discipline. Knowledge production is democratised with research actors extending/involving "beyond the academy". Emphasis is on "reflective knowledge" co-produced with and responsive to wider society, with an emphasis on impact and benefit. Achieves accountability via social and public accountability. **Mode 3** (author's own term)

Source: Adapted from Brennan, 2004 and Trow, 1973, 1974, 2006. Highlighted section indicates author's contribution.

Trow's elite, mass and universal "phases" of higher education are ideal types, and may occur in tandem at the institutional level or represent sequential stages at the system level. Likewise, the transition from Mode 1 to Mode 2 and then Mode 3 display additional complexities in the knowledge production process. They may co-exist symbiotically within institutions depending upon discipline and research problem and not simply across different institutions; nevertheless, a progression is occurring. The essential point is that if the Enlightenment was characterised by a "model of knowledge produced for its own end in the splendid isolation of the academy – the ideal of liberal education" (Delanty, 2001, 154), recent decades has borne witness to a closer alignment between higher education and society. The civic or publicly engaged scholar is one way of describing the transformative process that has brought the end user into the research process as an active participant shaping the research agenda, and an assessor of its value, impact and benefit. Translational research, traditionally applied to medicine ("from bench to bedside") is now appropriate to other fields. Knowledge is ceasing "to be

something standing outside society, a goal to be pursued by a community of scholars dedicated to the truth, but is shaped by many social actors under the conditions of the essential contestability of truth" (Delanty, 2001, 105).

This is changing not only how the work is organised but the status of the work, the people doing it, the fields and disciplines, and the institutions themselves (Ellison and Eatman (2008, 7). While higher education may always have been a source of intellectual know-how for society, this was usually indirect; walled campuses express this sense of distance. Today, for better or worse, the inter-relationship between higher education and society, but more particularly the economy, is direct. Critics have denounced this progressive penetration of the market into fields of inquiry and their application as "academic capitalism" (Slaughter and Leslie, 1997), but the process has helped underpin the democratisation of knowledge, and facilitated the emergence of more diverse roles and models of higher education. Table 2, read vertically, illustrates how the research-innovation spectrum and educational focus were historically aligned. Today, strict demarcations between pure basic or fundamental, use-inspired basic, problem-solving or goal-oriented, pure application or market-oriented and technology/knowledge transfer have become porous. The linear model of research has been replaced by a dynamic understanding of innovation (Rowthwell, 1994). Boundaries between educational models have also faded. As traditional boundaries fade, all HEIs are entrepreneurial – to paraphrase Clark (1998).

Table 2: Alignment between Research-Innovation Spectrum and Higher Education Models

Knowledge Production	Pure Basic or Fundamental	Use-Inspired Basic	Problem-solving or Goal-oriented	Problem-solving or Goal-oriented	Pure Application or Market-oriented	Development and Technology Transfer	Knowledge Transfer
Indicative Outputs and Impact	Peer Articles Books and Monographs Books Chapters	Peer Articles Policy and Technical Reports Patents Creative Work		Peer Articles Policy and Technical Reports Patents Creative Work		Licenses Contribution to Standards New Products and Services New Companies and Employment	
Accountability	Peer Review Citations	Peer Review Citations Social and Market Accountability		Peer Review Citations Social and Market Accountability		Social, Public and Market Accountability Peer, User and Stakeholder Esteem	
Educational Models	Academic	Professional		Vocational		Entrepreneurship	

A New Way to Profile Diversity

i. Defining Diversity

Diversity is usually described using macro-level generic categories, such as institutional size, form of institutional control, range of disciplines offered, degrees awarded, and modes of study (Huisman et al, 2007). The US Carnegie Classification system has had a major influence on how institutions are described and describe themselves. While the system was changed in 2005 to embrace more characteristics with opportunity for customisation and multi-listings, its early rendition identified six main criteria and institutional categories/missions (McCormick, 2006; see Table 3). Unfortunately, the system was read hierarchically and used accordingly by governments and institutions thereby confusing classification and identity (McCormick and Zhao, 2005, 55). This in turn influenced, for example, the way *US News and World Report* subdivided its ranking of universities into tiers, of which Tier One is the most favoured – becoming the focal point for both political and institutional ambitions (USNS, 2010). Both Reichert (2009, 122) and the EU-sponsored U-Map project (Van Vught, 2009) have endeavoured to overcome the problems encountered by Carnegie by identifying five and fourteen dimensions, respectively.

Table 3. Different Ways to Describe Institutional Missions

Carnegie Classification System (1973, 2005)	Duderstadt (2000)	OECD (Vincent-Lancrin, 2004)	U-Map (Van Vught, 2009)	Reichert (2009)
• Doctoral-Granting Institutions • Comprehensive Universities and Colleges • Liberal Arts Colleges • Two-Year Colleges and Institutes • Professional Schools and other Specialized Institutions • Instructional program • Enrolment profile • Size and setting • "Elective" classifications	• World university – international focus; • Diverse university – social/ethnic diversity, pluralistic learning community; • Creative university – university of the arts, media, architecture; • Division-less university – interdisciplinary approach to learning; • Cyberspace university – open and distance learning; • Adult university – advanced education and training; • University college – undergraduate provision; the lifelong university – programme provision throughout lifetime; • Ubiquitous university – new "life-form" linking/connecting social institutions; • Laboratory University – new "green-field" site experiment in learning.	• Tradition – catering to relatively small share of youth for credentials; • Entrepreneurial - teaching, research and service are well balanced; • Free Market – market forces drive specialisation by function, field, audience; • Lifelong Learning and Open Education – universal access for all ages w/ less research; • Globally networked – teaching/training institution in partnership with other orgs.; and • Diversity of Recognised learning – disappearance of formal institution – distance, "open course" education.	• Types of degrees offered • Range of subjects offered • Orientation of degrees • Involvement in life-long learning • Research intensiveness • Innovation intensiveness • International orientation: teaching and staff • International orientation: research • Size • Mode of delivery • Public/private character • Legal status • Cultural engagement • Regional engagement	• Institutional clienteles or target communities • Missions and functional emphases, i.e. research, teaching, research training, CPD, etc. • Programme or subject profiles, e.g. academic, professional, etc. • Staff profiles • Student profiles

Moving beyond distinction by level (e.g. BA, MA, PhD), the OECD (Vincent-Lancrin, 2004) envisioned post-secondary education as "a collection of specialised HEIs carrying out several missions or functions for different groups of the population and for different kinds of knowledge". Read at either the system or institutional level, institutional missions are seen to be complex and meeting a wide range of socio-economic requirements. Duderstadt (2000) proffered another variation assigning indicative descriptors much like a car-showroom might display a range of different models. Clark (1998, xiv) coined the term "entrepreneurial" university to describe universities which "took chances in the market"; Lynton's "metropolitan university" (1994) has similarities to Bleiklie and Kogan's "stakeholder" university (Bleiklie et al, 2007, 371) or Goddard's "civic university" (2009, 4), the latter denoted by the way universities "engage [as-a-whole and not piecemeal] with wider society on the local, national and global scales, and…do so in a manner which links the social to the economic spheres" The engaged institution fulfils Delanty's observation that "the university is the institution in society most capable of linking the requirements of industry, technology and market forces with the demands of citizenship" (2001, 158; see also Sturm et al, 2011).

Differences may exist within institutions or between them; indeed, different units of an HEI may operate in different ways depending upon the discipline, orientation, business/financial model, etc. and the overarching historic/socio-economic context and governance model. Traditional collegial or federal models tend to tolerate greater internal differences than newer or managerial models which favour a unitary approach. Greater similarity in practice may be a feature of single-discipline institutions or highly unionised environments. Socio-cultural, economic and historic context are always important influencers.

A difficulty with these approaches is that the level of granularity is insufficient to fully appreciate the extent to which differentiation exists. This occurs because differences between institutions are usually recorded quantitatively by the level of intensity, e.g. the greater number of proportion of an activity. Quantification appears to be scientific – objective and not subjective – but it has led to some perverse effects of ranking and classification systems.

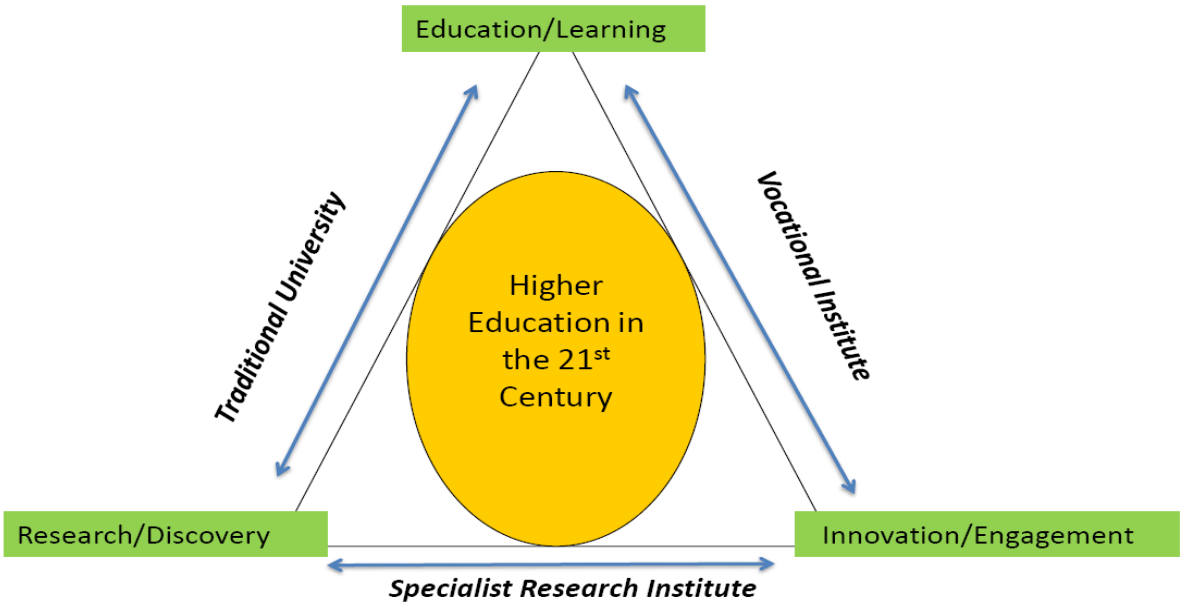
> Colleges and universities are complex organizations that differ on many more dimensions than the handful of attributes used to define the classification's categories, and of course the very act of asserting similarity among institutions runs counter to the rhetoric of distinctiveness on our campuses. More important, the host of intangibles that constitute institutional identity could not possibly be incorporated into an empirically based classification system (McCormick and Zhao, 2005, 55).

In other words, by using a limited number of macro-level characteristics, many of the distinctive features of higher education remain hidden. Institutions and the system-as-a-whole look fixed in time, so change is greeted disapprovingly. Terms such as "mockers and mocked", "institutional chameleons" and pseudo-universities are used to describe what is considered imitative or "striving" behaviour (Meek and O'Neill, 1996; O'Meara, 2007).

ii. Multi-dimensional Diversity

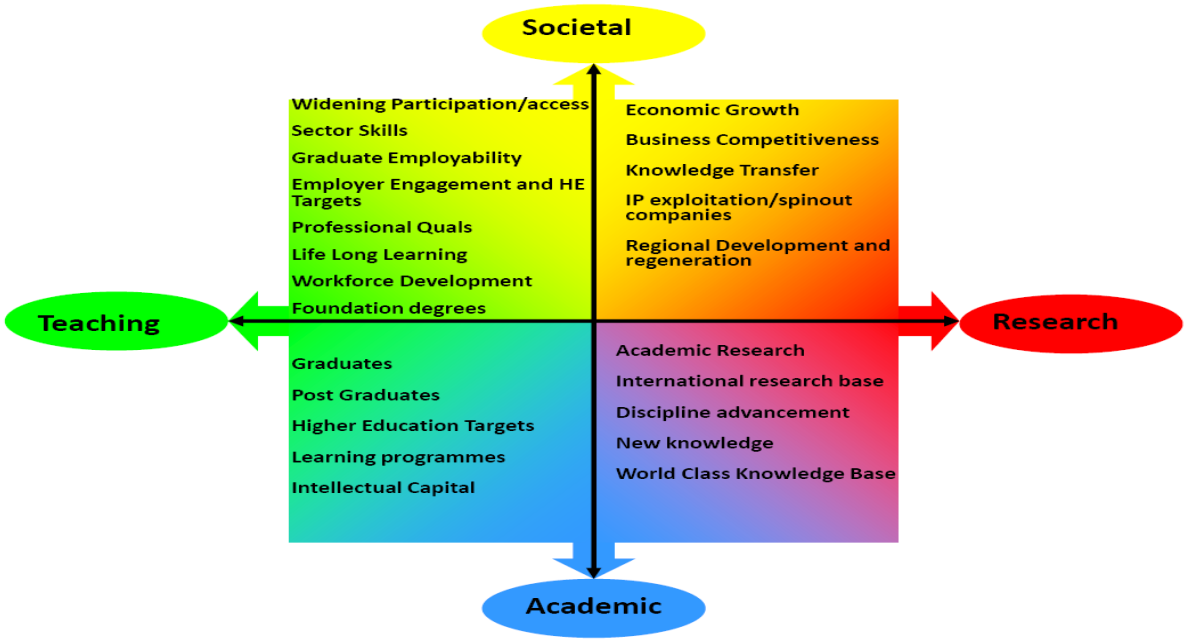
One way to address the problem of complexity is depicted in Figure 2; it super-imposes the European Union's concept of the knowledge triangle of teaching, research and innovation (European Commission, 2010) onto different institutional missions and distinguishes particular foci from each other. Kerr's (1963) "multiversity" described higher education at the intersection of an expanding and multifaceted set of objectives and stakeholders, interpreted and prioritised in different ways by HEIs rather than in a bipolar world of teaching and research. Figure 3 updates this scenario using quadrants, whereby institutions position themselves in varying proportions to meet different socio-economic and policy objectives. Figure 4 displays two different institutional types – one with a strong teaching and societal commitment and the other more focused on traditional academic research. By visualising institutional profiles in this way, resembling the sun-bursts used by both U-Map and U-Multirank (van Vught, 2009, 2011 and van Vught et al 2010), *some* differences can become more apparent to each other and other stakeholders. However, because, terms such as "education", "research" and "innovation" – which dominate most mission statements – operate at the macro level, they cannot adequately showcase diversity. Thus, it appears all institutions are pursuing the same objectives in the same way. The new multi-dimensional approach to diversity (see below and Figure 5) aims to overcome these perceptual limitations and misunderstandings by moving to the next level of granularity – and providing a useful vocabulary.

Figure 2: New Model of Higher Education



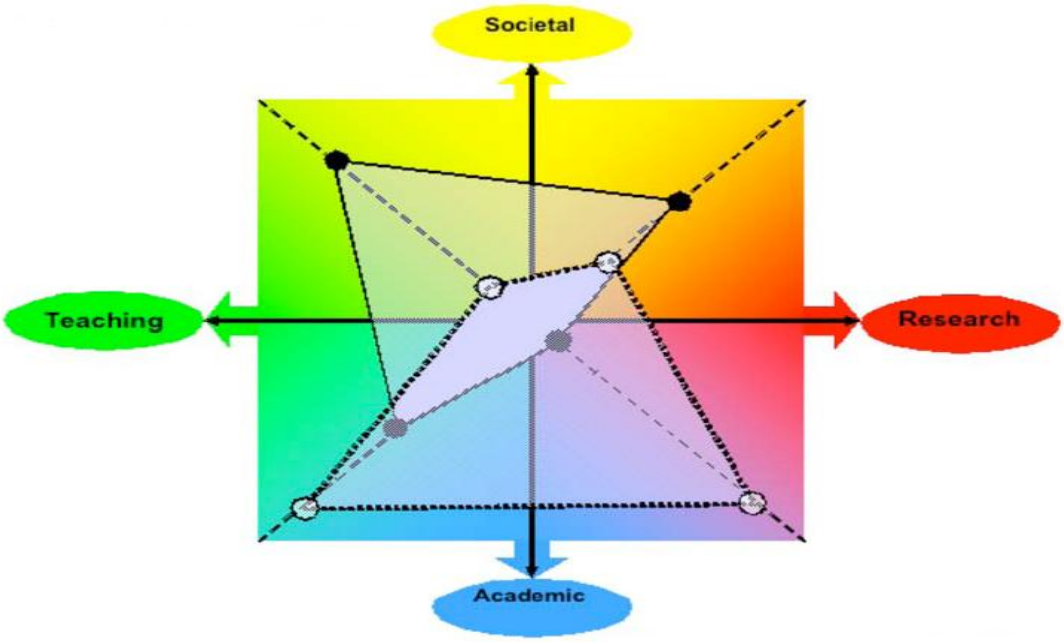
Source: Adapted from Hazelkorn, 2005, 43

Figure 3. Some Agendas and Expectations of Higher Education



Source: Wedgwood, 2004, 10.

Figure 4: Mapping Diverse HEI Profiles



Source: Wedgwood, 2004, 11.

As knowledge systems and institutions evolve, it is possible to "envisage a larger and still more varied array of providers, both public and private, national and international, global and corporate, campus-based and virtual" (Skilbeck, 2003; Skilbeck, 2001, 58-71)" or to identify institutions which may straddle the line between categories – specialist art schools which also award masters degrees and conduct research or dual-sector institutions of Ireland, Australia, Africa, and Canada which offer both further and higher educational programmes. There may appear to be substantial duplication in programme provision but this ignores differences in pedagogy, use of work-based or on-line learning, case studies, internships, etc. which provide very different learning environments. Similar difficulties plague descriptions of research. This is because research is usually measured in terms of "intensity", e.g. the number of papers and citations per faculty, the ratio of research students/faculty, research income, patents/licenses, etc. The greater the number, the more a particular

HEI is designated as a research university. However, quantification fails to distinguish between approaches to knowledge production and critical inquiry, and ignores field specialisation. Measuring activity at the macro-level may also exaggerate the extent to which de-differentiation and isomorphism or "striving" is occurring.

The *Multi-Dimensional Diversity Framework* (Figure 5) adopts a different approach. It displays multiple sub-characteristics, below the macro-level, to showcase the complex terrain of higher education. It also provides the necessary vocabulary – the set of key words – required by policymakers and HEIs to better express diversity. The characteristics/sub-characteristics are divided into four groups: mission, target (e.g. student or programme), size and structure (e.g. organisation); this is simply an indicative list. Each characteristic/sub-characteristic is treated independently so they can be mixed accordingly. For example, an institution may be urban-based, disciplinary focused with strengths in use-inspired basic research while another may also be specialist but focused primarily on problem-solving/goal-oriented research. In this way, HEIs can be shown to be more diverse than would be the case by simply describing them as teaching vs. research or world-class vs. regional suggests. While data is an important strategic tool, relying on quantification to determine diversity may actually reduce complexity to a few pre-selected categories – effectively undermining the purpose of the exercise. Figure 5 presents *Multi-Dimensional Diversity Framework*™ displaying macro and meso level descriptors. This can be used as a strategic tool for policymakers and higher education to use for, inter alia, benchmarking or quality purposes to help define and profile institutional diversity.

Figure 5: Multi-Dimensional Diversity Framework

Mission	
	Traditional Academic; Civic/Engaged; Liberal Arts; Technological; Entrepreneurial; Vocational/Professional; Specialist
	International; National; Regional; Metropolitan; Community
	Research-Intensive; Research-Informed; Teaching-Led
	Religious; Non-Religious
Students	
	Elite; Mass; Universal
	Selective; Recruiting; Open Access
	Doctoral; Masters; Bachelor; Associate; Certificate; Dual Sector
	Homogeneous; Multi-Ethnic/Diverse
	Local; Domestic; International
	18-22; Mature; Part-Time; Distance Learning; First-in-Family; Up/Re-Skilling; LLL; All Learners
Academic	
	Multi-Disciplinary; Specialist Disciplines; Mono-Discipline
	Classical Canon; Professional; Technological; Vocational; Entrepreneurship
	Lecture; Seminar; Case-Studies; Problem-Oriented; Work-Based; Practice-Based; Community Engaged Learning; Internships; Service Learning; Study Abroad; Blended-Learning;
	Pure Basic/Fundamental; Use-Inspired Basic; Problem Solving/Goal-Oriented; Pure Application; Market-Oriented
	Technology Transfer; Knowledge Transfer; Community Engagement
Organisation	
	Residential; Commuter; ODL
	Old; Young
	Wealthy; Humble
	Collegial; Managerial; Corporate
	Wholly Public; Public Dependent; Private Not-For-Profit; Private For-Profit
	Government/Public Controlled; Regulated; Semi-Autonomous; Autonomous
	Unitary; Federalist
	Colleges; Faculties; Schools; Departments
	City; Town; Suburban; Rural
	Large; Medium; Small
	Single-Campus; Multi-Campus; International Campuses; Franchise

Moving forward: Recommendations

The evolution of higher education reflects the growing complexity of peoples, society and knowledge systems. As ways of thinking and doing expand beyond the preserve of a small elite to embrace a wide array of knowledge creators and end-users, higher education has changed to reflect this wider diversity of perspectives and requirements. But, while policy declares support for diversity, the methodologies used to assess, measure, evaluate and fund higher education are often at variance.

> Institutional diversity will thrive only if both the system of regulation and funding as well as the values which underpin institutional development do not favour a particular profile or particular dimensions of institutional activity over others (Reichart, 2009, 8).

So, if the goal is institutional diversity – what are the policies?

The literature on diversity points to a broad range of factors which have either encouraged/discouraged differentiation between HEIs. While it's difficult to ascertain a single cause, the policy environment is certainly a critical factor. Three areas of complexity which pose particular challenges to policy development are addressed briefly below: government steering methods, conceptualising research and third-mission activities. Finally, a process for embedding diversity into performance assessment for institutions and individuals is proposed.

i. Diversity and government steerage

In Europe, governments commonly sought to impose differentiation through regulatory mechanisms; what is known widely as the binary system. It assigned distinct roles/missions to universities and Hoschule, etc. in ways which mirror the US California model (Douglass, 2000). Top-down regulation of mission often coincided with government micro-management of the institutions, including budgets and expenditure at the operational level, curriculum, and academic appointments. In recent decades, there has been a shift from control to regulation to steering, not least because it is widely argued that successful institutions are those most able to direct and strategically manage their own affairs (Estermann and Nokkala, 2009; Aghion et al, 2008). At the same time, governments want to retain control, especially with respect to publicly-funded or -dependent institutions. Driving change from a distance may include promoting common comparability frameworks at either a national or international level, e.g. qualifications frameworks, global rankings, assessment of learning outcomes. While these initiatives are promulgated in response to pressure for greater accountability, they could undermine diversity by endorsing common standards (Eaton, 2011). The challenge is how to balance autonomy and accountability with diversity.

One approach gaining traction is university contracts or compacts. This seeks to engage HEIs in a service-level agreement to provide teaching, research, services, etc. appropriate to mission in return for funding. Australia has been an early mover, and has sought to tie the "unique mission of each university to the Government's goals for the sector". From the government's vantage point, compacts enable a more "coordinated response to the...goals for higher education, research and innovation" (Evans, 2010) while linking funding to performance. Denmark, the Netherlands, Norway and Ireland have adopted similar approaches. The Irish *National Review of Higher Education to 2030* recommended proposed the introduction of the "strategic dialogue" between the Higher Education Authority (the buffer agency) and individual institutions, and occasionally at a sector-wide level, as a means of "aligning the strategies of individual institutions with national priorities and agreeing key performance indicators (KPIs) against which institutional performance will be measured and funding decided" (Review Group, 2011, 91). Aside from ensuring that HEIs meet societal needs, the emphasis is on ensuring "a diverse range of strong, autonomous institutions." The process involves a formal conversation at which

> each institution will be required to define its mission and decide how it can best contribute to achieving national goals, as determined by the government. In defining mission, institutes should avoid playing catch-all – this is a formula for blandness and dissipation of energy and resources – and ultimately will not be funded...They need to find a balance between their own development as institutions and the development of the sector as a whole; between competition in quality and standards, and due regard to the strategic objectives of others, and national objectives (Boland, 2011).

The process is described as "directed diversity"; while there may be some opportunity for institutions to self-define their mission, it will not be open-ended. This means the choice of KPIs is critical. The key questions are whether government can resist the temptation to micro-manage, and whether this approach provide a legitimating ideology for each mission (Clark, 1978).

ii. Diverse research missions

Research and teaching are often seen as oppositional attributes; an institution can excel at one but not both. Governments often express policy options in terms of "world-class research universities" vs. "world-class teaching institutions" or university vs. **non**-university; sometimes the former is shortened to "world-class university" where the word "research" is implicit. Another formulation is "world-class university" vs. "regional university" – whereby the distinctions are understood in terms of status rather than mission. In the rush to criticise the obsession with "world-class", commentators have argued that

> ...what we really need in countries everywhere are more world-class technical institutes, world-class community colleges, world-class colleges of agriculture, world-class teachers colleges, and world-class regional state universities (Birnbaum, 2007; Salmi, 2009, 3).

While the sentiment is worthy, it doesn't get around the fact that the drive for "world-class" status is made on the basis that "steep vertical diversification of higher education is desirable" and that there is an unquestioning correlation between quality and elite universities (Guri-Rosenblit et al, 2007, 381).

Research presents a policy dilemma for diversity. First, research is generally interpreted as homogeneous – institutions either engage in research or they don't. This simple distinction can be modified by distinguishing between basic and applied research, in which the former is generally perceived, in status terms, as *real* research implicitly associated with big science and fundamental bio-medical discoveries. But, as Boyer reminds us

> the word "research" actually entered the vocabulary of higher education [recently]....scholarship in earlier times referred to a variety of creative work carried on in a variety of places, and its integrity was measured by the ability to think, communicate, and learn. What we now have is a more restricted view of scholarship, one that limits it to a hierarchy of functions (Boyer, 1990, 15).

Second, this over-simplification of research activity is driven quantitatively by bibliometric practices which count productivity principally by journal articles, and impact by citations or rather what one academic has written and another read. But this is only a fraction of research activity; Table 4 shows that what is measured (above the red line) represents a fraction of the breadth of activity (below the red line; cf. Ellison and Eatman, 2008, 1; Sandmann et al, 2009). Unfortunately, this narrow conception informs most rankings, classification systems and policy (Hazelkorn, 2011a; Hazelkorn, 2011b). At a time when society has a growing need for new methodologies and interdisciplinary research to explore and resolve major societal and scientific challenges, the simplicity and limitation of data collection and analysis obscures important understandings (see McCormick and Zhao, 2005, 56), and leads to distortions in policy and resource allocation, and hiring, promotion and tenure (CFIR, 2004, 2).

Table 4. Indicative List of Diverse Research Outputs/Impact

• Journal articles	• Peer Esteem
• Book chapters • Computer software and databases • Conference publications • Editing of major works • Legal cases, maps • Major art works • Major works in production or exhibition and/or award-winning design • Patents or plant breeding rights • Policy documents or brief • Research or technical reports • Technical drawings, designs or working models • Translations • Visual recordings	• Impact on Teaching • Improved Productivity, Reduced Costs • Improvements on environment and lifestyle • Improving people's health and quality of life • Increased employment • Informed public debate • New approaches to social issues • New curriculum • Patents, Licenses • Policy change • Social innovation • Stakeholder esteem • Stimulating creativity

iii. Engagement and third-mission activity

Another area of complexity concerns "third-mission" activities; this has replaced the traditional concept of "service" which usually referred to membership of in-house or professional committees – arguably a Mode 1 understanding of higher education. Today, sustained, embedded and reciprocal engagement is defined as

learning beyond the campus walls, discovery which is useful beyond the academic community and service that directly benefits the public. Different programmatic models and initiatives are emerging which bring together actors from civil society, the state and state agencies, and higher education to mobilize and harness knowledge, talent and investment in order to address a diverse range of problems and need through co-ordinated action. While these objectives are lauded, policy and academic practice has done little to formally reward such endeavours beyond paying lip-service to counting patents and licenses. Carnegie's Community Engagement classification draws upon institutional documentation (Driscoll, 2008, 41) while U-Multirank uses a limited set of pre-selected indicators (van Vught, 2011). In contrast, the EU-funded E3M project (2011) has developed an extensive range of continuing education, technology transfer and innovation, and social engagement indicators (Table 5).

Table 5. Indicative List of Third Mission Indicators

Continuing Education	Technology Transfer & Innovation	Social Engagement
• CE included in HEI policy/strategy • Existence of CE institutional plan • Existence of quality assurance procedure for CE activities • Total # CE programmes active in year for implementation • # CE programmes delivered which have a major award under higher education system • # partnership with public/private business CE programmes delivered in year • % international CE programmes delivered in year • % funded CE training projects delivered in year • Total # ECTS credits of delivered CE programmes • # ECTS credits enrolled • # registrations in CE programmes in year • % CE ECTS enrolled referred to the total ECTS enrolled • % qualifications issued referred to total CE registrations • Students satisfaction • Key stakeholder satisfaction • Completion rate for all programmes (in average) • % CE programmes with external accreditations	• TTI included in HEI policy/strategy • Existence of TTI institutional action plan • # licences, options & assignments (active & executed, exclusive & non-exclusive) to start-ups or spin-offs & existing companies • Total budget coming from commercialisation revenues • # start-ups/spin-offs • # creative commons & social innovation projects HEI employees involved in • # R&D sponsored agreements, contracts & collaborative projects with non-academic partners • % HEI budget from income of R&D sponsored contracts & collaborative projects with non-academic partners • # consultancy contracts • % postgraduate students & postdoctoral researchers directly funded or co-funded by public & private businesses • # created (co-funded) or shared laboratories & buildings • # companies participating in CPD courses • # HEI employees with temporary positions outside of academia • # non-academic employees with temporary positions • # postgraduate theses or projects with non-academic co-supervisors • # joint publications with non-academic authors • # academic staff participating in professional bodies, networks, organizations & boards • # external organizations or individuals participating at advisory, steering, validation, review boards to HEIs, institutes, centres or taught programmes • # prestigious innovation prizes awarded by business & public sector associations or funding agencies (national & international)	• SE included in HEI policy/strategy • Existence of SE institutional action plan • Budgetary assignment to SE • % academics involved in volunteering advisory • # events open to community/public • # research initiatives with direct impact on the community • Number/cost of staff/student hours made available to deliver services & facilities to community • # people attending/using facilities • # projects related to educational outreach • # faculty staff & students involved in educational outreach activity • % HEI budget used for educational outreach

Source: Adapted from E3M Project - European Indicators and Ranking Methodology for University Third Mission (2011) *Final Report of Delphi Study*, unpublished.

iv. Aligning diversity with performance

For diversity to be meaningful, these complexities need to be captured and reflected in policy and public discourse, and the systems that incentivise and reward institutions and individuals. However, there is little doubt that that diversity breeds complexity – and undermines another government objective of cost containment and efficiency. But, to be fair to both the goal and the process, a multi-faceted process that meets the different objectives needs to be developed. One solution is to change the assessment and reward system, for institutions and individuals, to better align it with policy intentions rather than "systems that distort academic investments and produce inequality..." (Calhoun, 2006).

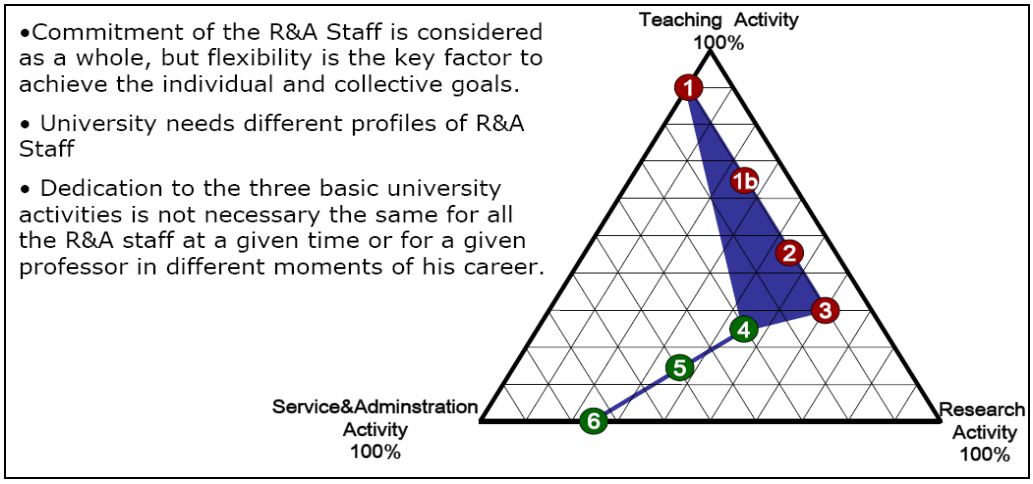
Because academic norms and values can be a road-block to diversity, new forms of academic credentialism and assessment that recognise the diversity of research outputs and impacts as part of the "continuum" of scholarship should be adopted.

> The term continuum has become pervasive because...it is inclusive of many sorts and conditions of knowledge. It resists embedded hierarchies and by assigning equal value to inquiry of different kinds (Ellison and Eatman, 2008, ix).

Some research assessment exercises are beginning to reflect Mode 2 and even Mode 3 realities, shifting focus away from simply measuring inputs (e.g. human, physical and financial resources) to looking at outcomes (the level of performance or achievement including the contribution research makes to the advancement of scientific-scholarly knowledge) and impact and benefits (e.g. the contribution of research outcomes for society, culture, the environment and/or the economy) (Europa, 2010, 36–37). As the UK Research Assessment Exercise developed, it became more inclusive of disciplines and methodologies but was undermined by protestations about the level of "bureaucratic" intrusion. Arguably this came loudest from those universities who gained the most and saw little point investing more time and money into the exercise. The result in the UK and Australia was to push for metrics-based assessment but this process simply amplified the distortions identified above (Corbyn, 2010; Rowbotham, 2011).

Another approach is to align resources to the different elements of the knowledge triangle or quadrants (Figures 2 and 3 above). Units and individuals would be expected to develop provision/activity which reflects education/teaching, discovery/research and engagement/innovation – relevant to the academic discipline – with resources or rewards based upon meeting thresholds in at least 2 of these areas (e.g. 40% + 40% + 20%). One such example is the Research and Academic Staff Commitment Agreement (CA) developed by the Universitat Rovira i Virgili (Spain); modelled on the knowledge triangle concept, the CA is described as an "instrument that makes it possible to manage the time that the academic and research staff (PDI) of the Rovira i Virgili University (URV) spend on the activities they carry out: teaching, research, technology transfer, continuous training, management, etc." (Vidal and Xavier, 2006; Fig. 6). Dublin Institute of Technology (www/dit.ie) uses a similar approach for its professorial appointments; candidates must show outstanding achievement in at least one of the three principal criteria: Research, consultancy, scholarship and/or creative achievement, Professional standing and Academic leadership. Other examples can be found most readily in the US where the concept of the engaged-scholar has become more established (see Saltmarsh et al, 2009; Ellison and Eatman, 2008).

Figure 6: Flexibility in Task Assignments



Source: Vidal, 2006.

Variations of these latter models can work at the individual, institutional and system level – and combined with the *Multi-Dimensional Diversity Framework*, further amplified by Tables 4 and 5 – can facilitate better profiling of institutions and clarity for the public. They can be used to help develop the vocabulary necessary to more accurately describe institutional diversity without falling back onto simplistic macro-level terminology.

Conclusion

This discussion only snips at the heels of possible ways forward. Its value is not simply to broaden our understanding of diversity but to begin to develop what Clark calls (1978) a "legitimating ideology" to anchor diversity in response to the other pressures, e.g. rankings, to juxtapose teaching with research. Arguably, that battle over mission descriptors is really about wealth and status in an environment of increasing competition. Yet, many pre-selected indicators and categories are a disservice to diversity; they end up controlling rather than profiling differences between institutions (McCormick and Zhao, 2005, 52). Research and teaching, and globally-facing and regionally relevant are often portrayed as contradictory or oppositional rather than complementary characteristics. This is because there are obvious difficulties associated with profiling complexity – but acknowledging these limitations is one thing, understanding their ideological impact and implications is another. In the rush to provide simple cost-effective solutions, we risk distorting higher education to meet the terms of the indicators or stylised models. There is already substantial evidence from the experience of the Carnegie Classification system and global rankings that measuring the wrong things produces distortions, leading to profound and often perverse affects on higher education and society – far beyond those envisaged by the producers.

The European Commission (2011) says "Europe needs a wide diversity of higher education institution...with more transparent information about the specific profile and performance of individual institutions..." This is where the *Multi-Dimensional Diversity Framework* (Figure 5 above) could be helpful, facilitating governments and institutions to go beyond macro-level terminology of teaching vs. research, basic vs. applied, comprehensive vs. specialist, school leaver vs. mature, etc. It carries the arguments of the OECD, Wedgewood, U-Map and U-Multirank a step further. It embraces a deeper understanding of diversity by moving away from a reductive set of dimensions or policy development. Saying everyone wants to be like Harvard is an easy quip. As long as higher education is perceived in terms of a status hierarchy, as long as governments react to rankings by valuing particular institutions and disciplines over others, then all developments and change, whether at the individual, institutional or system level, will be portrayed as a "snake-like procession" (Riesman, 1956) – and "parity of esteem is not likely to occur" (Clark, 1978, 250). Because these views have become ingrained in our status system, overcoming these preconceptions requires strong leadership and vision.

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