

### **Technological University Dublin** ARROW@TU Dublin

Books/Book chapters

Centre for Social and Educational Research

2012

## Everyone Wants to be Like Harvard – Or Do They? Cherishing All Missions Equally

Ellen Hazelkorn Technological University Dublin, ellen.hazelkorn@tudublin.ie

Follow this and additional works at: https://arrow.tudublin.ie/cserbk



Part of the Social and Philosophical Foundations of Education Commons

#### **Recommended Citation**

Hazelkorn, E. (2012) Everyone Wants to be Like Harvard Or Do They? : Cherishing All Missions Equally. In A. Curaj et al (eds) European Higher Education at the Crossroads: Between the Bologna Process and National Reforms. Part 1. Paris: Springer. Doi: 10.1007/978-94-007-3937-6

This Book Chapter is brought to you for free and open access by the Centre for Social and Educational Research at ARROW@TU Dublin. It has been accepted for inclusion in Books/Book chapters by an authorized administrator of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie, vera.kilshaw@tudublin.ie.

# Chapter 43 "Everyone Wants to Be Like Harvard" – Or Do They? Cherishing All Missions Equally

Ellen Hazelkorn

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)

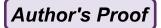
Diversity is not necessarily desirable particularly if, in the name of differentiation of resources, one lets slide into penury those institutions which bear the brunt of mass teaching and learning whilst creating poles of excellence for the fortunate few. How does diversity of resources for instance, square with the notion of equality of access to public service across the national territory? (Neave 2000, 19)

#### 43.1 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 the 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

E. Hazelkorn (⊠)

Directorate of Research and Enterprise, and Higher Education Policy Research Unit (HEPRU), Dublin Institute of Technology, 143-147 Rathmines Road, Dublin 6, Ireland e-mail: ellen.hazelkorn@dit.ie



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 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 are 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 "Humboldtian 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 twenty-first century. There are three main sections. Section 43.2 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, shouldn't higher education reflect this wider diversity of perspectives? To what extent can this be portrayed as "mission evolution" rather than "mission creep"? Section 43.3 presents a new approach for profiling diversity – one that seeks to illustrate the great complexity of the higher education landscape. Finally, Sect. 43.4 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 do they just want to be loved? What policy or institutional practices could support a new direction for higher education?

#### 43.2 When Systems and Institutions Evolve

#### 43.2.1 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 of the University of Berlin, 1810) and Cardinal John Henry Newman (1801–1890, inspiration for establishment of Catholic University, Ireland, 1852–1858). 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 twentieth 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 twentieth century, began to "provide job training programs as a way to ease widespread unemployment" in response to the depression of the 1930s (Kasper 2002–2003, 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 forprofit) institutions, emerged catering for specialist and socio-economically diverse learners of all ages. Figure 43.1 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).

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



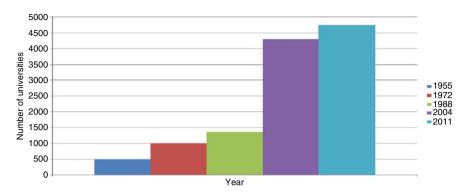


Fig. 43.1 HEI growth in OECD countries 1955–2011 (Source: IMHE/OECD, from World List of Universities and other HEIs, IAU, 1995, 1971–1972, 1988–1989, 2004; Universities Worldwide http://www.univ.cc/)

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).

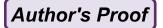
#### 43.2.2 Aligning Knowledge Production and Higher Education

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 43.1). 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

| higher education  |
|-------------------|
| o universal       |
| to mass t         |
| From elite        |
| <b>Table 43.1</b> |

| Table Total Library                 | Table 4.5.1 110m chie to mass to universal inguer 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;<br>distinctions between learning and life break<br>down   |
| Institutional<br>characteristics    | Homogeneous with high and common<br>standards; small residential<br>communities; clear and imperme-<br>able 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 |

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



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 1995). Mode 3 knowledge production achieves accountability via social and public accountability.

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 have 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 43.2, read vertically, illustrates the historic alignment between the research-innovation spectrum and different educational models. Today, the 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

## Author's Proof

43 "Everyone Wants to Be Like Harvard" – Or Do They?...

|                                  |                            |  | Problem-solving      | Problem-solving Pure application           | Pure application       | Development and                          |                       |
|----------------------------------|----------------------------|--|----------------------|--|------------------------|--|-----------------------|
| Knowledge<br>production          | Pure basic or fundamental  | Use-inspired basic                         | or goal-<br>oriented | or goal-<br>oriented                       | or market-<br>oriented | technology<br>transfer                   | Knowledge<br>transfer |
| Indicative outputs<br>and impact | Peer articles<br>Books and | Peer articles Policy and technical reports | nical reports        | Peer articles Policy and technical reports | al reports             | Licenses Contribution to standards       | ndards                |
|                                  | monographs                 | Patents                                    |                      | Patents                                    |                        | New products and services                | services              |
|                                  | Books chapters             | Creative work                              |                      | Creative work                              |                        | New companies and employment             | þ                     |
| Accountability                   | Peer review                | Peer review                                |                      | Peer review                                |                        | Social, public and market accountability | narket                |
|                                  |                            | Social and market accountability           | eet<br>ty            | Social and market accountability           | accountability         | Peer, user and stakeholder esteem        | cholder               |
| Educational models               | Academic                   | Professional                               |                      | Vocational                                 |                        | Entrepreneurship                         |                       |



understanding of innovation (Rothwell 1994). Boundaries between educational models have also faded. As traditional boundaries fade, all HEIs are entrepreneurial – to paraphrase Clark (1998).

#### 43.3 A New Way to Profile Diversity

#### 43.3.1 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 43.3). 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 5 and 14 dimensions, respectively.

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" (1995) 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,

# Author's Proof

| Table 43.3   Different was  | Table 43.3 Different ways to describe institutional missions   |  |   |  |
|---|--|--|---|--|
| Carnegie Classification<br>System (1973, 2005)  | Duderstadt (2000)  | OECD (Vincent-Lancrin 2004)  | U-Map (van Vught<br>2009)   | Reichert (2009)  |
| Doctoral-granting institutions Comprehensive universities and colleges Liberal arts colleges Two-year colleges and institutes Professional schools and other special- ized 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.  Diversity of recognised learning – disappearance of formal institution – 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 | Institutional clienteles or target communities Missions and functional emphases, i.e. research training, CPD, etc. Programme or subject profiles, e.g. academic, professional, etc. Staff profiles |



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 (Codling and Meek 2006).

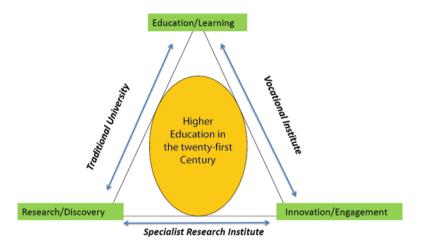
A difficulty with these approaches is that the level of granularity is insufficient to fully appreciate the extent to which differentiation exists. This occurs because differences between institutions are usually recorded quantitatively by the level of intensity, e.g. the greater number or proportion 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).

#### 43.3.2 Multi-dimensional Diversity

One way to address the problem of complexity is depicted in Fig. 43.2; it superimposes 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 43.3 updates this scenario using quadrants, whereby institutions position themselves in varying proportions to meet different socio-economic and policy objectives. Figure 43.4 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; 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



this figure will be printed in b/w

Fig. 43.2 New model of higher education (Source: Adapted from Hazelkorn 2005, 43)

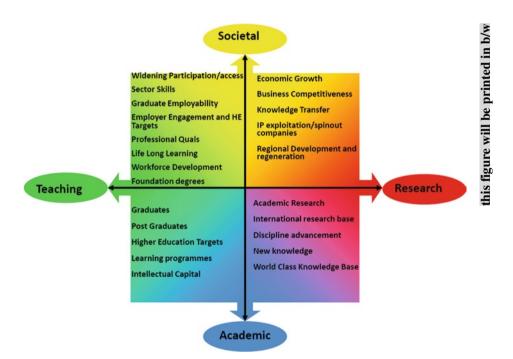


Fig. 43.3 Some agendas and expectations of higher education (Source: Wedgwood 2004, 10)

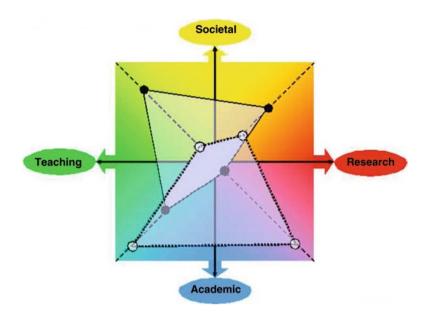
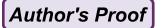


Fig. 43.4 Mapping diverse HEI profiles (Source: Wedgwood 2004, 11)

in the same way. The new multi-dimensional approach to diversity (see below and Fig. 43.5) aims to overcome these perceptual limitations and misunderstandings by moving to the next level of granularity – and providing a useful vocabulary.

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 2001, 58–71, 2003) 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* (Fig. 43.5) 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,



| 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                         |
|  |

Fig. 43.5 Multi-dimensional diversity framework

students, academic and organisation, albeit, 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 43.5 presents a *Multi-dimensional Diversity Framework* TM as a strategic tool for policymakers and higher education to use for, inter alia, benchmarking or quality assurance purposes to help define and profile institutional diversity.



#### **43.4** 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. (Reichert 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 is 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.

#### 43.4.1 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 the introduction of a "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 can provide a legitimating ideology for each mission (Clark 1978).

#### 43.4.2 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 also understood in terms of status not only 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 does not 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).

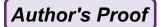


Table 43.4 Indicative list of diverse research outputs/impact

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

Research presents a policy dilemma for diversity. First, research is generally interpreted as homogeneous – institutions either engage in research or they do not. 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 43.4 shows that what is measured (above the line) represents a fraction of the breadth of activity (below the line; cf. Ellison and Eatman 2008, 1; Sandmann et al. 2009). Unfortunately, this narrow conception informs most rankings, classification systems and policy (Hazelkorn 2009, 2011a, b). 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).

#### 43.4.3 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 lipservice 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 43.5).

#### 43.4.4 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 diversity breeds complexity – and potentially undermines another government objective of cost containment and efficiency. 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.

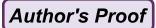
The term continuum has become pervasive because ... it is inclusive of many sorts and conditions of knowledge. It resists embedded hierarchies and by assigning equal value to inquiry of different kinds. (Ellison and Eatman 2008, ix)

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

# Author's Proof

| Table 43.5 Indicative list of Third Mission indicators | icators  |                                      |
|--|--|--------------------------------------|
| Continuing education (CE)                              | Technology transfer & innovation   | Social engagement                    |
| CE included in HEI policy/strategy                     | TTI included in HEI policy/strategy  | SE included in HEI policy/strategy   |
| Existence of CE institutional plan                     | Existence of TTI institutional action plan   | Existence of SE institutional action |
| Existence of quality assurance procedure for           | Number of licenses, options & assignments (active & executed,  | plan                                 |
| CE activities  | exclusive & non-exclusive) to start-ups or spin-offs & existing  | Budgetary assignment to SE           |
| Total number of CE programmes active in                | companies  | Percent academics involved in        |
| year for implementation                                | Total budget coming from commercialisation revenues  | volunteering advisory                |
| Number of CE programmes delivered which                | Number of start-ups/spin-offs  | Number of events open to commu-      |
| have a major award under higher                        | Number of creative commons & social innovation projects HEI  | nity/public                          |
| education system                                       | employees involved in  | Number of research initiatives with  |
| Number of partnership with public/private              | Number of R&D sponsored agreements, contracts & collaborative  | direct impact on the community       |
| business CE programmes delivered in year               | projects with non-academic partners  | Number/cost of staff/student hours   |
| Percent international CE programmes                    | Percent HEI budget from income of R&D sponsored contracts &  | made available to deliver            |
| delivered in year                                      | collaborative projects with non-academic partners  | services & facilities to             |
| Percent funded CE training projects delivered          | Number of consultancy contracts  | community                            |
| in year  | Percent postgraduate students & postdoctoral researchers directly  | Number of people attending/using     |
| Total number of ECTS credits of delivered CE           | funded or co-funded by public & private businesses   | racilities                           |
| programmes   | Number of created (co-funded) or shared laboratories & buildings   | Number of projects related to        |
| Number of ECTS credits enrolled                        | Number of companies participating in CPD courses   | educational outreach                 |
| Number of registrations in CE programmes in            | Number of HEI employees with temporary positions outside of  | Number of faculty staff & students   |
| year   | academia   | involved in educational outreach     |
| Percent CE ECTS enrolled referred to the               | Number of non-academic employees with temporary positions  | activity                             |
| total ECTS enrolled                                    | Number of postgraduate theses or projects with non-academic  | Percent HEI budget used for          |
| Percent qualifications issued referred to total        | co-supervisors   | educational outreach                 |
| CE registrations                                       | Number of joint publications with non-academic authors   |                                      |
| Student satisfaction                                   | Number of academic staff participating in professional bodies,   |                                      |
| Key stakeholder satisfaction                           | networks, organizations & boards   |                                      |
| Completion rate for all programmes (in average)        | Number of external organizations or individuals participating at advisory steering validation review boards to HFIs institutes |                                      |
| Percent CE programmes with external                    | centres or taught programmes   |                                      |
| accreditations   | Number of prestigious innovation prizes awarded by business &  |                                      |
|  | public sector associations or funding agencies (national &   |                                      |
|  | International)   |                                      |

Source: Adapted from E3M Project (2011)



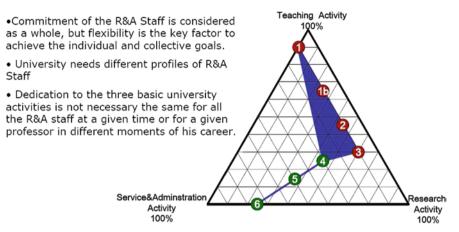
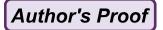


Fig. 43.6 Flexibility in task assignments (Source: Vidal 2006)

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 which 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 (Figs. 43.2 and 43.3 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. 43.6). 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).



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 43.4 and 43.5 – 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.

#### 43.5 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 other pressures, e.g. rankings, which juxtapose teaching with research. Arguably, the 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 globallyfacing 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 institutions ... with more transparent information about the specific profile and performance of individual institutions ..." This is where the Multidimensional Diversity Framework (Fig. 43.5 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. 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.



**Acknowledgments** 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, to participants at the Bologna Process Researchers Conference, Bucharest, 2011, and to Evin McCarthy for helping design the *Multi-dimensional Diversity Framework*.

#### References

- Aghion, P., Algan, Y., Cahuc, P., & Shleifer, A. (2008). *Regulation and distrust*. Unpublished paper, Harvard University.
- Birnbaum, R. (1983). Maintaining diversity in higher education. San Francisco: Jossey-Bass.
- Birnbaum, R. (2007). No world-class university left behind. *International Higher Education*, 47, 7–9.
- Bleiklie, I., Laredo, P., & Sörlin, S. (2007). Introduction. *Higher Education Policy*, 20, 365–372.
- Boland, T. (2011). *Hunting for treasures: A vision for an excellent higher education sector in Ireland*. Paper at opening of first academic year at Limerick Institute of Technology following the integration with Tipperary Institute. Higher Education Authority, Ireland.
- Boyer, E. L. (1990). Scholarship reconsidered. Priorities of the professoriate. Princeton: Carnegie Foundation.
- Brennan, J. (2004). The social role of the contemporary university: Contradictions, boundaries and change. In Center for Higher Education Research and Information (CHERI) (Ed.), *Ten years on: Changing education in a changing world* (pp. 22–26). Buckingham: The Open University. <a href="http://www.open.ac.uk/cheri/documents/ten-years-on.pdf">http://www.open.ac.uk/cheri/documents/ten-years-on.pdf</a>. Accessed 5 June 2011.
- Butler, N. (2007). Europe's universities Time for reform. *Centrepiece*, Autumn 10–11. http://cep. lse.ac.uk/pubs/download/cp233.pdf. Accessed 29 Aug 2011.
- Calhoun, C. (2006). The university and the public good. Thesis Eleven, 84, 7–43.
- CFIR Committee on Facilitating Interdisciplinary Research. (2004). Facilitating interdisciplinary research. National Academy of Sciences, National Academy of Engineering, Institute of Medicine. Retrieved July 31, 2009, from http://books.nap.edu/openbook.php?record\_id=11153&page=2
- Clark, B. R. (1978). Academic differentiation in national systems of higher education. *Comparative Education Review*, 22(June), 242–258.
- Clark, B. R. (1983). *The higher education system: academic organization in cross-national perspective*. Berkeley, California: University of California Press.
- Clark, B. R. (1998). Creating entrepreneurial universities. Organizational pathways of transformation. Oxford: IAU Press/Pergamon/Elsevier.
- Codling, A., & Meek, V. L. (2006). Twelve propositions for diversity in higher education. Higher Education Management and Policy, 18(3), 31–54.
- Corbyn, Z. (2010, April 1). Nervous HEFCE 'edging out' of REF citations. The Times Higher Education.
- Daniel, J. (1996, August 9). The world cuisine of borderless knowledge. *Times Higher Education*. http://www.timeshighereducation.co.uk/story.asp?storyCode=99628&sectioncode=26. Accessed 11 Sept 2011.
- Delanty, G. (2001). Challenging knowledge. The university in the knowledge society. Buckingham: SRHE/Open University Press.
- Douglass, J. (2000). The California idea and American higher education, 1860 to the 1960 master plan. Palo Alto: Stanford Press.
- Driscoll, A. (2008, January/February). Carnegie's community engagement classification. Intentions and insights. *Change*, 38–41.
- Duderstadt, J. J. (2000). A university for the 21st century. Ann Arbor: The University of Michigan Press.



- E3M PROJECT. (2011). Final report of Delphi study. European Indicators and Ranking Methodology for University Third Mission, Universidad Politécnica de Valencia and the Universidad de León, unpublished.
- Eaton, J. (2011). Does quality assurance threaten institutional autonomy and academic freedom? Paper to the XXIII Anniversary of the Magna Charta Universitatum conference. Bologna.
- Ellison, J., & Eatman, T. J. (2008). Scholarship in public: Knowledge creation and tenure policy in the engaged university. Syracuse: Imaging America.
- Enserink, M. (2009, December 9). Sarkozy to French universities: We're going to invest massively. Science Insider. http://news.sciencemag.org/scienceinsider/2009/12/sarkozy-to-fren.html. Accessed 28 May 2010.
- Estermann, T., & Nokkala, T. (2009). *University autonomy in Europe I. Exploratory study*. Brussels: European University Association.
- European Commission (2010). Assessing Europe's university based research. Expert Group on the Assessment of University-based Research. Brussels: European Commission. http://ec.europa.eu/research/science-society/document\_library/pdf\_06/assessing-europe-university-based-research\_en.pdf. Accessed 4 Apr 2010.
- European Commission (2011). Supporting growth and jobs An agenda for the modernisation of Europe's higher education system. COM (2011)567/2, Brussels.
- Evans, C. (2010). *University compacts to reward high performance*. Joint Media Release. Canberra: Department of Education, Employment and Workplace Relations. http://www.deewr.gov.au/ministers/evans/media/releases/pages/article\_101026\_140947.aspx. Accessed 11 Sept 2011.
- Geiser, S., & Atkinson, R. C. (2010). Beyond the master plan. The case for restructuring baccalaureate education in California. http://cshe.berkeley.edu/publications/docs/ROPS.Geiser. Atkinson.BeyondMP.11.18.10.pdf. Accessed 30 Oct 2011.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The new production of knowledge*. London: Sage.
- Goddard, J. (2009). Re-inventing the civic university. London: NESTA.
- Gumport, P. J. (2000). Academic restructuring: Organizational change and institutional imperatives. *Higher Education*, 39, 67–91.
- Guri-Rosen Dit, S., Sebkova, H., & Teichler, U. (2007). Massification and diversity of higher education systems: Interplay of complex dimensions. *Higher Education Policy*, 20, 373–389.
- Hazelkorn, E. (2005). Developing research in new institutions. Paris: OECD.
- Hazelkorn, E. (2009). The impact of global rankings on higher education research and the production of knowledge (UNESCO Forum on Higher Education, Research and Knowledge Occasional Paper No. 16). http://unesdoc.unesco.org/images/0018/001816/181653e.pdf. Accessed 3 May 2010.
- Hazelkorn, E. (2011a). Rankings and the reshaping of higher education: The battle for world class excellence. Houndsmills: Palgrave Macmillan.
- Hazelkorn, E. (2011b, August 16). The futility of ranking journals. Chronicle of Higher Education. http://chronicle.com/blogs/worldwise/the-futility-of-ranking-academic-journals/28553. Accessed 25 Sept 2011.
- Huisman, J. (1998). Differentiation and diversity in higher education systems. In J. C. Smart & W. G. Tierney (Eds.), Higher education: Handbook of theory and research. Norwell: Kluwer Academic Publishers.
- Huisman, J., Meek, L., & Wood, F. (2007). Institutional diversity in higher education: A cross-national and longitudinal analysis. *Higher Education Quarterly*, 61(4), 563–577.
- Julius, D. J. (2011). When systems evolve. *Inside Higher Ed.* http://www.insidehighered.com/ views/2011/06/03/essay\_on\_the\_evolution\_of\_flagship\_universities
- Kasper, H. T. (2002–2003, Winter). The changing role of community college. *Occupational Outlook Quarterly*, 14–21. http://www.bls.gov/opub/ooq/2002/winter/art02.pdf
- Kerr, C. (1963). *Uses of the university*. Godkin lectures. Harvard University. (Reprinted as *The uses of the university* (5th ed.) by C. Kerr, 2001, Cambridge, MA: Harvard University Press).
- Lynton, E. A. (1995). What is a metropolitan university. In D. M. Johnson & David A Bell Metropolitan Universities: An Emerging Model in American Higher Education, (pp. xi–xxi). Denton, Texas, University of North Texas Press.

- 43 "Everyone Wants to Be Like Harvard" Or Do They?...
- Marcus, J. (2011). Old school: Four-hundred years of resistance to change. In B. Wildavsky, A. P. Kelly, & K. Carey (Eds.), *Reinventing higher education* (pp. 41–72). Cambridge, MA: Harvard Education Press.
- McCormick, A. C. (2006). The Carnegie classification of institutions of higher education. OECD Workshop on Institutional Diversity. Paris. http://www.oecd.org/dataoecd/9/41/37800086.pdf. Accessed 25 Sept 2011.
- McCormick, A. C., & Zhao, C. M. (2005, September/October). Rethinking and reframing the Carnegie classification. *Change*, *37*, 51–57.
- Meek, V. L. (1991). The transformation of Australian higher education from binary to unitary system. *Higher Education*, 21(4), 461–494.
- Meek, V. L., & O'Neill, A. (1996). Diversity and differentiation in the Australian unified national system of higher education. In V. L. Meek & A. O'Neill (Eds.), The mockers and mocked: Comparative perspective on differentiation, convergence and diversity in higher education (pp. 60–78). Issues in higher education. Oxford: IAU Press/Elsevier Science Ltd.
- Neave, G. (2000). Diversity, differentiation and the market: The debate we never had but which we ought to have done. *Higher Education Policy*, 13, 7–21.
- O'Meara, K. (2007). Striving for what? Exploring the pursuit of prestige. *Higher Education: Handbook of Theory and Research, XXII*, 123–124.
- Reichert, S. (2009). *Institutional diversity in European Higher Education. Tensions and challenges for policy makers and institutional leaders*. Brussels: European University Association.
- Review Group. (2011). *National strategy for higher education to 2030*. Report of the Review Group. Dublin: Department of Education and Skills.
- Rhoades, G. (1990). Political competition and differentiation in higher education. In J. C. Alexander & P. Colomy (Eds.), *Differentiation theory and social change. Comparative and historical perspectives*. New York: Columbia University Press.
- Riesman, D. (1956). Constraint and variety in American education. Lincoln: University of Nebraska Press.
- Rothwell, R. (1994). Towards the fifth-generation innovation process. *International Marketing Review*, 11(1), 7–31.
- Rowbotham, J. (2011). Kim Carr bows to rank rebellion over journal rankings. *The Australian*. http://www.theaustralian.com.au/higher-education/kim-carr-bows-to-rank-rebellion/story-e6frgcjx-1226066727078
- Salmi, J. (2009). The challenge of establishing world class universities. In *Directions in human development*. Washington, DC: The World Bank.
- Saltmarsh, J., Giles, D. E., O'Meara, K.-A., Sandmann, L., Ward, E., & Buglione, S. (2009). Community engagement and institutional culture in higher education. An investigation of faculty reward policies at the engaged campus. In B. Moely, S. Billig, & B. Holland (Eds.), Creating our identities in service-learning and community (pp. 3–29). Greenwich: Information Age Publishing, Inc.
- Sandmann, L. R., Thornton, C. H., & Jaeger, A. J. (Eds.). (2009). Institutionalizing community engagement in higher education: The first wave of Carnegie classified institutions (New directions for higher education, No. 147). San Francisco: Jossey-Bass.
- Santiago, P., Tremblay, K., Basri, E., & Arnal, E. (2008). Tertiary education for the knowledge society, 1. Paris: OECD.
- Skilbeck, M. (2001). The university challenged. Review of international trends and issues with particular reference to Ireland. Dublin: Higher Education Authority.
- Skilbeck, M. (2003). Towards an integrated system of tertiary education: A discussion paper. Unpublished.
- Slaughter, S., & Leslie, L. (1997). Academic capitalism. Politics, policies and the entrepreneurial university. Baltimore: Johns Hopkins University Press.
- Sturm, S., Eatman, T., Saltmarsh, J., & Bush, A. (2011). Full participation: Building the architecture for diversity and public engagement in higher education. http://www.fullparticipation.net/download/the-catalyst-paper. Accessed 30 Oct 2011.



- Trow, M. (1974). Problems in the transition from elite to mass higher education. In General Report on the Conference on Future Structures of Post-Secondary Education, OECD, Paris, 55–101.
   (Reprinted in M. Burrage (Ed.), 2010, Martin Trow. Twentieth-Century Higher Education. From Elite to Mass to Universal, Baltimore, MA: Johns Hopkins University Press, 88–143).
- Trow, M. (2006). Reflections on the transition from elite to mass to universal access: Forms and phases of higher education in modern societies since WWII. In J. F. Forest & P. G. Altbach (Eds.), *International handbook on higher education* (pp. 243–280). New York: Springer (Reprinted in M. Burrage (Ed.), 2010, *Martin Trow. Twentieth-Century Higher Education. From Elite to Mass to Universal*, Baltimore, MA: Johns Hopkins University Press, 556–610).
- van Vught, F. A. (2007, November 16). *Diversity and differentiation in higher education systems*. CHET Anniversary Conference, Cape Town.
- van Vught, F. A. (2008). Mission diversity and reputation in higher education. *Higher Education Policy*, 21(2), 151–174.
- van Vught, F. A. (Ed.). (2009). Mapping diversity. Developing a European classification of higher education institutions. Dordrecht: Springer.
- van Vught, F. A. (2011). A user-driven and multi-dimensional ranking tool in global higher education and research. Paper to the UNESCO Global Forum on Rankings and Accountability in Higher Education: Uses and Misuses, Paris.
- van Vught, F. A., Kaiser, F., File, J. M., Gaethgens, C., Peter, R., & Westerheijden, D. F. (2010). *U-Map. The European classification of higher education institutions*. Enschede: CHEPS.
- Vidal, G. (2006). The URV research and academic staff commitment agreement. Presentation to the 1st European Forum for Quality Assurance: Embedding quality culture in higher education, Munich.
- Vidal, G., & Xavier, F. (2006). The URV research and academic staff commitment agreement. Tarragona: University Rovira i Virgili.
- Vincent-Lancrin, S. (2004). Building future scenarios for universities and higher education. An international approach. *Policy Futures in Education*, 2(2). Paris: OECD-CERI.
- Vincent-Lancrin, S. (2008). What is the impact of demography on higher education systems? A forward-looking approach for OECD countries. In CERI (Ed.), *Higher education to 2030: Vol. 1. Demography* (pp. 41–104). Paris: OECD.
- Wedgwood, M. (2004). Higher education for the workforce: Barriers and facilitators to employer engagement. London: Department of Innovation, Universities and Skills. http://www.bis.gov. uk/assets/biscore/corporate/migratedD/publications/D/DIUS\_RR\_08\_04. Accessed 7 Sept 2011.

#### Webography

- CFAT Carnegie Foundation for the Advancement of Teaching. (2011, January). *Updated Carnegie Classifications*<sup>™</sup> show increase in for-profits, change in traditional landscape. http://www.carnegiefoundation.org/newsroom/press-releases/updated-carnegie-classifications. Accessed 11 Sept 2011.
- European Commission. (2010, June). Era in the knowledge triangle. http://ec.europa.eu/research/era/understanding/what/era\_in\_the\_knowledge\_triangle\_en.htm. Accessed 11 Sept 2011.
- U-Map http://www.u-map.eu/. Accessed 31 Aug 2011.
- U-Multirank. http://www.u-multirank.eu/. Accessed 31 Aug 2011.
- USNS U.S. News Staff. (2010, August 17). Frequently asked questions: College rankings. US News and World Report. http://www.usnews.com/education/articles/2010/08/17/frequently-asked-questions-college-rankings#8. Accessed 11 Sept 2011.