

Research and Development Series

HIGHER EDUCATION FUTURES: KEY THEMES AND IMPLICATIONS FOR LEADERSHIP AND MANAGEMENT

Jay Kubler

Association of Commonwealth Universities

Nicola Sayers

Leadership Foundation for Higher Education

With an epilogue by Professor Sir David Watson

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Acknowledgements

This work was funded by the Leadership Foundation for Higher Education, and the work was jointly undertaken by the Leadership Foundation and the Association of Commonwealth Universities. Their support is gratefully acknowledged. The authors particularly wish to thank Nick Mulhern at the Association for Commonwealth Universities, and Professor Robin Middlehurst and Helen Goreham at the Leadership Foundation for Higher Education.

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First Published in October 2010

Leadership Foundation for Higher Education

Published by the Leadership Foundation for Higher Education

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ISBN 978-1-906627-20-1

Designed & produced by Smith Creative

Printed in the United Kingdom

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Executive Summary

This report looks at recent research on the future of higher education and the future of the university. It draws on the literature to highlight the key challenges, opportunities, and most importantly the questions facing institutional leaders as they guide their institutions toward a future that is by definition uncertain. The issues confronting higher education systems and their constituent institutions are manifold, interconnected and complex, encompassing fundamental questions such as: how will they be funded, who will they teach, what will they teach, how will they be regulated and governed, who will they serve and how will they be structured. The report examines the dynamics of change underpinning the possible futures for higher education and provides a framework for leaders and other policy-makers to think today about the factors that will help them plan for tomorrow.

The higher education sector is a relative newcomer to the range of strategic planning and foresight tools, such as scenario building, that have long been used in other sectors to facilitate strategic decision-making and planning. The past 20 years have seen transformative changes take hold of the higher education sector which have prompted many to consider how the sector might evolve in the next 10 to 20 years and beyond. The certainty of change is undisputed, but the pace and nature of change are much less clear and are the subject of extensive and increasing speculation. This report pulls together some of this speculation into a set of themes based on converging trends and characteristics.

The primary basis for this report is a selection of recent sets of scenarios about the future of higher education – selected because of their depth and relevance (see Appendix One for a detailed outline of the scenario projects). A thematic analysis of these scenarios provides the framework for this report, which also draws on wider literature on the future of higher education. Trends emerging from the futures research and associated speculations are presented, with discussion about how they might inform the policy-making and strategic thinking of higher education leaders.

The report is divided into seven chapters and focuses on six principal thematic areas:

Chapter 1 Provides a brief contextual overview of some of the issues and trends currently facing the higher education sector that are likely to shape its future development. It draws on some recent examples of higher education scenarios to generate a series of ‘meta-themes’ which form the focus of the remainder of the paper.

Chapter 2 Theme 1: **The Role and Function of Higher Education within Society:** looks at the internal and external perceptions of the university’s role (and the role of the sector more broadly); the communities it serves; the stakeholder

relationships with which it is engaged; the relationship between the state and higher education; the role of the market; and the influence of privatisation, industry links and entrepreneurialism in defining and adapting the role of the university as a social institution.

Chapter 3 Theme 2: **The Structure and Organisation of Higher Education:** this chapter looks at issues concerning the level of structural diversification and differentiation within the sector. It assesses the dynamics that drive sectors towards greater levels of diversity and specialisation or conversely toward greater homogeneity. It also looks at the implications of growing diversity among the providers of higher education and other knowledge services and addresses the question of whether the core functions of the university will remain integral to the university or become more diffuse. The regulation and governance of different structures of higher education are also addressed in this chapter.

Chapter 4 Theme 3: **The Impact of Technology:** the transformative impact of technology on the core functions of the university is a common theme in the futures literature and is examined here as it relates to pedagogy, research and access. This chapter also briefly examines speculation about new technologies that are likely to have an impact on the near-term future of higher education.

Chapter 5 Theme 4: **The Impact of a Changing Student Population:** a university is nothing without its people, those that staff it and those that are served by it. This chapter examines how the student population is changing and may change in the future. It examines potential demographic changes (including overall rates of participation, changes in student type, and variations by region) and international student mobility and explores some of the implications of potential changes.

Chapter 6 Theme 5: **The Future Higher Education Workforce:** this chapter examines the role of universities as sites of employment. It looks at changing academic and professional roles, changing staffing models, the relationship of employees to the institution, human resource needs and workforce planning.

Chapter 7 Theme 6: **Changing Values:** this chapter unearths and explores what values underlie the current higher education discourse and considers ways in which different values and priorities could emerge in the future.

The report ends with an epilogue written by Professor Sir David Watson, who explores the key questions for leaders that arise when thinking in general about the future and when considering the specific themes that have emerged from futures research, as discussed in this report.

This report is a companion volume to *A Guide to Scenario Planning in Higher Education*¹ which was also published by the Leadership Foundation for Higher Education.

A Contextual Overview

1.1 The Function of Scenarios

The starting point for much of the speculation about the future is a backward glance at the trends that have shaped the development of higher education in recent decades. Mass expansion and diversification of access, constraints on public funding, growing diversity of higher education providers, internationalisation, globalisation, the impact of technology and the growing influence of market forces on the core functions of the university are among the commonly cited 'drivers of change' in higher education. How these general trends translate to the specific context and ambitions of an institution is at the heart of strategic decision-making processes. The object of scenario planning is to provide a tool for policy-makers and leaders to think about the future and consider alternative options and strategic responses to different future contexts.

A detailed discussion of the purpose of scenario planning can be found in the preceding publication to this one, *A Guide to Scenario Planning in Higher Education*.² What is important for the present report is that scenario planning projects usually involve creative and in-depth discussion and thought about possible futures. In recent years there have been a number of substantial scenario projects which have focused, broadly speaking, on the future of higher education in the coming decades. By analysing what themes emerge across these projects and in other supporting literature on higher education futures, it is hoped that we can provide some insight into potential future issues and trends which appear to have relevance for the sector as a whole.

Before looking at the scenarios that form the basis of this study, it is worth highlighting briefly some of the trends that currently shape the operating context for universities and inform the speculation about their future.

1.2 Contextual Trends

Examining the future role and value of the university within society has both internal and external dimensions. On the one hand, the sector needs to look inward and reflect on its functions; at the same time there is increasing pressure to be externally responsive and accountable. The concept of the knowledge-based economy has been instrumental in intensifying the external demands on the university; it has reconfigured the perception of higher education, especially in the eyes of the state, business and industry. It has also altered the value attached to the core business of the university –

creating and disseminating knowledge. The outputs of the higher education sector in the form of research, innovation and skilled human resources are championed as an integral part of national and global economic development. Thus, monitoring, measuring and comparing universities so that they are efficient, responsive and competitive, as befits an instrument of a market-based economy, have become a defining characteristic in higher education.

The economic rationale for higher education has become increasingly dominant, some would argue at the expense of its intellectual, cultural and broader social value. Many of the scenarios focus on this economic dynamic as the pivotal driver of change on which the future of the sector will hinge, placing less emphasis on more intangible cultural shifts that might stem, for example, from generational changes and technological innovation. It also reflects the hegemony of the concerns and preoccupations of well-established sectors mostly situated in the north and west of the globe rather than the emerging concerns of sectors in the south and east. Here the possibilities of expansion facilitated by technology and the potential contributions to health, the environment, and social stability, as well as economic implications, might be important drivers shaping future speculation.

The OECD provides a wide-ranging analysis of university futures from an international, although mainly developed world, perspective.³ Drawing on the experience of its member states, Vincent-Lancrin's 2004 paper on future scenarios for universities and higher education highlights a series of overarching trends affecting OECD member states.⁴ The 'drivers' are grouped into broad long-term structural developments that are likely to shape the environment for higher education sectors, across multiple countries. The OECD's analysis focuses on a number of thematic areas – demographic change, ICT, globalisation, market forces, university research and labour market demand. Outlined below is a summary of four broad trends derived from that paper.

- **Autonomy, funding and new providers.** A shift towards autonomy and entrepreneurialism will, Vincent-Lancrin argues, undoubtedly accompany the growing pressure for institutions to generate income. Equally, public universities will be competing with a broader range of higher education providers – private institutions, corporate providers, virtual universities, consortia and public-private partnerships – that will challenge the dominance of traditional providers. At the same time growing pressure on scarce public resources will place universities under

² Sayers (2010)

³ The OECD has 30 member states: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

⁴ Vincent-Lancrin (2004)

greater scrutiny from a range of stakeholders demanding better public management and governance – defined by accountability, transparency, efficiency, effectiveness, responsiveness and forward vision.

- **Mass education and the diversification of students.**

Vincent-Lancrin's paper draws attention to the projected decline in the populations of young people in most (but not all) OECD countries. He argues, however, that despite demographic decline student numbers will continue to grow but the constituency of learners will be more diverse and compensate for population declines in the traditional cohort of young learners. Lifelong learners, part-time learners, older 'leisure' learners, and international learners will ensure continued growth of higher education sectors across the OECD, facilitated by new technologies and a more entrepreneurial, market responsive ethos among institutions seeking to capitalise on 'new markets'. In those countries where mass education is not yet a reality the focus is likely to remain on the way in which supply can be increased to better meet demand and on what funding arrangements will be available to achieve this goal.

- **More globalised and liberalised world and growing influence of the knowledge economy.**

The paper refers here to more liberal conditions for the trade of higher education services across international borders as well as to the integral role that higher education is increasingly seen to have within the global knowledge economy. At the time of writing his paper, negotiations on the General Agreement on Trade in Services (GATS) were in full swing and its potential to shape a more liberal regulatory framework for trade in higher education services was the focus of considerable debate. However the collapse of the World Trade Organisation Doha trade round in 2008 has left a degree of uncertainty around multilateral trade liberalisation in education which is unlikely to be resolved or clarified in the near future. Nevertheless, greater global connectivity keeps the issue of trade liberalisation very much on the agenda, whether on a multilateral or bilateral basis.

- **Development of technology.**

Technology is extending the reach of education but is also, at a very fundamental level, changing communication at all levels and transforming how institutions teach, learn and research. Advances in technology will continue to grow at an exponential rate and the changes that have already been effected by technology will accelerate with the development of new and more sophisticated tools.

1.3 Tackling the Unknown

Scenarios represent an effort to reflect alternative futures and in doing so they must embrace unknown as well as known factors. Long-term structural trends will obviously play a role in shaping the future context but there are many 'unknowns' that will direct and divert the course of the future. How to anticipate the 'unknowns' is a perpetual dilemma for futurists as well as leaders. A topical example of an unpredictable force currently influencing higher education sectors around the world is the global economic crisis precipitated by the collapse of the banking system. Many universities are not only affected by the crisis in terms of their immediate resources, with millions already lost in endowment and investment income, they must also contend with greater constraints on public funding from increasingly cash-strapped governments. It is likely that the planning horizons for universities will contract in the face of greater uncertainty about future financial sustainability. On a more philosophical level, some commentators are suggesting that a fundamental ideological shift in higher education might result from the misgivings prompted by the crisis about the role of the market in our society. The value attached to the market and competition as an effective means of regulating and developing the system could undergo a period of revision – although arguably there are limited signs of this revision so far.

As the literature demonstrates, trying to anticipate the changes and challenges facing the future of higher education is a complex, multi-layered and ultimately fallible exercise. The focus of this review is to look at key pieces of recent research (in most cases post-2000) and examine the key emerging themes and potential issues for higher education leadership. The table in Appendix One highlights the eight sets of scenarios that underpin the thematic framework for this report. They represent perspectives from a range of organisations and vary in scope and focus. The following table is a summary of the main areas of thematic convergence derived from the scenarios; these will be explored in greater detail in the subsequent chapters of this report.

Table 1: Areas of convergence emerging from the scenarios

| Areas of convergence within the scenarios | Related themes |
|--|---|
| 1. Role and function of higher education within society (external and internal role: public perception and demand, national context, global context, market influence) | Mission, stakeholder responsiveness, national policy context, relationship between state and sector, role of the market, private sector involvement and competition, globalisation, knowledge economy |
| 2. Structure and organisation of higher education (external and internal: national policy context and institutional policy) | Diversity, stratification and differentiation, organisation of teaching and research, governance and management |
| 3. Mode of distribution/technology uptake | Impact of technology on reach, engagement and process of higher education delivery and management |
| 4. University people – students | Demographics, internationalisation and student mobility |
| 5. University people – staff | Changing roles, changing staffing models, relation of employees to the institution, changes to human resource needs and workforce planning, internationalisation |
| 6. Values underlying higher education | Limitations of scenario planning, critique of emphasis on the knowledge economy, new and emerging values – sustainability, critical and integral perspectives, interdisciplinarity |

The Role and Function of Higher Education within Society

The role higher education plays in society is one of the principal themes in the analysis of its future and goes to the heart of the purpose and function of the university. The expansion of higher education in recent decades, together with the confluence of knowledge and socio-economic development, has shaped the understanding of the societal function of the higher education sector in the last quarter century. The perception of the university as a social institution with a special role in the stability, strength and economic prosperity of society is the basis for much speculation about the future of the university and of higher education more broadly. As universities contend with the growing influence of a wider range of stakeholders, questions emerge around what communities the university needs to serve in order to retain its relevance to society, how it will prioritise the interests of those it serves, and how it will engage with society at multiple levels (local, national and international). Linked to this are questions around the position of the state in preserving and protecting the 'special role' of the university within society on the one hand and opening it up more fully to the forces of the market and competition on the other. This in turn prompts questions about the future role and status of universities as the dominant repositories and disseminators of knowledge within our society, whether this will be sustained and if so in what form.

What follows is a brief exploration of some of the social issues shaping recent futures speculation in higher education. It looks at the recurrent themes within the analysis, highlighting possible lessons and shortcomings.

2.1 The Mission and Stakeholders of the University: Looking Inward while Facing Outward

Universities are social constructs and their role and responsibilities adapt as society changes.⁵ However, how they respond and how effectively they carve out their role and purpose as they proceed through the 21st century will

be fundamentally tied to their self-perception and sense of purpose and mission. The first stage for any university (understood as a self-reflective organisation) in looking to plan and prepare for its future is to develop a clear understanding of: what it is, whom it serves, what it stands for and where it wants to be (the same can also be said of national sectors). Done well, scenario planning can contribute to the process of self-reflection and institutional dialogue. A common theme emerging from the literature is that universities need to develop a clear vision of where they are going and behave as active agents in shaping their future, and not just as respondents to an ever-changing social landscape. The Universiti Sains Malaysia understood this point when they initiated their futures project in which scenarios were used as a tool to assist the university in developing a 14-point vision for its future.⁶

Part of the process of self-reflection and creating a vision is to 'define the societal mission and explain the services they may genuinely provide to society'^{7, 8} In the American Council on Education (ACE) roundtable discussions on the future of US higher education, leaders of American universities highlighted the importance of clarity of vision and a deep understanding of mission in defining their future role. The associated paper calls on institutions and their leaders to articulate the social purpose of higher education and reaffirm the 'values and means that make higher education a special contributor to society [to help] elevate the work of institutions and their leaders above the fray of simply management and accountability'.⁹

Establishing a clear social mission has, however, become increasingly difficult as universities operate within an ever more complex social context where they are expected to serve multiple communities and be responsive to a broader range of stakeholders. As higher education has become more closely aligned with the concept of the knowledge society¹⁰ (and the associated concept of the knowledge economy) the communities and stakeholders served by the university have increased and become more demanding. Watson refers to a dramatic expansion in the concept of community

5 Jónasson (2008)

6 USM (2007)

7 Jónasson (2008) p65

8 Jónasson looks to the philosophical values underpinning the contemporary university (drawing on the Humboldtian, Newmanian and Napoleonic traditions) to characterise the roots of the university mission. He suggests that there are essentially three main categories of social mission for the university: the **cultural mission** (including the cultivation of science and understanding); the **economic mission** (including professional education and research for technological development and innovation); and the **political mission** (which ensures the high level of critical and sophisticated information and knowledge needed for democratic debate). He also includes a fourth mission – the **egalitarian mission**, to encourage equality of access to higher education and the opportunities it provides.

9 White and Eckel (2008) p15

10 Välimaa and Hoffman (2008) p265 note that the conceptualisation of the 'knowledge society' and other associated terms such as the 'knowledge economy', the 'information society' and the 'learning society' have come to denote the growing importance of knowledge, research, innovation and evolving perspectives on expertise within society (as represented by individuals and communities and the binding structures of economics, politics and culture) which together are 'changing the social role of universities in the globalized world'.

In their efforts to accommodate multiple stakeholders, higher education sectors globally and their constituent institutions face a bewildering number of choices that potentially compromise their clarity of mission and focus

number of choices that potentially compromise their clarity of mission and focus. Several writers have described the systemic and institutional challenges engendered by a more complex

as a result of opening access to non-traditional learners, to international communities and to business and industry.¹¹ In their efforts to accommodate multiple stakeholders, higher education sectors globally and their constituent institutions face a bewildering

society variously as a crisis of identity, a crisis of confidence, existential uncertainty and an acute case of mission confusion.¹² The diversifying levels and types of societal engagement pursued by universities must be finely balanced with the growing number of internal and external demands being placed on the tertiary/higher education sector.¹³ Universities cannot ignore the fact that the communities they serve are changing and adapting. They must think strategically about how to manage this complex environment and prioritise in accordance with their vision for the future as well as with the practicalities of the day.

Jongbloed et al provide a useful table highlighting the various stakeholder categories in higher education:¹⁴

Table 2: Stakeholder categories

| Stakeholder category | Constitutive groups, communities, stakeholders, clients |
|-----------------------------|--|
| Governing entities | State and federal government, governing board, board of trustees, buffer organisations, sponsoring religious organisations |
| Administration | Vice-chancellor/president, senior administrators |
| Employees | Faculty, administrative staff, support staff |
| Clientele | Students, parents/spouses, tuition reimbursement providers, service partners, employers, field placement sites |
| Suppliers | Secondary education providers, alumni, other colleges and universities, food purveyors, insurance companies, utilities, contracted services |
| Competitors | Direct: private and public providers of post-secondary education Potential: distance providers, new ventures Substitutes: employer-sponsored training programmes |
| Donors | Individuals (including trustees, friends, parents, alumni, employees) industry, research councils, foundations |
| Communities | Neighbours, school systems, social services, chambers of commerce, special interest groups |
| Government regulators | Ministry of education, buffer organisations, state and federal financial aid agencies, research councils, federal research support, tax authorities, social security, patent office. |
| Non-governmental regulators | Foundations: institutional and programmatic accrediting bodies, professional associations, church sponsors |
| Financial intermediaries | Banks, fund managers, analysts |
| Joint ventures | Alliances and consortia. Corporate co-sponsors of research and educational services |

Jongbloed et al (2008) p309

11 Watson and Wei (2007)

12 See Jongbloed et al (2008) and Jónasson (2008)

13 Watson (2007) has highlighted some of the contradictory societal expectations and demands placed on the university highlighting the fact that the university is expected at once to be: conservative and radical; critical and supportive; competitive and collegial; charitable and commercial; autonomous and accountable; excellent and equal; entrepreneurial and caring; certain and provisional; ethical and technical; traditional and innovative; ceremonial and iconoclastic; local and international; and crucially public and private.

14 Chapleo and Simms (2010) provide an alternative list of stakeholders which they reached by interviewing people at the senior management level at the University of Portsmouth (as a case study) and asking them both to identify and to prioritise stakeholders. Interestingly, the most frequently mentioned stakeholders were students, followed closely by local employers/businesses, university staff, academic and research bodies/funding councils, and local government/city authorities.

The role that universities and higher education systems more broadly will play in society revolves around their engagement with different communities and stakeholder groups. Jongbloed et al have emphasised that universities need to distinguish between different stakeholders and prioritise their relationships with them. They helpfully draw on ‘stakeholder theory’ to model the process of categorising and prioritising different higher education stakeholder groups, distinguishing between latent, expectant and definitive stakeholders.¹⁵ The model is useful for conceptualising the future demands likely to bear down on the university. The emphasis, however, appears to be on the strength and legitimacy of stakeholder claims and less on the goals and values of the institution or the sector. What is argued by several contributors to the debate is that establishing an understanding of the social purposes of the university will help in navigating the levels and types of engagement with society.

Managing stakeholder relationships and community engagement will clearly be important variables in the social function, relevance and accountability of universities, possibly requiring new governance and accountability structures that will enable them to identify, prioritise and respond to the needs of different constituencies. As Jongbloed et al put it, ‘the legitimacy of higher education in society will increasingly be a direct function of the nature, quality and evolving ties with the stakeholder society.’¹⁶ The factors that shape the ties that universities forge with their stakeholders will be an important influence on the future development of the sector. Chief among these factors will be how universities are funded, who is funding them and what the funders’ expectations are. Central to these questions, and subject to much speculation in the futures scenarios, is the role that market forces will play in the future of higher education.

2.2 Influence of the State and Market Forces on the Role of Higher Education

While public provision continues to dominate higher education systems in many countries, the interaction between the higher education sector, the state and the market has become an important dynamic in the relationship between university and society. Most futures scenarios and research address this dynamic either implicitly or explicitly. The economic importance of higher education and of knowledge has been instrumental in shifting the terms of higher education’s

relationship with the state. Many governments in both the north and the south are keen to harness the potential of higher education to serve the needs of a global and competitive knowledge economy. At the same time, universities have a role in advancing the social, cultural and intellectual values of higher education. How these dynamics will play out in the coming decades is the subject of considerable speculation, with some scenarios depicting a much more market-oriented future where the obligations and functions of the sector are more responsive to the forces of the market (such as the OECD ‘Entrepreneurial’ and ‘Free Market’ scenarios, the Centre for Education Policy Studies [CHEPS] ‘Natural Garden’ and ‘Vitis Vinifera’ scenarios, Universiti Sains Malaysia’s ‘A la Carte’ university and Universities UK [UUK]’s ‘Market driven and competitive’ scenario).

The interaction between the higher education sector, the state and the market has become an important dynamic in the relationship between university and society

Others depict a more interventionist role for the state, with significant influence over the policy context and policy agenda as well as strong regulatory authority over universities. Within these

scenarios the operating context of the university is strongly shaped by the state and the university acts as an important medium for advancing the social values and national priorities of the state such as equality (through access policies), civic and local responsiveness, environmental sustainability and other areas of social responsibility (as in the OECD’s ‘Lifelong learning and open education’ and ‘Serving the local community’ scenarios and the Universiti Sains Malaysia’s ‘State University’ scenario). Between these positions are the ‘hybrid scenarios’ that incorporate an important role for both the state and market and commonly attribute multiple missions and responsibilities to the university. These scenarios are often represented by a more collaborative, diffuse and networked sector, where the relationship between universities, markets and states are more fluid and interconnected (OECD’s ‘Open networking’ and ‘New Public Responsibility’ scenarios and CHEPS’s ‘Natural Garden’ and ‘Octavia’ scenarios).

In a 2007 paper, Naidoo summarises the impact of neo-liberal thinking in redefining the relationship between the state and higher education, carving out a more significant role for market mechanisms in the structure, organisation and

15 This draws on the theory of *stakeholder salience* developed by Mitchell et al (1997) which distinguished three attributes of stakeholders: *Power* to influence the organisation; *legitimacy* of the stakeholder’s relationship with the organisation; *urgency* of the stakeholder’s claim on the organisation – i.e. the degree to which they can call for immediate action. Stakeholders who possess just one attribute are described as *latent*, those with two as *expectant*, and those with three as *definitive*. The status of stakeholders is fluid and can move from one category to another. Thus Jongbloed et al describe government, as the principal source of funds for most universities, as a definitive stakeholder but describe others such as business and employers’ organisations as moving from latent to expectant or even expectant to definitive (with the knowledge-driven economy adding the attribute of urgency to legitimacy and power). They also note that at different managerial levels within the institution the perspectives on stakeholder status may change.

16 Jongbloed et al (2008) p307

funding of higher education. She asserts that the traditional 'social contract' between higher education and the state has been weakened, transforming the relationship between these two institutions. She writes:

Whilst there are variations across countries including differences between the United Kingdom and many continental European university systems, the general trend is towards the erosion of the 'social contract' that evolved between higher education, the state and society over the last century. The belief that universities require a relative independence from political, economic and corporate influence to function optimally, which was in turn linked to the need for substantial state funding and professional autonomy, has been weakened. These developments, together with more general retractions in public policy and a move away from welfare state models, have generally resulted in the reduction of state funding and the implementation of funding and regulatory frameworks based on neo-liberal market mechanisms. The underlying assumption is that market mechanisms in higher education which introduce competition within and between institutions will lead to greater efficiency, effectiveness and relevance. For this reason, attempts are being made worldwide to foster closer relationships between higher education and industry and to direct publicly funded higher education systems towards the needs of industry. In addition, the call for higher education to contribute in a more direct way to enhancing the country's competitive edge in the global economy has begun to eclipse other social and cultural roles.¹⁷

In some sectors, such as the US, market mechanisms and responsiveness to private investment and endowments are long standing and explicit. In others, such as other anglophone countries (and to a somewhat lesser degree, continental European countries) these mechanisms are emerging and becoming increasingly significant. In the UK, Brown cites the following indicators as signifiers that the higher education system is moving in a market direction: liberalisation of the criteria for university title; introduction of 'top-up' tuition fees that allow institutions to compete on fees (not that many do at present) and on student bursaries; increasing numbers of officially sponsored and commercial guides to quality; and increased incentives for universities to raise funds from private sources.¹⁸ He suggests that as we look to the future, the issue will not be one of markets or non-markets, but of the appropriate balance of competition

and regulation and of state supervision and academic self-regulation. Brown is not alone in seeing the prevailing status quo of an economically oriented future underpinned by the principles of market forces extending into the future (some embracing this future enthusiastically, others more stoic and resigned). Within the majority of the scenarios detailed above the prevailing context appears to be premised on the concept of a higher education system reflecting and contributing to a market-based economy. Even when one looks to China, recent reforms are contextualised by the emergence of a so-called 'socialist market economy'.

The influence of market forces and market mechanisms in higher education is a source of debate and contention in the developing south as much as in the developed north. Within developing and emerging economies, universities have long been associated with the 'national development project'. However, this has placed many institutions and their future development in a curiously paradoxical position. On the one hand, the state maintains considerable and direct influence over the activities of the universities; on the other, external donors push for greater liberalisation and privatisation in higher education.¹⁹ The resurgence of investment in higher education by the donor community since the mid-1990s has been closely intertwined with the concept of the knowledge economy and the role of higher education in contributing to sustainable economic development. Following the neo-liberal principles that market forces and liberal market conditions produce more efficient, effective and responsive systems, donor communities have been keen to emphasise the importance of institutional income diversification and privatisation of services and provision of a more open and liberal sector allowing easier access for foreign and private providers. The presence of private and foreign providers in developing and donor-reliant countries and the associated permeation of competitive market forces is a much starker reality for developing and emerging economies in the south and east than it is for countries with well-established and relatively well-funded sectors in the north and west. The lines between public and private provision become increasingly blurred as public institutions come under pressure to generate private income. In a speech to the Commonwealth Education Ministers in 2006, Mamdani launched a stinging attack on these policies for developing countries and their prospects for the future of quality higher education, with particular reference to Africa. He drew on the example of Makerere University in Uganda, often lauded by international donors for its implementation of market reforms in the 1990s. He argues

17 Naidoo (2007) p3

18 Brown and Scott (2009)

19 Mwiria (2002) notes that in Africa universities were seen as 'too visible and prestigious as national monuments to be given complete autonomy' and many leaders felt threatened by academic communities. Consequently there is a culture of the state keeping a close eye on the university and in a number of cases the African heads of state double as titular heads of their respective national universities with 'the power to appoint key senior administrators and members of the governing council'.

that the policies of privatisation and commercialisation within the university led to the creation of two parallel universities. The first is the official university where academic staff are hired on a permanent basis by officially appointed bodies observing official procedures and rules. The official university delivers traditional higher education to merit-based students and undertakes research; it is a descendent of the post-independence developmentalist university set up to serve the nationalist (or nation-building) project. The parallel or shadow university, by contrast, is predominantly staffed by part-time teachers on informal, short-term contracts and focuses on fee-paying students and predominantly vocational courses. This dual system facilitated a tenfold increase in student numbers within a decade (from 3,000 to 30,000).²⁰ This strong duality of public and private provision is a very strong characteristic in developing and emerging economies and one that donors are arguably weighting on the side of private provision and income-generation under the rationale that it is the only financially viable and sustainable model for boosting higher education capacity in developing countries.

Return on investment is another theme that has become a guiding principle in funding higher education, whether those funds come from the public or private purse. Private investors want a return on investment in terms of profit (or sustainability in the case of non-profits), students want a return in terms of employability and governments want a return in terms of economic development and social policy. In the US, university and college presidents participating in the ACE roundtable discussion identified 'outcome-driven' funding as one of the key challenges of the future for US higher education. There was consensus that the trend of insufficient public support for colleges and universities would continue. The public support that is available would be concentrated in areas with 'tangible returns on investment, particularly in areas that meet state priorities such as economic growth or workforce development'. Moreover, they point out that if quid pro quo becomes the new funding principle, then successful universities 'will be those that most effectively show evidence of their ability to deliver benefits to either the state or the private sector'.²¹ Thus economic relationships with a range of stakeholder groups are mediated by a growing demand for accountability whereby universities and higher education sectors need to demonstrate their value to their paymasters rather than be entrusted with the professional autonomy implicit in academic freedom.

The influence of the state and the influence of the market are not antithetical; indeed they have been brought into closer alignment by the imperatives of the global knowledge

economy. Many countries see a more market and economically oriented higher education sector as important to the national interest. In China the role of higher education in economic growth and in contributing to a developing 'socialist market economy' is unambiguous.²² There is considerable emphasis

The influence of the state and the influence of the market are not antithetical; indeed they have been brought into closer alignment by the imperatives of the global knowledge economy

in national strategy on developing the science and high-tech infrastructure of the country through higher education and creating the necessary skilled professionals to meet the needs of industry. Similarly in a major review of higher

education commissioned by the Malaysian Ministry of Higher Education in 2006, one of the focal areas is the contribution of higher education to the economy and society. Their report notes that: 'Institutions of higher education are critical agents of wealth promotion and wealth creation [as well as] the overall wellbeing of society'.²³ The report advocates strong links with the private and commercial sectors in order to contribute to broad national economic priorities.

At present, the state (or states) set, or at least strongly influence, the policy framework in which institutions operate, but whether such a dominant role will continue in the decades to come is one of the key variables of future speculation. As governments encourage the private industriousness and enterprise of universities it stands to reason that the influence and power of the state over universities may weaken as the influence of the market increases. Some scenarios highlight the possibility of elite public institutions seeking to move away from the public sector to be able to pursue their own agenda within the parameters of a free market and without the constraints associated with the national (or state) policy framework; a situation not dissimilar to that of the elite institutions in the US.²⁴ The head of one of the UK's leading universities, Imperial College London, has recently called for Britain's 'best' universities (Imperial, University College London, the London School of Economics and Oxbridge) to be privatised in the form of the US Ivy League. Privatisation would, he argues, be accompanied by the ability to charge unlimited tuition fees and take on more overseas students. He also asserts that the potential of the UK's top five institutions to earn income for the UK should be viewed as an attractive prospect for the government. Linked to this, the debate around tuition fees has also come to the fore in the UK with a government review of tuition fees in train and a UUK

20 Mamdani (2006)

21 White and Eckel (2008) pp3-4

22 Ji (2005) p279

23 Ministry of Higher Education, Malaysia (2006) pxxxii

24 Brown (2008)

publication looking at future scenarios for variable tuition fees. The corollary of this argument is that as higher education systems come to rely more on market mechanisms for funding and regulation, policies of social responsibility imposed by the state – such as widening participation – might, in the future, also be left to the market to determine.

2.3 Beyond National Boundaries

The increasingly international and borderless character of higher education is a critical factor in the evolving relationship between the state, higher education and society. Higher education lends itself particularly well to the idea of 'globalisation'²⁵, dealing in that most mobile of entities, knowledge. Marginson in his forward look at competition and markets in higher education notes that universities are implicated in many global spheres and processes 'including the formation of globally mobile labour; the worldwide systems of communications, knowledge production and transfer; linguistic convergence; and in the "competition state", the strategies of national governments for achieving greater competitiveness on the world scale.'²⁶ International activities have long been an important dimension in the functions and character of higher education; however the intensification of the international agenda for many institutions has been associated with the commercial and competitive impulses of the global knowledge economy. Growing competition for students, staff and income requires institutions to look beyond their national borders. Many scenarios place great weight on the importance of global activity, whether it represents a threat (rising competition and growing international dominance of new global actors such as India and China), or an opportunity (expanding internationally through various forms of cross-border provision and tapping into international expertise and intellectual creativity). There is also speculation about the need for, and possible impact of, international mechanisms of governance and regulation – such as international accreditation, recognition, quality assurance and trade rules – on national systems of governance and regulation.

In the 2004 OECD scenarios, four of the six scenarios highlight the importance of an international focus; most of these are also associated with the growing force of the market ('Entrepreneurial', 'Free Market', 'Network' and 'Diversity/disappearance' – as well as the 'Open networking' and 'Higher education inc.' scenarios from 2006) and among the CHEPS scenarios for Europe, one scenario – 'Vitis Vinifera, the City of Traders' – sees internationalisation as one of the most important dimensions of system diversity, and higher education as one of Europe's most important trading commodities.

A challenge for higher education futurists might be to reconceptualise global connectivity and fully embrace its educational, ethical, intellectual and social dimensions and not simply its political and economic aspects

Wei argues that there exists today a fairly uncritical espousal of globalisation among institutions. This is reflected in the scenarios which tend to present the international dimensions of higher education as a product of participation within a global and internationally competitive higher education market. Wei emphasises the need for a sophisticated reappraisal of the role of globalisation within our higher education sectors, writing: 'Much that is regarded as part of globalisation seems to stem from the commercialisation of universities: all too often globalisation is little more than a framework for competition and the striking of bargains.'²⁷ A challenge for higher education futurists (as well as the leaders and policy-makers they seek to inform) might be to reconceptualise global connectivity in the terms Wei suggests and fully embrace its educational, ethical, intellectual and social dimensions and not simply its political and economic aspects.

2.4 Privatisation, Commercialisation and Entrepreneurialism

The chapters above have highlighted the fact that the exposure of higher education to the forces of the market is closely bound to the related concepts of privatisation, commercialisation and entrepreneurialism. Whether talking about student fee income, competition from private providers, commercialisation of university activities, foreign providers, public-private partnerships or links to business and industry, the questions around the role that private enterprise will have in shaping the future of higher education is a strong theme running through the futures analyses. The premise of much of the analysis is that constraints and retrenchment in public funding will likely increase pressure on universities to access new sources of funding from a broader range of sources. A reversal of this trend would require a fairly radical shift in the growing political consensus that sees higher education as a producer of public and private goods that are most effectively resourced through a public-private funding mix. The majority of scenarios draw on this configuration, but project a more marketised and privatised future for higher education.

Private involvement is not only a question of how higher education is funded but a broader issue of attaching a financial

25 Marginson (2004) p176 quotes the Held et al definition of globalisation as 'the widening, deepening and speeding up of world-wide interconnectedness' facilitated by rapid developments in technology that supports the 'flows of people, ideas and capital across national boundaries.'

26 Marginson (2004) p176

27 Watson and Wei (2007) p9

value on knowledge, teaching and credentials and viewing those services as marketable and subject to competition.²⁸ Some futures scenarios speculate about the possibility of private sources monitoring and regulating higher education. Indeed the very process of regulation could become a more active site of competition where private regulators compete to become the premier brand of quality and excellence and universities in turn compete to become associated with particular 'quality brands'. Of even greater consequence is the growing speculation about the disaggregation of research (in particular applied research) from the public higher education sector. This is something that Mamdani highlights in the African context. He raises concerns about the downgrading of research in the face of marketisation and commercialisation and the potential loss of academics and intellectual capacity. This loss would limit the important social function of critical self-reflection and defining meaningful choices for society.²⁹

2.5 The Entrepreneurial University and Industry Links

A related theme commonly included in the scenario projections is that universities may have to become more proactive and creative in attracting income and resources. Several scenarios anticipate a more entrepreneurial future for universities and academics. Indeed, the OECD puts forward a specific entrepreneurial scenario that sees the university of the future responding with greater autonomy to a variety of funding sources, adopting a mixed public-private funding model, viewing research as a lucrative activity and adopting a market-based approach with strong links to the local economy.³⁰

Gallagher outlines some of the principal characteristics of the entrepreneurial university:

- It responds to varying student needs and circumstances.
- It takes account of labour market requirements and employer needs.
- It embeds entrepreneurial skills and ethical values in course offerings.
- It develops application linkages for research.
- It undertakes collaborative research with industry.
- It participates in research commercialisation ventures.
- It establishes diverse sources of income.

- It provides commercially valuable services.
- It plans for growth in total income.
- It competes successfully in its markets.
- It collaborates with others for full service delivery.
- It employs flexible staffing strategies.
- It manages intellectual property strategically.³¹

Central to the conception of the entrepreneurial university are links to business and industry and with employers in general. As Jongbloed et al have highlighted, these stakeholders are increasingly becoming 'definitive stakeholders' in shaping the functions and focus of higher education.³² The links between universities, business and industry are seen not only as important for income generation but also for cultivating an entrepreneurial culture among students and preparing them to operate in a more complex and uncertain global labour market. This theme sits alongside a utilitarian skills-oriented vision of higher education where providing students with a portfolio of interdisciplinary skills that are outward facing rather than directed at inward personal development is paramount. New subjects like the interdisciplinary field of Service Science, Management and Engineering (SSME), specifically designed to equip students with a range of skills to meet the needs of industry and business, reflect this trend.³³ UUK's 'Employer-driven flexible learning' scenario depicts a UK sector where employer-led demand dominates UK provision.³⁴ In a country like China that is looking to expand its economic growth and international standing very rapidly the links between higher education and business and industry are even more pronounced, as is the focus on graduate employability and catering for workforce demand.

A recent collection of studies on higher education in the Southern African Development Community (SADC)³⁵ also underlines the importance of university-industry links in developing and emerging economies.³⁶ For the SADC region, however, the focus is not so much on international competitiveness (with the possible exception of South Africa) but on the more immediate concerns of poverty alleviation and economic growth for sustainable development. The main benefits of interaction are viewed as knowledge and information exchange, enhancing the reputation of the university and cultivating insights for new collaborative

28 Naidoo and Jamieson (2005) p45

29 Mamdani (2006)

30 Vincent-Lancrin (2004) p259

31 Gallagher (2000) cited in Kenway et al (2004) p336

32 Jongbloed et al (2008)

33 OBHE To serve for the benefit of all? IBM champions worldwide curricular integration of new academic area of study Service Science. http://www.obhe.ac.uk/documents/view_details?id=746

34 Brown (2008)

35 Covering Angola, Botswana, DRC, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe and comprising 67 public universities.

36 Kruss and Petersen (2008) found it was among relatively new universities (medium to large in size) with a strategic science and technology orientation focused on national needs that interaction with industry and business was most common. Large universities with a traditional orientation and small universities had lower levels of interaction with industry. They list the types of relationship with firms as follows: donations, sponsorship of bursaries, education of work-ready students, training courses for employees, testing of equipment, technical evaluation and feasibility studies, project management services, design and prototyping, agricultural advice services, engineering services, software development and or adaptation, consultancy, personnel exchanges, technology transfer, short-term R&D, long-term R&D, R&D for firm innovation.

research projects.³⁷ The biggest obstacles to interaction were the lack of knowledge among universities about industry needs, as well as the lack of knowledge across industry about university activities. Interestingly, they suggest that many obstacles to university-industry links experienced in developed contexts, such as academic resistance, were not seen as significant obstacles in southern Africa.³⁸

Highlighting the barriers to industry and community engagement from a European perspective Jongbloed et al cite the following:

- The determination of the research agenda and the educational offerings of universities along disciplinary lines and accreditation criteria that are not focused on community engagement and responsiveness.
- An internal reward structure in universities that does not take into account engagement activities.
- The lack of an entrepreneurial culture in universities and among academics.³⁹

National, institutional and even international policies might be moving to break down some of these barriers. The commercial dimensions of higher education in the form of growing links with industry and the commercialisation of knowledge are embedding entrepreneurship and enterprise within institutional and national policy. National and international policy frameworks are encouraging the idea of innovation systems that facilitate knowledge flows between different stakeholders and particularly between the university and business.⁴⁰ The emphasis is on knowledge application and the organisation of research and knowledge in interdisciplinary clusters according to application and in pursuit of funding (Mode 2 Research).⁴¹ Observing that this is a global phenomenon, Kenway et al point to the development of national innovation systems that bring together the university, industry and the state and reshape knowledge production and exchange in countries as diverse as the UK, Singapore, Canada, Australia, Korea and India.⁴² The Chinese government also sets great store by the notion of a national innovation system centred on science and technology innovation platforms as well as national centres for innovation in the humanities and social sciences.⁴³ However, Kenway et al highlight a number of potential risks associated with the growing strength of the market-focused, entrepreneurial agenda, including:

- Knowledge becomes industry led rather than curiosity driven.
- Technology is given undue power as an agent of change without giving proper attention to the social and cultural forces of change.
- The ability to respond to risk is curtailed as the focus is on immediate and measurable impact and competitive advantage.
- Those disciplines not compatible with the commercial and entrepreneurial orientation of national innovation systems are likely to suffer.
- The social contract between the public and the university is potentially undermined in favour of chapteral interests with the money to pay for the knowledge they want.⁴⁴

Issues for consideration:

- The universities' mission and vision will be integral to shaping the role of the university within society.
- Universities will need to identify, differentiate and prioritise the communities and stakeholders they serve.
- Universities will need to assess whether their governance and accountability structures are fit to manage a growing range of stakeholder relationships.
- Strategic choice and direction will be shaped by developments in the broader 'knowledge society' and 'knowledge economy', but institutions, individually and collectively, must lead as well as respond, and assert their vision for the sector in relation to the future landscape.
- The state and the market have been brought closer together through the imperatives of the knowledge economy.
- The global dimensions of the knowledge economy will reinforce the importance of internationalisation, but questions remain about the rationales that will drive international engagement in the future.
- Private involvement in higher education is likely to increase with the potential impact of greater competition from the private sector.
- University-industry links contain important risks and opportunities for higher education.
- The relationship between governments, higher education sectors and market forces will be important in defining the context for the future of higher education. Establishing different configurations of this relationship will allow for different ideological depictions of the future of higher education.

37 Kruss and Petersen (2008) p367

38 Kruss and Petersen (2008) p369

39 Jongbloed et al (2008) p316

40 The Lisbon Agenda would be an example of the international push towards entrepreneurialism.

41 Gibbons et al (1994) formulate the concept of knowledge production as context-driven, problem-focused and interdisciplinary as opposed to Mode 1 knowledge which is investigator-led and discipline-based.

42 Kenway et al (2004)

43 Ji (2005) p43

44 See Kenway et al (2004) pp339-341

The Structure and Organisation of Higher Education

This chapter looks at how higher education structures might change in the future. It is best viewed as an extension of the previous chapter, as the structure of higher education is closely tied to its role and function within society. Futures analysis and scenarios place significant emphasis on the level of diversity and stratification within higher education. Some scenarios envisage a much more diverse sector with wide variation in providers and high levels of institutional specialisation; others depict a more homogeneous sector dominated by elite universities and shaped by common measures of institutional quality and success. A linked theme is the extent to which research functions will remain the dominant preserve of the university and continue to be closely associated with teaching. How sectors are organised, governed and managed will also influence and be influenced by the structure of higher education and we shall turn briefly to this issue at the end of the chapter.

3.1 Diversification and Stratification

The expansion of higher education is intertwined with notions of diversification and questions around the way to cater for an expanding and increasingly diverse student body.⁴⁵ Teichler argues that a major theme in the future (as in the past) will be the extent to which higher education sectors, institutions, their organisational sub-units, such as departments or research units, and their functional sub-units, such as study programmes, will be homogeneous or diverse.⁴⁶ On the one hand, there is considerable emphasis on the need for and value of more differentiated and diversified systems to cater for a broader range of student and stakeholder demands. At the same time, the emphasis on global competition and market responsiveness encourages institutions to foster similar and converging ambitions. Jónasson argues that together the market, globalisation and technology are producing vertical differentiation which masks a more profound trend toward convergence and uniformity where elite universities dominate and other institutions aspire to climb up the hierarchy.⁴⁷ While there might be a widening gulf between those institutions at the top and those at the bottom in terms of access to resources, expertise and students, resulting in steep vertical stratification, if institutions aspire to the same goals there will be a growing tendency towards uniformity of mission.

In both Miller's and the OECD scenarios, one of the axes on which the scenarios are positioned relates to the systemic structure of higher education. High levels of conformity and

hierarchy (vertical differentiation) are represented at one end of the spectrum with more diverse, open and networked (horizontal differentiation) structures at the other. At the one extreme, the system is defined by tradition and continuity with the past (catering predominantly for a small share of the traditional cohort population, limited private involvement, limited application of lifelong learning and e-learning within the mainstream sector, knowledge production, dissemination and validation dominated by the sector). At the other extreme, systems are so open and diverse that formal higher and tertiary education structures become less important and in some scenarios all but disappear. This is best reflected in the OECD's 'Diversity/Disappearance' scenario where: the emphasis is on lifelong learning; assessment and credentialism is undertaken by specialist bodies; and research takes place largely within public research centres and corporate R&D divisions. Aspects of system diffusion and diversity are also reflected in Miller's 'Marginal-Open' and 'Ambient' scenarios, Universiti Sains Malaysia's 'Invisible University' and CHEPS' 'Octavia' scenario.

Vertical stratification and competition

Vertical differentiation constitutes the traditional and dominant model of mass education where elite research-intensive universities with high levels of prestige sit at the apex of the system and commonly absorb higher levels of the public funding available, especially for research. Cheaper, teaching-intensive, vocational and technical institutions generally sit lower down in the pecking order. It is a model that benefits elite institutions and is reinforced by national policy positions that emphasise the importance of 'world-class' universities delivering 'world-class' skills and research. It is further strengthened by national and international rankings of universities that promote a culture of elitism. One argument in support of vertical stratification of higher education systems is that this provides a more effective and efficient system for distributing resources across institutions, with austerity at the bottom allowing for greater concentration of resources at the top. Another related argument is that the unequal distribution of rewards creates healthy competition encouraging institutions to achieve better results.⁴⁸

This debate came into sharp focus in Australia with the release of the Bradley review of higher education. In November 2008 the Group of Eight (Go8) leading universities in Australia called for research funding to be concentrated among elite, research-intensive universities to increase competitiveness.⁴⁹ The Go8 statement pre-empted the publication of the Bradley Review which argued, by contrast, for a more distributive approach to higher education funding across the sector to meet national goals such as widening access. The Go8's caustic response

45 Teichler (2008) p351

46 Teichler (2008) p353

47 Jónasson (2008) pp133-134

48 Teichler (2008) p369

49 Group of Eight (2008)

was that the review represented a 'road map to mediocrity'.⁵⁰ Clearly, 'elite' institutions have a vested interest in maintaining and reinforcing hierarchical structures in which they are best positioned to compete for resources and for status (both nationally and internationally).

In developing economies too, the aspiration to promote 'world-class' universities that operate on an international playing field also perpetuates the endurance of systemic vertical stratification. In early 2009, the World Bank released a publication on establishing 'world-class' universities in developing countries in which it acknowledges that the pursuit of world-class status represents a driving goal within many higher education sectors and among individual institutions, whether appropriate for local contexts or not.⁵¹ India provides an instructive example. The 11th Indian five-year plan set a highly ambitious target of increasing enrolment

In developing economies the aspiration to promote 'world-class' universities also perpetuates the endurance of systemic vertical stratification

from 10% to 15% by 2013. Under the plan, 30 new central universities were proposed with 14 targeted at achieving 'world-class standards'. At the same time, degree-awarding powers would be extended to 370 colleges, and funding to state universities, colleges and polytechnics would be boosted and technical education expanded. The model is of a vertically differentiated system of universities, colleges, technical institutions, some with degree-awarding powers, some not, some seeking to operate on an international stage, others with a regional and local focus. Similar patterns of a vertical but diversified system catering for a vast population are reflected in China. On the one hand, China is keen to pursue the development and expansion of world-class universities, demonstrated by the launch of Project 985 and Project 211 initiatives.⁵² At the same time, there is strong emphasis on the diversity of provision and creating a differentiated system that supports widespread expansion of access to higher learning.⁵³

Systems that are highly stratified are also likely to be highly competitive, with institutions competing for the rewards associated with the top of the system. There is greater potential in these systems for resources to be concentrated among the elite providers, which can have broader

implications for the overall quality of the system and its ability to adequately fulfil certain social functions such as providing access to high-quality provision for disadvantaged groups.⁵⁴ Advocates of a stratified system might counter that a stratified system promotes overall quality by incentivising institutions to strive upwards. It is incumbent upon those planning for and thinking about the future of higher education, from both an institutional and systemic perspective, to generate alternatives and consider the implications of stratification and competition on quality and access. Jónasson suggests that the trend toward homogeneity will be dependent on how institutions choose to manage competition in the face of the 'moulding forces of convergence'.⁵⁵

Horizontal diversity and collaboration

What we have defined as horizontal differentiation might be better defined as more collaborative systems with internal as well as external differentiation and specialisation. In the scenarios, this is reflected by more open systems such as Miller's de-compartmentalised, diffuse and networked models, the 'Natural Garden' or 'Octavia' scenarios by CHEPS, the OECD's 2006 'Open networking' (open collaboration) scenario or even Universiti Sains Malaysia's 'A la Carte' model which combines elements of the vertical and the horizontal in advocating a world-class university, but with internal differentiation and regional/international collaboration.

Horizontal diversity is likely to coincide with a broader range of providers operating in the sector and more open and mixed-mode methods of teaching, learning and research. It might also coincide with greater internal institutional differentiation, with institutions providing a more diverse set of functions. Formal collaboration and mergers between different types of institution with the aim of expanding and differentiating institutional provision might be an example of intra-institutional diversity. Mergers can be associated with both vertical and horizontal diversity. On the one hand they can lead to the creation of dominant 'mega universities' more typically associated with vertical stratification. On the other hand, they might provide for enhanced intra-institutional diversity. The February 2009 edition of the International Association of Universities' newsletter, Horizons, focuses on the role of mergers in higher education.⁵⁶ From Sweden to China, Australia to South Africa, France to Latin America, it provides an international perspective on different models of

50 Gallagher (2009)

51 Salmi (2009)

52 Ji (2005) pp37-43 Project 211 was launched in 1995 and set out to develop 100 first-class universities in a number of key fields of study with particular focus on science and technology. Project 985, established in 1999, aims to support the development of world-class research universities by providing state financial support to help strengthen and enhance the comprehensiveness of particular universities and enable them to recruit top talent from at home and abroad.

53 Ji (2005)

54 Teichler (2008) p375

55 Jónasson (2008) p134

56 IAU (2009)

institutional merger, some imposed from above, such as in South Africa, and others emerging from a bottom-up drive that builds on existing collaboration, such as the Swedish Linnaeus University.

South Africa provides a useful case study. Here the system went through a process of major structural transformation in response to the deeply stratified and unequal higher education system inherited from the apartheid system. A series of mergers between historically advantaged (white) and disadvantaged (black) institutions was enforced which reduced the total number of universities from 36 to 23. However, as a politically driven process imposed by the government, it has been subject to considerable criticism, largely from within the sector, for not addressing the fundamental needs of the sector and catering for growing demand. One South African vice-chancellor has suggested that the concurrent decline in real-terms funding will actually reinforce the stratification of the South African sector by creating a few internationally competitive universities while the rest languish below.⁵⁷ Interestingly, this view came from the vice-chancellor of one of the few voluntarily merged institutions. The message was perhaps that any drive for mergers or more structured collaboration should emerge from within rather than be imposed from without.

How institutions collaborate and work together has increasingly become a critical issue in discussions about the future development of higher education. Focusing on the Australian context, the vice-chancellor of the University of Canberra advocated greater collaboration between different types of post-secondary provision in a 2008 paper entitled Australia's tertiary system: time to look again at structure. He speaks of the need to 're-conceptualise post-secondary education and abandon *a priori* distinctions between "higher", "vocational", and "training"'.⁵⁸ Parker makes the case on the basis of better efficiency and competitiveness and goes as far as saying that he does not believe 'Australia can sustain 40 separate stand alone university institutions', arguing that the 'sector is inefficient, even if individual institutions are efficiently run. There is too much duplication and resources are still locked in weak rather than strong areas'.⁵⁹ He advocates the idea of 'university systems' with multiple institutions – universities, community colleges, vocational institutions – operating under a collective governance system that allows for flexibility, differentiation and mobility.

This was also the premise of a 2009 lecture given by the vice-chancellor of the University of Warwick. Here the argument is that the UK will need to consider radical policy options if it wants to retain a leading higher education sector in 20 years'

time. The author also advocates a 'system' model defined by heterogeneity, whilst emphasising the importance of a clear and well-supported apex of around 30 research-intensive universities within this system.⁶⁰ The US sector is invoked by both Parker and Thrift as a model of a system that is diverse and provides genuine choice. The policy options put forward by Thrift for consideration in systemic restructuring revolve around domestic mergers, foreign mergers (or structured collaborations), private ownership and specialisation. He emphasises that we are entering an era where much greater collaboration will be required, while at the same time premising his argument for change on the need for the UK sector to remain competitive.

In one of the biggest emerging sectors too, the concept of choice and cross-fertilisation of different types of higher learning has become integral to the process of reform and future planning. Recognition of the importance of connecting different educational levels and types of provision is something that the Chinese view as critical to their commitment of developing a broad learning society in China. The emphasis is on pooling and coordinating resources to create a differentiated system of traditional universities and colleges, adult universities, higher education examinations for self-taught students, various forms of distance education and specialised technical education. The principle is that lifelong learning will be a critical factor in meeting the learning needs of society as we progress through the 21st century and this will require greater levels of openness and fewer barriers between higher, vocational and other forms of education.

Diversity of providers

Closely tied to the concept of horizontal diversity is the diversification of higher education providers. In most cases, this focuses on private and trans-national/foreign providers and even here, there are significant degrees of differentiation, notably between for-profit and not-for-profit providers. A number of the scenarios present different speculations on the influence and proliferation of private and foreign providers in the coming decades. At present, the private sector is much more active in developing and emerging economies where they have been able to capitalise on high demand and limited supply, often combined with more open regulatory systems. In Asia and Africa, private provision is a major growth industry. India already has the third largest higher education sector in the world and is planning expansion on an unprecedented scale, and private providers are seen as playing an important role in this process. In the five years between 2001 and 2006 alone, the share of private unaided higher education institutions increased from 43% to 63% and the share of enrolments increased from 33% to 52%. It

57 McLeod (2008)

58 Parker (2008) p3

59 Parker (2008) p7

60 Thrift (2009)

is anticipated by the government that during the period of the Eleventh Five-year Plan (2008-2013) that about half of incremental enrolment targeted for higher education will come from private providers.⁶¹ In neighbouring Pakistan, the higher education development framework for 2005-2010 proposed that incentives should be provided to facilitate the expansion of private higher education institutions and to encourage the private sector to contribute to the provision of public universities.⁶² Often these institutions specialise and focus on lucrative professional disciplines such as business administration, computer science and engineering.⁶³ Similar patterns are in force in South East Asia, especially Malaysia and Singapore where the growth of private higher education has also provided fertile ground for foreign providers. In Africa, growth in private provision has also been pronounced. While the number of public universities increased from around 100 to 200 between 1990 and 2007, the number of private tertiary education institutions has risen from around 24 to an estimated 468, according to a recent World Bank report.⁶⁴

Most post-industrial economies have nowhere near this level of private provision, but the growth of private income in higher education might provide a gateway and more attractive prospect for private providers, especially with tuition fees becoming more widespread and the culture of paying for education more widely accepted. This is perhaps why the expansion of private provision and the receptiveness of national policy-makers to private providers is such a strong projected feature of the scenarios. It is uncertain what the full impact of the current financial crisis will be, but if major cuts in public funding result, private funding is likely to become a more important force than at present.

A key consideration for those looking to the future of higher education is whether private and non-traditional providers

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will proliferate and gain strength and status, and whether this will pose a threat to or provide an ally for the public sector. The OECD 'Free Market' scenario depicts a much stronger role for private providers, while the CHEPS 'Polder Garden' scenario envisages

closer alliances between the private and public sectors. The 'Natural Garden' scenario envisages a more mercenary culture of private takeovers of colleges and some universities. One

of the risks identified by UUK in their 'Market Driven and Competitive' scenario is that private providers with degree-awarding powers could damage the reputation of the UK sector or, alternatively, that the public sector becomes less attractive, with some institutions voluntarily seceding from the public sector into the private sector. Another consideration is whether the sector will become more specialised, with the core functions of the university distributed among a wider range of specialist institutions or sub-units within institutions.

3.2 Division of Teaching and Research

Related to the structural questions around diversity and specialisation is the issue of the relationship between teaching and research. The Humboldtian principle of linking teaching and research remains strong in many higher education sectors, but futures analysts have speculated about whether this will continue to be the case. Specialisation and concentration of resources might encourage greater disaggregation of research from the university's teaching functions, especially at the undergraduate level. Jónasson believes there is a strong likelihood that Europe will follow the US model where a clear distinction between undergraduate and graduate schools already exists, appealing to research-focused academics, but at the same time retaining the link between research and graduate education. It is not just the link between research and teaching that is under scrutiny, but the broader link between research and the university.⁶⁵ Several scenarios speculate that the growing emphasis on applied and 'functional' research might make the intrinsic function of research less essential within the university. The diffusion of research among more diverse sets of knowledge providers (both public and private) challenges some of the fundamental perceptions about what a university should be and should do and how it should do it.

In a recently published survey on technology and the future of higher education by the Economist Intelligence Unit (EIU), only one in five respondents agreed that 'their domestic academic institutions are quicker than companies to develop and implement new technologies', around 66% believing the reverse to be true.⁶⁶ One consequence they suggest could be the growth of research-driven public-private partnerships. Others have argued that research dominance may shift from high-income countries to countries with cheaper academic labour, and that the competition for research contracts, as with other aspects of higher education, will go global.

From the university's point of view, Marginson presents the research-teaching nexus in terms of institutional competition for social status framed within a competitive market economy

61 Figures available in the Education chapter of India's 11th five-year plan p.23 http://planningcommission.nic.in/plans/planrel/fiveyr/11th/11_v2/11v2_ch1.pdf

62 World Bank (2006) p44

63 Kubler and Lennon (2008) pp44-47

64 World Bank (2009)

65 Jónasson (2008)

66 EIU (2008) p12

in status goods. It is possible that those institutions who do not have high-status research outputs may focus on more commercially viable teaching outputs, or 'research intensive universities might decouple commercial teaching services from research services by breaking the teaching-research nexus.' However, Marginson considers this an unlikely scenario, not because of a fundamental commitment to the Humboldtian tradition, but because to break the teaching-research nexus would be an ideological shift that would potentially undermine the status of the university and reduce its 'attractiveness to the social and academic elite'.⁶⁷ Thus any push to take research and research funding, substantively, away from the universities is likely to come from outside and be strongly resisted from stakeholders within the sector (students, staff, administrators).⁶⁸ Among 'lower status' institutions the marginalisation of research might prove more difficult to resist.

3.3 Governance of an Evolving Sector

Insofar as futures scenarios address the issue of governance and management of higher education they tend to focus on regulation and whether the regulation of universities will be dominated by the state or disaggregated among a range of bodies (local, national, international, professional etc ...). But the question of sector governance goes beyond issues of regulation, accountability and compliance.⁶⁹ It goes to the heart of how institutions adapt to changing circumstance and how they will be structured to contend with future challenges. Questions of diversity, responsiveness to different communities and stakeholders, funding mix, private involvement, and the role of networks and partnerships will shape the way in which institutions are governed and managed. Without going into the detail of institutional or sector-wide governance structures, it is probably fair to say that the rise of stakeholder influence and the concept of the knowledge economy have led to a growing culture of accountability and measurability in the governance and management of higher education institutions in many countries. As the state steps back, universities are compelled to seek legitimacy not so much through their public mission as through the acceptance and trust of their services by the various stakeholders within society.

The imperatives of relevance and responsiveness have become as important as the traditional imperative of academic excellence, and the structures of higher education have to adapt accordingly. The import of private-sector principles of management and governance to the higher education sector has become widespread in many well-established sectors. Often referred to as New Public Management (NPM), this form of governance places strong emphasis on performance measurement, monitoring, and management and audit systems, rather than on self-regulation. The aim is to produce a more efficient, accountable and results-oriented public sector.⁷⁰ To date, in Europe, it has been the UK that has spearheaded NPM as an organising principle for the higher education sector but it has also been effectively exported to other countries.⁷¹ A number of writers have observed, however, that NPM is not particularly well suited to greater social complexity and diversity of the sector and that multi-level, networked governance is an emerging concept of governance that might be better suited to higher levels of complexity and differentiation. Here the emphasis is on: the cultivation of networks between higher education institutions and other social actors; lighter touch regulation and more professional self-regulation; multi-level governance that operates at the international, regional, national and local levels as well as among a range of non-governmental and civil society organisations; the development of collaborations, consortia and strategic alliances; and governance systems that are more pluralist, participative and less directive.⁷² Elements of networked governance are evident in some European sectors such as Germany and France, especially in relation to the idea of multi-level governance.

A similar and linked concept is the notion of 'horizontal accountability' in which the accountability of the university extends beyond the state to all groups that have an interest in its activities.⁷³ Jongbloed et al suggest that networked governance might prove a useful template for facilitating greater 'horizontal accountability'. The Warwick model details different approaches to higher education governance and implies a shift from past to the future.⁷⁴

67 Marginson (2004) p195

68 In some European countries top research is carried out in research institutions, not in universities (eg Max Planck Institute, Germany)

69 Specific institutional governance is not addressed as it is too detailed and context-specific to be covered with any justice in this paper

70 Ferlie et al (2008) p335

71 According to Ferlie et al (2008) p336 UK is seen as the main index case but elements have been adopted in other European countries such as the Netherlands, Germany and Norway.

72 Ferlie et al (2008) pp337-338

73 Jongbloed et al (2008) pp318-319

74 Jongbloed et al (2008) p320 reproduced from Bennington (2005)

Table 3: The Warwick Model of governance structures

| | Traditional public administration | New Public management | Networked governance |
|------------------------|---|---|-------------------------------------|
| Context | Stable | Competitive | Continuously changing |
| Population | Homogeneous | Atomised | Diverse |
| Needs/problems | Straightforward, defined by professionals | Wants, expressed through market | Complex, volatile and prone to risk |
| Strategy | State and producer-centred | Market and consumer-oriented | Shaped by civil society |
| Governance through ... | Hierarchies | Markets | Networks and partnerships |
| Actors | Public servants | Purchasers and providers, clients and contractors | Civic leaders |

Source: Jongbloed et al (2008)

Issues for consideration:

- Global competition is likely to encourage greater levels of vertical stratification between institutions competing for resources and status on the international stage.
- The expansion and growing diversity of students may prompt a more diverse and specialised range of higher education providers.
- Greater diversity among the communities served by the university might force more inter- and intra-institutional diversity, the former reflected by a wider range of higher education/post-secondary providers and more explicit institutional specialisation, the latter by institutional collaboration and merged activities.
- The teaching-research nexus will come under pressure from a growing emphasis on applied and functional research geared towards commercial or national policy outcomes. This might result in greater specialisation of research within and outside the university and a decoupling of research from teaching, especially at the undergraduate level and among 'lower status' institutions.
- If the sector becomes more diverse, governance structures will have to adapt and a more networked model of governance might emerge as a more appropriate model for a more diverse sector.

The Impact of Technology

4.1 Technology and Leadership

Technology has fundamentally altered the way we access, generate, analyse, distribute and share knowledge. The implications of technology application relate closely to questions of how universities will be structured, organised and managed, how they will collaborate, how they will reach out to different constituencies and above all, how they will execute their core functions. However, anticipating specific technological change in the medium to long term is notoriously difficult; but at the most fundamental level, technology certainly has the potential to make the delivery of higher education more flexible, interactive, collaborative and mobile, all of which present strategic choices for the institutional leader.

While ICTs represent a transformative development in higher education, they should not necessarily be viewed as an independent force bearing down on universities. Instead they are a cross-cutting force closely aligned to other developments in higher education. In their paper, *Universities in the Digital Age*, Seeley Brown and Duguid remark that it is 'probably less helpful to say simply that the university will change because of the changing technologies than to say the emerging computational infrastructure will be crucially important for retooling the already changing university and in providing

New possibilities and paths are opened by the rapid development of academics, administrators as well as external stakeholders, and shift the boundaries of teaching, learning, research and access

access to the students of tomorrow.⁷⁵ It is certainly true that universities need to understand where they are going in order to understand fully how technology can help them to get there. However, it is also important to recognise that new possibilities and paths are opened

up by the rapid development and application of technology which can alter the expectations of students, academics, administrators and external stakeholders, and shift the boundaries of teaching, learning, research and access. If one thinks of the way various social networking and Web 2.0 technologies, for example, are penetrating the academic sphere, it is possible to see how universities have to respond and adapt to new ways of communicating and sharing

knowledge. This does more than facilitate changes that would have happened anyway, it creates possibilities for doing things differently.

Few higher education scenarios focus on the specifics of technological development; instead they focus on generalities such as increasing use of technology, growing flexibility, more e-learning and interactive learning, more networked working patterns and cross-border collaboration. Technological development is taking place at such a fast pace that scenarios are perhaps not the best model for making detailed claims about what technology will look like and how it will be used by universities in the future, other than in these relatively broad terms.

Cooke's report on e-learning that contributed to the UK government's debate on the future of higher education,

When it comes to technology, predictions beyond a few years is a fool's game

emphasises that when it comes to technology, predictions beyond a few years is a fool's game.⁷⁶ ICT, Cooke notes, will be more interactive and powerful

than it is at present, but confidence about the full potential of any one particular technology and its application and impact is misplaced. Instead, he argues, it is necessary to anticipate the future of higher education more broadly and how ICT will fit into this future. He argues that the development of e-learning (at a national level) and the growth of e-literacy within universities, together with effective leadership and management of e-resources within universities, will be critically important to supporting the future developments of higher education more generally.⁷⁷ In his recommendations, he emphasises the need for leadership at the institutional and national level in order to realise the potential of technology. This is echoed in the second publication of the ACE foresight series on the 'dynamic nature of knowledge', which sets out a series of challenges for leaders looking to adapt their institutions to the digital age.⁷⁸ Essentially, they encourage leaders to see the application of technology within their institution as a fundamental consideration of strategic development that requires widespread engagement and consultation across the institution. Arguably, the next stage of technological development in higher education is all about strategic decision-making. This will involve looking at how institutions will develop in the future and 'the role of technology in the transition to a wider learning and research culture'.⁷⁹

75 Seely Brown and Duguid (1995)

76 Cooke (2008)

77 For teaching and learning he explores the potential of virtual education based on open learning content. For research he speaks of revitalising investment into e-infrastructure and high-performance computing and for management and administration he stresses the importance of institutional information strategies.

78 Eckel and Hartley (2001) p19 Among the challenges listed in the report are: leading critical conversations with a range of institutional stakeholders, investing in people to ensure that the institution has the right skills in place; encouraging innovation and experimentation, developing the right physical space and forging new relationships with other institutions.

79 Bradwell (2009) p12

4.2 ICT Developments in Higher Education

The 2008 EIU survey of senior representatives from the higher education and corporate sectors on the role of technology provides a useful summary of the potential impact, development and risks associated with technology and higher education.⁸⁰ It concludes that technology will continue to have a significant impact on higher education and teaching methodologies and that technological resources will be a key factor in attracting students, staff and corporate partners as well as in influencing the reputation of the university. Online learning in particular will gain a firm foothold in universities and be a critical factor in widening access and reaching out across national boundaries.⁸¹ Within the next five years the report anticipates increased use of: multi-modal teaching; online collaboration tools; dynamic delivery to support individually paced learning; learning-management systems and enhanced video and presentation tools; wider application of Web 2.0 technologies (such as social networking, user-generated content, video conferencing, wikis, blogs, instant messaging); growing influence of online gaming and simulation software and wider use of free web applications and freeware such as Google docs, and Microsoft's live@edu to reduce costs and increase efficiency.⁸² The implications of these developments will be multifarious but will particularly affect the teaching and learning experience, making it more flexible and personalised for the student and more interactive and collaborative for the teacher. There are implications too for the nature and practice of research and research dissemination. Governance and management systems will be forced to adapt accordingly, potentially incorporating technology-based criteria into performance measurements and reward and recognition strategies for students and staff.

The impact of technology will not, however, be all positive. It presents risks, disruptions and critical challenges such as rising levels of plagiarism and cheating, growing difficulty in navigating vast amounts of information, escalating costs, complex training requirements and institutional resistance. At the institutional and systemic level, new ways of ensuring the standards and quality of pedagogy and scholarship also need to be developed to take into account the technological changes. In developing countries, these challenges are reinforced by severe infrastructure and resource limitations. Recent estimates of the average number of people sharing computers in African universities, for example, are as high as

55 per computer (although there are regional variations).⁸³ Similarly, the bandwidth capacity of internet connectivity is very limited across the continent, restricting the potential to exploit online resources and transmit data. However, things are improving all the time, and in many developing and emerging economies outside Africa, there is much more advanced ICT infrastructure which will enable institutions to capitalise on the possibilities of collaborative relationships, wider access and efficiencies engendered by technology. Even in Africa, various initiatives are underway to improve infrastructure significantly in the coming years and this may enable some institutions to leapfrog the current digital divide that separates them from their counterparts elsewhere.

One of the most detailed investigations into the impact of information technology on the future of the university was carried out by the US National Research Council (NRC) in 2002. While somewhat dated for our purposes, it provides some interesting observations about the role of the university in adapting to technological change. The panel was only asked to look at 'near-term' developments likely to take place within the

Universities should neither procrastinate in the uptake of technology nor act with too much haste and lose sight of their core values in the use of technology

next decade, recognising that a long-term view would be too difficult to anticipate. The report of the panel concluded that change in ICTs will be rapid, profound and will transform not only the intellectual

and academic activities of the university, but also the administration and governance of the university. They argue that universities should neither procrastinate in the uptake of technology nor act with too much haste and lose sight of their core values in the use of technology. They should be constantly vigilant about potential changes in technology, developing sufficient in-house expertise to track trends and assess various courses of action. Institutional adaptation will invariably be a part of technology development, but this will vary for different institutions. The panel emphasised that 'one of the university's greatest challenges will be managing the great discrepancy between technological and institutional change.'⁸⁴ The technological revolution will emerge from the increased speed, storage capacity, and memory of computers and greater bandwidth capacity which will facilitate a

80 The research draws on two initiatives conducted in July and August 2008: a global online executive survey and in-depth interviews. Of the 289 executives responding to the survey, 189 participants came from higher education and 100 came from corporate settings. The US accounted for slightly over one-half (154) of all respondents, with the remainder distributed through Europe (69), Asia-Pacific (43) and the rest of the world (23). Of this total, board members and C-level respondents made up 43% of private-sector respondents, while professors, deans and other faculty members accounted for 86% of

those surveyed from academic institutions. In addition, 12 interviews were held with university chief information officers and leaders in the private sector to gauge reaction to the survey's findings and gain deeper insight into the wider impact of technology on both higher education and the job-preparedness of today's graduates.

81 EIU (2008) p4

82 EIU (2008) pp6-7

83 Harle (2009)

84 NRC (2002) pp14-15

move from e-commerce, e-government and e-learning to e-everything, and it is incumbent on universities to prepare for e-everything by re-examining their role in a digital age.

4.3 Pedagogy, Scholarship, Access, and Communication

Teaching and research

Much of the literature examined as part of this study has tended to focus on the pedagogical, research, access and communication potential of technology which we will now look at in a little more detail. The first ACE report emphasises that the very understanding of knowledge and 'how it is validated and transmitted is being reshaped by changes in technology and resources such as Wikipedia and Google, as well as free open source course [material]'.⁸⁵ It raises questions

The very understanding of knowledge is being reshaped by technology – raising questions such as: who are the arbiters of knowledge and what role will virtual communities play in the formation and spread of ideas?

such as: who are the arbiters of knowledge and what role will virtual communities play in the formation and spread of ideas? Learning will undoubtedly be more interactive both within and outside the classroom, facilitated by multiple platforms of online and electronic

communication. At the same time, students will need to be equipped with new skills to 'sort, decipher, connect, order and understand' the vast amounts of information they will have access to through electronic media.⁸⁶ It will also be necessary for institutions to assess how they develop curricula and determine what students need to know in an electronically mediated world. This might in turn reconfigure the role of the teacher in relation to their students, especially arising from what the report describes as the 'emerging gulf between the entering generation of students and their institutions when it comes to technology'.⁸⁷ Technology will also enhance the ability of students to undertake self-managed and individually paced learning.⁸⁸

In China informal, self-managed learning has arguably been accepted as a legitimate and recognised form of higher learning much more readily than elsewhere, not least because of the pressures on a system that caters for such a vast population. It may have lessons for other countries where informal learning is growing in popularity and significance, but where it has been difficult to reconcile it with formal frameworks, posing

a real challenge as the world moves toward a more open education landscape.⁸⁹ In China, informal learning has already been embraced into formal frameworks with the introduction of higher education examinations for self-taught students. This innovation was born out of necessity for rapid, cost-effective expansion of recognised higher learning. After two decades of development this form of study has become increasingly widespread and is gaining in credibility with an average of 13 million applying for these examinations annually.⁹⁰

In terms of research, the possibilities of collaboration – already discussed above – will be greatly enhanced. The potential to create virtual departments and research teams offers considerable opportunity for flexible, disaggregated and interdisciplinary research. It may also create a more level playing field between research staff at differently resourced institutions because of more open access to e-journals and scholarly information. Looking more broadly at the ICT infrastructural requirements for enhanced research and knowledge production, Atkins emphasises the importance of 'cyber-infrastructure' in today's technology-driven society. The term refers to the confluence of ICT, service organisations and policy that under-gird an increasing range of knowledge-based activities in society.⁹¹ The main components are high-performance computation services, global-scale networking and software that make it easier for virtual organisations and communities to operate in a secure environment. Together this will allow distributed teams of researchers to work together effectively. Atkins stresses that enhanced cyberinfrastructure should be part of the mission of universities and might herald the emergence of a new form of university, where the core elements – based on a 'community of masters and scholars' seeking to spread and advance knowledge – are filtered and dispersed across a much more open and unstructured academic sphere occurring largely in cyberspace.⁹² He cites the example of the ATLAS project to build the Large Hadron Collider which would not have been possible without advanced cyberinfrastructure which brought together large international communities of researchers within a virtual 'collaboratory'.

Online learning

Widespread use of online learning is a key characteristic within many scenarios. Traditionally associated with distance learning, online learning is increasingly viewed as an important factor in enhancing conventional campus-based learning. The 2006 international survey of online learning in universities conducted by The Observatory on Borderless

85 White and Eckel (2008) p7

86 Eckel and Hartley (2008) p7

87 White and Eckel (2008) p7

88 NRC (2002) p26

89 Bradwell (2009) p53

90 Ji (2005) p190

91 Atkins (2004) p4 It is similar to Cooke's recommendation for investment in what he terms e-infrastructure which is similar in substance to Atkins' 'Cyberinfrastructure'.

92 Atkins (2004) p11

Higher Education (OBHE) found that a growing proportion of universities had implemented an institution-wide strategy for online learning within their institution, compared with similar surveys carried out in 2002 and 2004.⁹³ This is reinforced by the more recent findings of the Sloan Foundation which conducts an annual survey of online learning in the US. Based on a survey of 2,500 colleges and universities, the study found that 3.9 million college students took at least one online course in 2007, a 12.9% increase on the previous year's survey. This follows year-on-year growth since 2002 amounting to a compound annual growth rate of 19.7% between 2002 and 2007, which far exceeds the 1.6% annual growth rate of the overall higher education student body during the same period.⁹⁴

Online learning also opens up the potential for reaching new and distant off-campus audiences providing a much more immediate, direct and interactive alternative to traditional mediums of distance education (paper, radio and television). However, adapting courses for online distribution requires investment, and investment is not always justified by demand. The perception that online courses are of poorer quality than the face-to-face equivalents is pervasive. The evidence suggests that at this stage the technology has still not developed sufficiently to replicate the richness of face-to-face interaction but that it does allow new and different opportunities for learning. The EIU survey found that the credibility of traditional degrees is much higher than that of online degrees; this perception was strongest among corporate respondents. Perceptions may begin to shift as more prestigious institutions offer highly regarded online provision. Wider acceptance of online provision will almost certainly require adapting quality frameworks for a more rigorous assessment and validation of the standards of online learning.

In terms of international uptake, Marginson noted that online education has not yet lived up to the commercial expectations anticipated.⁹⁵ The Sloan Foundation report shows that among the institutions it surveyed, the majority of online provision was taken up by local students and only a very small proportion was directed at international students; thus the perception that online provision extends reach is not necessarily borne out by reality. The authors also note that while the increase in the study of online courses has been considerable, there was a decline observed in the number of institutions that saw online learning as critical to their long-term strategy, for the first time in the six years of the survey. Interestingly, however, there was a widespread perception that the economic downturn

would boost interest in online courses as a perceived low-cost, flexible alternative to campus-based courses.⁹⁶

Open-access resources

Alongside online learning, a related development has been the growth of open-access resources, ranging from study and information resources to software. The Open ICT movement (some would term it a revolution) is a complex and evolving phenomenon which some institutions have embraced and others are still getting to grips with. 'Open-access resources' are likely to have an important impact on how individuals will access higher education in the future. The movement is multi-dimensional involving: free access to content, course material and learning resources which can be shared between institutions or accessed by individuals; informational tools such as Wikipedia; online publications and collections such as Project Gutenberg; open operating systems such as Linux; open browsers like Firefox and open source software like Open Office and Moodle.⁹⁷

Making course material available online, free of charge, is an area of open technology that has been largely driven by the universities themselves. The OpenCourseWare Consortium lists over 80 universities in 23 countries as providing some or all of their courses free. In 2008 the Massachusetts Institute of Technology (MIT), one of the pioneers of OpenCourseWare, made all their courses available online free of charge and also established an interface to enable users to revise and republish their material (though there has been limited take-up of this option). The UK Open University (OU), also one of the leading advocates, has put up over 5,000 hours of material online with an estimated 2 million visitors a year. Like MIT, the OU also established an interface for revising content so that it can be adapted by others. More recently one of the world's top-ranked universities, University College London (UCL), announced that it would provide free online access to all its published research, considering it to be an effective way to showcase its research and enhance the profile of the university among a wider audience.⁹⁸ Open courseware, together with other types of open-access resources, has thrown up many questions about intellectual property, knowledge ownership and the proprietary culture of knowledge-generation in academia. Bradwell points out that 'there has been only sluggish progress in reforming the intellectual property landscape to match the new era' of information distribution.⁹⁹ The necessity for universities to confront these issues will become increasingly urgent as 'openness' becomes more ubiquitous.

93 Becker and Jokivirta (2007) p6

94 EIU (2008) p9

95 Marginson (2004)

96 EIU (2008)

97 Yuen and Yuen (2008) slide 63

98 Bradwell (2009) p9

99 Bradwell (2009) p61

Interaction and Web 2.0 technologies

One of the main benefits of a more open and less proprietorial culture in academia is that it will facilitate interaction and collaboration. It is complemented by interactive technological developments that are strengthening the ease with which university communities can communicate with each other and with the outside world. Institutions are applying and looking into ways to harness the possibilities of Web 2.0 and social networking platforms. If universities do not drive these developments it is increasingly evident that students will; so universities can either be reactive or proactive. Engaging students and younger generations in the active process of

One of the main benefits of a more open and less proprietorial culture in academia is that it will facilitate interaction and collaboration

developing learning tools might be one way of anticipating and responding to student expectations for higher levels of interaction and self-management of their studies. The

ACE report emphasises the importance of leaders engaging in critical conversations across their university in order to assess and appraise applications of technology.¹⁰⁰ The use of new interactive technologies needs to be a considered and well-informed process based on relevance and suitability. De Vries and Clark found that when looking at interactive Web 2.0 activities, these did not necessarily lend themselves particularly well (at this stage of their development) to formal learning because of issues around privacy, trust, security and continuity.¹⁰¹ They do, however, provide opportunities for peer collaboration and communication. It is about deploying resources appropriately and according to need, effectiveness and vision, not because others are doing it or because it seems on the surface like a cheap and easy way to extend access.

Interactive technology has already firmly established itself as a highly effective tool for communication, facilitating communication between academic communities as well as between the academic communities and the outside world. It can be used to convey information about the institution which has both benefits and risks for the institution. Potential students are increasingly likely to use interactive tools such as blogs to source information about prospective universities and will be heavily influenced by the unmediated and informal opinions of their peers. Universities, and their staff, need to be as aware of their profile and representation in the cybersphere as they are of their latest position on league tables. Reputations will be at stake in a medium that is largely beyond the university's control.

4.4 Looking to the Future – Emerging Technologies

It has already been stated that it is difficult to predict what specific technological developments will shape higher education in the future. However, a few trends highlighted in the literature are worth noting, including those within the 2009 edition of the annual Horizon Report which looks at ICT developments likely to have an impact on higher education within a four- to five-year timeframe. Among the technologies identified as the 'ones to watch' in the next few years are:

- **Mobile phones** becoming a more integral resource for learning, especially with the development of broadband mobile devices like the iPhone able to assume the tasks once exclusive to portable computers.
- **Cloud computing**, where large clusters of networked servers provide an efficient and cost-effective means of bringing 'huge quantities of processing power and storage capacity within easy reach'.¹⁰² Essentially, 'the cloud' provides ICT services and infrastructure through the internet so that users have easy and flexible access to extensive processing capacity as well as personalised data (one example is accessing your PC desktop from anywhere in the world with an internet connection). It complements the open-source developments by espousing the value of sharing content, applications and infrastructure and thereby making better, more flexible use of ICT resources. It has particular benefits for the research community who will be able to make more use of untapped processing power through 'the cloud'. It also has the potential to scale up the IT resources available to institutions at relatively little cost. IBM are providing cloud computing services to universities and have highlighted the following benefits:
 - The ability to open their technology infrastructures to businesses and industries for research advancements.
 - Creating efficiencies that can help universities keep pace with the ever-growing resource requirements and energy costs.
 - Enabling institutions to teach students in new and different ways and help them manage projects and massive workloads.¹⁰³
- **The personal web**, which reconfigures and customises web use around personal preferences. The Horizon report claims that the tools supporting the personal web, such as tagging, categorising and instant online publication, are also useful for research and learning. The possibilities of this technology will allow those within the academic community to make much more effective use of vast amounts of information on the web, armed with the tools for tagging, aggregating, updating, keeping track of content, and navigating.

100 Eckel and Hartley (2008) p19

101 De Vries and Clark (2008)

102 Johnson et al (2009) p4

103 IBM Cloud computing – listed under skills for the 21st century <http://www-304.ibm.com/jct01005c/university/scholars/cloud/index.html>

- **Semantic-aware applications** reflect the next step from the personal web. These applications will extract meaning and understanding of context from web content. The potential will be to enhance the ability to search and analyse huge amounts of electronic information, tailoring it to the requirements of the user.¹⁰⁴
- From a leadership and management point of view, focusing on specific technologies like these might be considered more of an operational concern than a strategic concern. However, one of the main calls emerging from the literature on the future impact of technology on higher education is for greater understanding among leaders of the potential of technology and its implications for the institution and the sector. It is about gaining insight into how technology will transform the way we teach, learn, communicate, research and innovate, all of which are at the heart of the strategic future of the university.

Issues for consideration

- Technology will play a defining role in the future of the university and institutional leaders need to adopt a strategic approach to the application of and investment in technology. This should be based on understanding gained from widespread consultation.
- Pedagogy will become more interactive and flexible, communication more immediate and interactive, and research more collaborative and open.
- Online learning and open technologies will have the potential to broaden access and open the resources of higher education institutions to much wider, possibly limitless, audiences.
- Open access has the potential to transform the proprietorial culture of knowledge and notions of intellectual property rights. This will have far-reaching implications for higher education, not least in the areas of reward and recognition for academic staff.
- Universities need to be aware of the implications of vast amounts of unmediated information about their institutions available in the 'cybersphere'.

The Impact of a Changing Student Population

5.1 Demographics

The changing demographics of the student population will have a significant impact on higher education and this therefore emerges as an important theme in most futures scenarios and research. Relative to other drivers of change, demographic changes are easier to predict, although there is still some uncertainty about how changes in the general population in a given region will impact on the population entering tertiary education, as this is dependent on many other factors. Furthermore, there is some debate about the implications for higher education of likely shifts in student demographics.

The current situation

Over the past decades there has been a significant increase in demand for tertiary education, a phenomenon known as 'massification'. In 2009 there were some 150.6 million tertiary students globally, roughly a 53% increase since 2000. Globally, the percentage of the age cohort enrolled in tertiary education grew from 19% in 2000 to 26% in 2007.¹⁰⁵ Participation rates in OECD countries are now high, with almost one in two young people (47% in 2004) entering general higher education programmes at some point.¹⁰⁶ Overall, most futures research assumes that, at a global level, this trend of massification, with increasing demand for tertiary education and increasing participation rates, will continue. Within that very high-level trend, however, there are significant potential shifts in student type that are likely to impact on the higher education sector, as well as significant variations by region.

Changing student type

In most OECD countries there is a projected decline in the number of young people until about 2030 (the situation is very different beyond the OECD, as will be discussed in the following chapter). Given that the majority of university enrolments are currently still from the traditional university-age population (university students under 30 represented 80% of university enrolments in 2009), there is speculation about how the predicted change in the general population will affect student enrolments.¹⁰⁷ Both the OECD and the UUK scenarios suggest a possible decline in the number of traditional-age undergraduate students entering higher education in the coming years, reflecting the wider population decline in most OECD countries. However, UUK also cautions about the unpredictability of demographic changes. For example, in 1987 demographic decline in the number of 18-20-year-olds in

the UK led to a prediction that the number of undergraduates in UK higher education would soon decline, and instead a rapid expansion followed – due to several factors, for example an increase in the number of female students, and a new National Health Service requirement for entrants to nursing to have a higher education qualification. Similarly, in the US, the most recent major phase of expansion coincided with a decrease in the size of its younger age cohorts, emphasising the fact that shifts in demographics and university enrolments are often not in line.¹⁰⁸

Whether numbers of traditional-age students decline or not, there is a clear expectation in many of the scenarios that the demand for tertiary education from non-traditional, older students will increase. This arises in part from the forthcoming retirements of the baby boomers¹⁰⁹ who with time and money on their hands, might be looking for new learning and intellectual stimulation; and in part from an increased emphasis on lifelong learning in the knowledge economy where education and training are more likely to be ongoing in adult life.

The implications of this change in the composition of the student body are a subject of much speculation. These older, non-traditional students have different needs from those of younger, traditional students, so alternative provision is emerging and will, it is expected, continue to emerge. These students are more likely to be part-time and require flexible learning, learning linked closely to professional development

Older, non-traditional students are more likely to be part-time and require flexible learning, learning linked closely to professional development, and teaching methods more appropriate to a more mature student body

and teaching methods appropriate to a more mature student body. Arguably these new types of students are even more important in scenarios which predict a much more market-oriented future with greater private provision (such as the

OECD 'Entrepreneurial' and 'Free Market' scenarios, the CHEPS 'Natural Garden' or 'Vitis Vinifera' scenarios, the Universiti Sains Malaysia's 'A la Carte' University or UUK's 'Market driven and competitive' scenario). In such scenarios, students are more aptly described as consumers, and the new students are a new market segment which will have considerable purchasing power. The increasingly mixed student body is also often linked to the potential diversification and stratification of the higher education sector, as it attempts to cater to very different types of students.

105 Altbach et al (2009) p1v

106 Vincent-Lancrin (2004) p247

107 Vincent-Lancrin (2004) p246

108 Vincent-Lancrin (2004)

109 White and Eckel (2008) p6

Another important shift in student demographics is the increasing ethnic, racial and socio-economic diversity of the student body. As the 2001 CHEPS scenarios put it, the structure of society is not only 'greying' and 'de-greening' (increasing proportion of the population above 65 years of age, and fewer children), as already discussed, it is also 'colouring' (increasing proportion of non-Western immigrants, different lifestyles).¹¹⁰ This wider demographic transformation of an increasingly ethnically and racially diverse population in most Western countries, particularly in younger households, is reflected in the changing student body. In a 2006 keynote address to an OECD ministerial meeting, Dr.ir. J.M.M. Ritzen (President, Maastricht University), predicted that 'the composition of the college freshmen class of 2020 will – both in the US and Europe – be a "majority minority" group (with the majority of students coming from minority groups)'.¹¹¹ Socio-economically, the mass growth in students entering higher education in the last decades has also meant that the socio-economic background of students in higher education is broader than historically it has been, with more and more students entering college with no prior family experience of higher education.¹¹²

There are also differences in participation rates between males and females, with female students now outnumbering male students in most countries in the world, a trend which is expected to continue. There are differences of opinion about the implications of this trend. The UNESCO 2006 'Global Education Digest' points out that about one-half of the world's countries lack gender-disaggregated data and that these countries are generally those with lower female tertiary enrolment rates; therefore it is hard to form global conclusions. Even in the countries where it is clear that more women do enrol, they argue that 'gender questions cannot be reduced to equity in participation or graduation rates' and make the point that field of study is very important, with the vast majority of countries showing a pattern in which men outnumber women in the sciences and women outnumber men in the non-science fields.¹¹³ This accounts to some degree for the income disparity between men and women later in life. However, others, such as Bahram Bekhradnia, emphasise that differences in participation rates reflect a real inequality, namely the difference in achievement between males and females at school, with males from low-income families performing particularly poorly at school, and that this is a dynamic to which higher education futurists should pay attention.¹¹⁴

North versus south

With the exception of the Universiti Sains Malaysia scenarios, the scenarios used as the basis for this report are predominantly

written for and about western countries, reflecting the fact that more in-depth and publicly available scenario work has to date been done in the west. A major theme in these scenarios is globalisation, internationalisation and student mobility (which will be discussed in the following chapter) – in other words, how increasing demand and provision in developing and emerging countries provide a potential market of internationally mobile students, but also potential future competition, from a western perspective. Less discussed is how demographic changes are likely to impact on national higher education systems in non-western countries. There is a general agreement that demand for tertiary education is likely to increase significantly in transition or developing countries, partly because of progress made in terms of participation and access to primary and secondary education, and partly because of a forecast increase in the school-age population¹¹⁵ (as opposed to the predicted demographic decrease in similar-age populations in most western countries).

However, these overall trends obscure differences between countries, and the fact that 'inequality among national higher education systems ... has increased in the past several decades'.¹¹⁶ While higher education in China and India has been growing rapidly and will continue to do so, tertiary-level participation in low-income countries has improved only marginally, from 5% in 2000 to 7% in 2007. In Latin America, enrolment is still less than half than in high-income countries, and sub-Saharan Africa has the lowest participation rate in the world at 5%.¹¹⁷ A challenge for global higher education futurists might be to consider not only the countries where participation is likely to rapidly increase, but also the countries and regions where that is not likely in the immediate future, such as in sub-Saharan Africa.

Overall trends obscure differences between countries ... participation in low-income countries has improved only marginally

Participation and access

In addition to inequality between national higher education systems, inequality within countries has also increased in the past several decades. The UNESCO report argues that despite greater inclusion, and initiatives aimed at widening participation in many countries, 'the privileged classes have retained their relative advantage in nearly all nations'.¹¹⁸ This is true in low-income countries, where participation tends to be below average for populations living in remote or rural areas and for indigenous groups, but it is also true in countries where

110 Westerheijden et al (2004) p383

111 Ritzen (2006) p5

112 Jansen et al (2008) p4

113 Global Education Digest (2006) p19

114 HEPI (2009)

115 Vincent-Lancrin (2004) p249

116 Altbach et al (2009) piii

117 Altbach et al (2009) piv

118 Altbach et al (2009) pv

enrolment is high, such as in the US, where the socio-economic status of a student's family is still a major determinant of how likely they are to enrol in and complete a four-year degree.¹¹⁹ Anthony Carnevale argues that access to higher education in the US is as class based as it was in Marshall's time (although it was then more biased towards race and gender than it is today) and that 'simply put, the educational haves are moving up and the have-nots are moving down.'¹²⁰ An extreme picture of this point is painted by Bourdieu and Passeron (1990), who describe the university as:

... a privileged instrument of bourgeois sociodicy that confers on the privileged the supreme privilege of not seeing themselves as privileged (and) convinces the disinherited that they owe their scholastic and social destiny to their lack of gifts or merits, because in matters of culture, absolute dispossession excludes awareness of being dispossessed.¹²¹

Many of the scenarios address an expected rise in tuition fees. This is partly a response to a decrease in public funding for higher education which is expected to steadily decline in most countries. However, it arises also from a change in perception – an increasing sense that higher education is less of a public good and more of a private good which benefits the individual¹²² and that the student and their family should therefore bear the fees. Cost is a major barrier to access, and even where there are available loans (only in some countries) fear of debt tends to be a greater deterrent among students from lower socio-economic backgrounds. How this will play out in the future, with widening participation initiatives working against rising tuition fees, is a subject of speculation.

The American Council on Education's roundtable discussions for presidents and other higher education leaders recorded a fear that the realities of difficulties of access to higher education might lead to social fragmentation and even a two-tiered system. As Steven G. Poskanzer, president of the State University of New York at New Paltz put it:

I fear we are moving in a direction that will lead to a very stratified higher education experience where, for a small number of people, it still becomes possible to go off and have a very classic, residential experience. And that's wonderful and valuable, nevertheless, the percentage of people who will have that opportunity will decrease and we will see almost a mass education versus an elite education. What will that mean for the fabric of society?¹²³

Daniel Yankelovich, in a paper on 'How Higher Education is Breaking the Social Contract and What To Do About It' argues that the majority of the public now feel that higher education is necessary in order to succeed, but increasingly feel that access is being denied because of cost. He suggests that this will soon lead to strong negative repercussions and backlash, and that this build-up of public *ressentiment* (meaning resentment based in public mistrust and anxiety) would be very bad for higher education institutions.¹²⁴

Others are more optimistic, and tend to focus on the stratification and diversification of higher education in

Different types of institutions speaking to different student wants or needs is very different to stratification based on different socio-economic backgrounds and different levels of access, a distinction which is not always sufficiently drawn out

meeting demand from different types of students as a good thing – as some argue that the American community college system has been. However, different types of institution speaking to different student wants or needs (such as in catering to lifelong learners) is very different from stratification based

on different socio-economic backgrounds and different levels of access, a distinction which is not always sufficiently drawn out in the higher education scenarios.

5.2 Internationalisation and Student Mobility

The internationalisation of higher education is a dominant theme in nearly all scenario projects. In part this refers to universities setting up off-shore academic programmes or branch campuses abroad, and partnerships between universities in different countries, but it mainly focuses on internationally mobile students studying in a country other than their own.

The current situation

The internationally mobile student population has been rising for the past 30 years¹²⁵; in 2009 more than 2.5 million students were studying outside their home countries.¹²⁶ It is worth noting that, although high in absolute terms and important in affecting the landscape of higher education, internationally mobile students are still low relative to students studying in their home country. The region with the highest percentage of tertiary students studying abroad (outbound mobility rate) is sub-Saharan Africa, at nearly 6%, while in the US only around 0.5% of students study abroad.¹²⁷

119 Altbach et al (2009) pvi

120 Carnevale (2009) p38

121 Cited by Matheson (2008)

122 Jansen et al (2008) p4

123 White and Eckel (2008) p6

124 Yankelovich (2009)

125 Global Education Digest (2006) p34

126 Altbach et al (2009) pvi

127 Global Education Digest (2006) p37

There are two main trends in the mobility of international students: the first is the flow of students from Asia to North America, Western Europe and Australia. Six countries currently host 67% of the world's mobile students: the US (23%), the UK (12%), Germany (11%), France (10%), Australia (7%) and Japan (5%).¹²⁸ Some of these countries have actively pursued foreign students, even adjusting visa and immigration requirements in order to attract them¹²⁹ – motivated largely by the financial gains of full fee-paying internationals. East Asia and the Pacific is the region with the greatest number of internationally mobile students (over 700,000 in 2004 – almost double the number in Western Europe, which is the next largest). The second main trend is within the European Union, brought about by a conscious effort within the EU to encourage student mobility (exemplified by the Bologna Process and Lisbon strategy) as well as programmes which enable mobility such as ERASMUS.

Expected growth

International student mobility is expected to grow rapidly in the coming decade, an assumption which surfaces in most of the scenarios. Estimates predict a rise in student mobility from the current 2.5 million international students, to 7 million in the next decade.¹³⁰ Some scenarios also bring up possible barriers to growth, such as the 'New Public Management' OECD 2006 scenario, which mentions 'a growing scepticism among the general population in regard to internationalisation for a variety of reasons, including recent terror attacks and wars, concerns about the growth in immigration, frustration about outsourcing and the feeling that national identity is threatened by globalisation and foreign influence.'¹³¹ Similarly 'Centralia, the City of the Sun', the 2004 CHEPS scenario, mentions the possibility of the EU implementing a restrictive visa policy in response to the fear of terrorism. However, mentions of potential barriers to growth are few compared with the focus on the probable growth of international student mobility.

Different futurists emphasise different aspects of this expected growth in the international student population. However, since they are mostly looking from the institutional perspective, the predominant angle is to focus on higher education as an export industry and to reflect on the expected increase in foreign students as a growing market for which there will be intensifying competition: 'students – including those from developed and developing countries – will shop a global market for educational opportunities.'¹³² Patricia Kelly criticises this emphasis and the fact that:

... in practice, much of the internationalisation discourse is based on educating for profit. This is expressed in policy meetings and documents as a combination of attracting full fee-paying overseas students; exporting ready-made courses to any country that will buy them; sending a tiny minority of wealthy or scholarship students to study abroad; setting up offshore campuses and importing overseas staff.¹³³

The internationalisation discourse is closely tied to the globalisation discourse. Thus critics of globalisation and

Globally, international student mobility largely reflects a north-south phenomenon, with students from the south coming to be educated in the north, predominantly in English-language courses with Anglo-American content – indigenous and non-English speaking perspectives seem largely absent

neoliberalism ask what the trend towards internationalisation actually reflects, and who it actually serves. They observe that globally, international student mobility largely reflects a north-south phenomenon¹³⁴, with students from the south coming to be educated in the north, predominantly in English-language courses with Anglo-American content –

indigenous and non-English speaking perspectives seem largely absent.¹³⁵ Furthermore, they point out that it is a small percentage of students who actually have access to international opportunities: 'The students and scholars most likely to take advantage of the range of new opportunities in a globalized higher education environment are typically the wealthiest or otherwise socially privileged. If current trends continue, the distribution of the world's wealth and talent will be further skewed.'¹³⁶ Thus, the participation debate is reflected in discussions of international student mobility.

Internationalisation and globalisation imply both that the student body is increasingly international and diverse, and that the world for which students leaving higher education should be prepared is increasingly global. This has implications for pedagogy, curriculum and learning which are explored by several commentators. Some emphasise the need for students to be prepared to compete in an international (and thus more competitive) job market. Others emphasise the need to educate 'global citizens', to help students fit their learning into a societal and global context, and to integrate cross-cultural learning into the curriculum. This may include

128 Global Education Digest (2006) p35

129 Altbach et al (2009) pvii

130 Altbach et al (2009) pvi

131 OECD (2006) p5

132 White and Eckel (2008) p9

133 Kelly (2008) p162

134 Altbach et al (2009) pvii

135 Kelly (2008) p163

136 Altbach et al (2009) pviii

engineering social contact, as international students often remain separate from domestic students so that head count does not reflect actual inter-cultural learning.¹³⁷ Bussey draws out a distinction between internationalisation as merely an agent of globalisation, versus internationalisation as a real opportunity to change our relationship to the 'cultural other', and asks, which do we want it to be?¹³⁸

Issues for consideration

- At a global level, increasing demand for tertiary education and increasing participation rates will continue – within that very high-level trend, however, there will be significant potential shifts in student type as well as significant variations by region.
- In Western countries, demand from non-traditional, older students and lifelong learners will increase, impacting on the type of learning required and potentially leading to further diversification and stratification of the sector.
- There will also be an increasingly diverse student body which universities should lead as well as respond to with visible and proactive leadership in driving forward the equalities agenda.¹³⁹
- Demand for tertiary education is likely to increase in developing or transition countries, but there are big differences between countries – regions like sub-Saharan Africa are likely to lag behind.
- In addition to inequality between national higher education systems, inequality within countries also shows signs that it is increasing, despite the efforts of widening-participation initiatives. Universities will need to prioritise this in order to avoid potentially strong negative repercussions.
- International student mobility is expected to grow rapidly in the coming decades but questions remain about the rationale which will drive this in the future. Universities should consider the balance between educating for profit and a genuine opportunity for inter-cultural encounter and learning.

137 Kelly (2008) p163

138 Sanderson (2004) p

139 Bebbington (2009) p2

The Future Higher Education Workforce

6.1 Universities as Employers

The role of universities as sites of employment is highly complex. The sector is extremely diverse, with different types of institutions (public, government-dependent private, or independent private¹⁴⁰), that are diverse in nature, and have different missions, strategic plans and policies.¹⁴¹ These different organisations employ a large number and wide range of staff – encompassing technical staff, academic staff, administrative and professional staff, and manual and clerical staff – on a variety of types of contracts. In different countries, universities also have differing levels of autonomy vis-à-vis their funders (usually the government) to recruit staff and decide on salaries themselves – in some countries, staff are civil servants.¹⁴²

The previous chapters have shown how the higher education sector is changing rapidly, and becoming increasingly complex as it struggles to adjust to changes such as massification, changes in technology, the increasing influence of market forces coupled with funding constraints, and changes in society. This chapter addresses the ways in which these changes and potential changes in the sector might affect the higher education workforce of the future. One thing is clear, and that is that the role of universities as employers is likely to become even more differentiated than it already is. This is well summarised by Henkel¹⁴³:

Universities have had to equip themselves to confront complexity, novelty, and instability: to position themselves in a multilevel ('glonacal') and multidimensional (collaborative/competitive; public/private) environment that offers high risks as well as opportunities. The implications for the composition and structures of their workforces and for career trajectories are profound.

As well as being affected by changes in the sector, changes in the higher education workforce also often reflect changes in society and the workforce more broadly. For example, Middlehurst references a PriceWaterhouseCoopers (PWC) report which puts forward three possible scenarios for the future of work and organisations generally. In the first scenario (the Blue World), big-company capitalism reigns supreme and corporations are of huge size and scale. In this world, people are graded, profiled and categorised for work suitability in terms of capability and individual preferences, and university

education is managed accordingly by the employer. In the second scenario (the Green World), consumers and employees force change on companies, pushing them towards greater social responsibility, and employees choose employers who match their beliefs and values. In the third scenario (the Orange World), 'localism' prevails and networks prosper in place of large companies. There is a global network of linked, but much smaller, communities and individuals are responsible for their own development – seeing themselves as members of a skill or network rather than as employees of a particular company.¹⁴⁴ In the following analysis, these PWC scenarios will occasionally be referred to in order to demonstrate that themes about changes in the workforce which emerge in higher education scenarios and futures literature often reflect themes which are being discussed more widely.

6.2 Changing Roles

There has been a growing sense in recent decades that what it means to be an academic, and what an academic's primary job functions are, is changing. There are complaints that the

There are complaints that the academic profession is becoming increasingly complex, struggling with the tensions it now has to hold – indeed, the literature suggests a growing sense of crisis

academic profession is becoming increasingly complex, struggling with the tensions it now has to hold – indeed, the literature suggests a growing sense of crisis.¹⁴⁵ Changes in the academic profession are of course closely linked to changes

in the university as a whole, its purpose and organisation. Moreover, it is hard to draw out changes in the profession as independent of one another, as many different aspects of change are interrelated. What the key changes in the academic profession are, and are likely to be in future decades, is a key theme of futures research in higher education and one which surfaces in many different scenarios.

The following paragraph by Enders and Musselin highlights the old view of the academic profession, and points out that this consensus is no longer a given:

... the traditional consensus among faculty in modern universities about what it means to be a professional in the higher academic strata is under pressure. The consensus stressed the following points: research is supposed to be a prominent focus of academic work and knowledge is pursued for its own sake; the effort to advance the frontiers of knowledge is best organised in

140 Eurostat (2007) p97

141 UCEA (2008) p3

142 Felt (undated) pp27-28

143 Henkel (2010) p6

144 Middlehurst (2010) pp231-232

145 Enders and Musselin (2008) p126

*academic disciplinary units; reputation is established by national and international peer groups of scholars; and quality is assured by peer review and academic freedom. Recent experience shows that these defining notions of the academic career are not a given and are likely to be contested in various ways.*¹⁴⁶

Whitchurch points out that academic faculty are at the heart of an academic institution's resources.¹⁴⁷ It is because of the importance of the academic profession that mentions of the future higher education workforce in scenarios tend to be primarily concerned with the future of the academic workforce. However, as Whitchurch goes on to say, 'around this central core ... is a broader professional community that incorporates people working in generalist and specialist functions, as well as in fields as diverse as information services, teaching and learning, academic practice, institutional research, enterprise, and staff development.'¹⁴⁸ It is arguably an omission that most scenarios focus exclusively on academic staff, so in what follows (a thematic analysis of changing roles) potential changes to both academic and professional roles will be discussed.

Expansion and diversification of roles

In previous chapters the expanding and increasingly diverse student body, and the correlating expansion and diversification of higher education institutions, were discussed. Put simply, there is also likely to be a continuing expansion and diversification of the higher education workforce. Expansion means that many more people now work in higher education than used to, a trend which will continue alongside the massification of student demand (more in developing countries than in countries in which the higher education markets are more saturated). As Middlehurst says, 'the development of mass higher education systems and the growing demand for all kinds of "knowledge workers" mean that research, scholarship, and university teaching have become mass occupations.'¹⁴⁹ There is some concern that the rapid increase in faculty numbers has caused, and will continue to cause, the average qualification for academics in many countries to decline. Many university teachers in developing countries have only a bachelor's degree – in China only 9% of the academic profession has a doctorate, with 35% in India.¹⁵⁰ Controlling the quality of academic staff where there is increasing demand may therefore be an issue for higher education institutions globally.

Diversification means that there are more actual and potential

roles within higher education, and roles are less cohesive than they were. This is partly a function of there being an increasingly wide range of types of universities, and partly a function of the increasingly broad functions of universities, but the result is that roles in the higher education workforce are many and varied and cannot be simply classified. As a report by PA Consulting Group puts it, 'there will not be one single taxonomy of roles across HE.'¹⁵¹ The diversification of roles relates to the big picture of the variety of roles within higher education, and is distinct from the move towards increasingly borderless roles, which refers to the nature of roles themselves and will be discussed in a following chapter.

Specialisation and division of roles

Historically, the research-teaching relationship has been at the heart of how the academic profession was conceived. Wilhelm von Humboldt, in the 19th century, was the first to argue explicitly that a university with teaching and research combined was definitely to be preferred over research institutions on the one hand, or teaching institutions on the other.¹⁵² Academics were thus traditionally involved in both research and teaching, along with any necessary administrative tasks. Increasingly, however, many academics are hired either as teachers or as researchers. As Middlehurst puts it:

*... connections between teaching and research have become much less straightforward. Both have become more professional and "managed", and this has tended to split them apart, leaving academic faculty either to pursue multiple careers or to choose between different career directions.'*¹⁵³

Even within teaching or research, specialisation and the clearer division of roles is expected to continue – in teaching, the development of curricula might become increasingly separate from the delivery of courses (as is the case already in most online education) and in research, a division between proposal writers, research managers, experimenters, etc. is expected to intensify.¹⁵⁴

This trend is linked to how far in a market-driven direction universities will go, and the division of roles within the academic profession thus tends to appear the most in scenarios with a strong market orientation (and is currently the clearest in private universities). For example, the 2003 OECD 'Free Market' scenario describes a world in which academic work would be very divided: 'research moves out to public research

146 Enders and Musselin (2008) p145

147 Whitchurch (2010a) p245

148 Whitchurch (2010a) p245

149 Middlehurst (2010) p237

150 Altbach et al (2009) pxiii

151 PA Consulting Group (2010) p28

152 Jonasson (2008) p23

153 Middlehurst (2010) p237

154 Enders and Musselin (2008) p139

centres and corporate R&D divisions, what research remains in universities becomes even more elitist while teaching to mass markets leads to greater standardisation and the patenting of curricula and teaching methods. Research becomes more demand-driven, specialised and secures important returns through intellectual property rights.¹⁵⁵ This trend is concerning to those who value the traditional Humboldtian university and believe that the university develops best and students benefit the most when teaching and research are combined.

Among professional staff a similar shift towards specialisation can be seen in the increasing ‘professionalisation’ of different roles. While areas such as finance and human resources have been for some time recognised as professions with their own standards, professional associations, necessary experience and recognised career paths, other areas, such as student services and international offices, are now also developing into professional areas with a similar set of norms and standards.

Borderless roles

Middlehurst takes the concept of ‘borderless education’ – used originally to refer to education across national boundaries, across organisational boundaries, across sectors and disciplines – and argues that one can also apply the concept of ‘borderlessness’ to higher education professionals.¹⁵⁶ This ties in with the same theme in higher education generally – as Henkel says: ‘Probably the most powerful and pervasive themes of the story of higher education transformation are those of blurring, loosening, stretching, breakdown, and collapse of different kinds of boundaries and distinctions in higher education itself, and the societies of which it is a part.’¹⁵⁷ Specifically, several authors reference movements which tie in with the concept of a ‘borderless professional’. For example, a report by PA Consulting Group¹⁵⁸ talks about the increasing permeability of roles and development of hybrid roles, and Whitchurch discusses ‘blended roles’, which refers specifically to a blurring of the boundaries between academic and professional staff, as increasingly roles have elements of both, and people move between the two.¹⁵⁹ In addition, Whitchurch describes how, increasingly, professional staff (without academic contracts) contribute to areas such as teaching and learning, research spin-out and a range of institutional projects in quasi-academic areas such as widening participation, outreach and regional partnerships.¹⁶⁰

At first glance, this ‘borderless’ trend may seem at odds with the trend towards increasing specialisation, and in some ways

it is. On the one hand there are signs of a division of roles, such as between teaching and research, and on the other hand there are signs of boundaries breaking down, increasingly ‘hybrid’ roles, less clear career paths, and more interdisciplinary and inter-professional work.¹⁶¹ This inconsistency can be understood in part as simply reflecting different potential ‘futures’ which surface in different scenarios. However, since both trends are already happening to a certain extent it requires more explanation. One way to think about it is to think of the division of roles in terms of *job function* – the core functions for specific jobs are becoming more specialised; and to think of the increasingly borderless nature of roles more in terms of *skills* – many jobs, whatever the core function, require multiple skills which are applicable across borders. For example, Whitchurch looks at several different roles and observes that they all demand a facility for developing networks, a confidence to operate in different milieus, an ability to conduct bridging activity with external partners, organisational skills, management of multiple functions in complex environments, and an ability to deliver a sweeping transformational agenda.¹⁶² Another way to think about it is in terms of collaboration – since universities are responsible to many different stakeholders many roles in higher education, no matter how specific in core function, require engagement with multiple stakeholders and collaboration across functions, disciplines, departments and even sectors.

The dissolution of boundaries may potentially have both positive and negative implications for individuals working in higher education. Mary Henkel puts this well:

In this world, individuals may have more freedom and opportunity to construct new identities and new images of their present and future occupational selves. They are less likely to be confined within one type of institution, as institutional identities are more diverse and less stable and as inter-sectoral boundaries are less rigid. On the other hand, the processes involved, including deconstruction as well as reconstruction, may be more or less voluntary and involve loss as well as gain of meaning and self-esteem.¹⁶³

Increasing entrepreneurialism

As observed in chapter three, universities are responsive to a broader range of stakeholders, who are increasingly demanding. As Craig McInnis puts it ‘one of the most salient features of the new workplace realities is the growth in the range and complexity of enterprises and external partnerships in which universities are now involved. Individuals now work

155 Miller (2003) p27

156 Middlehurst (2010) p226

157 Henkel (2010) p8

158 PA Consulting Group (2010)

159 Whitchurch (2008)

160 Whitchurch (2010b) p168

161 Middlehurst (2010) p235

162 Whitchurch (2010a) p170

163 Henkel (2010) p9

in diverse local and global settings that require engagement with multiple organisations, some of which overlap while others operate in parallel.¹⁶⁴

The implication of this for academics is that they are increasingly expected to engage with different stakeholders and groups, and there is a growing emphasis on their quasi-entrepreneurial role.¹⁶⁵ For some, this is a very positive direction. White and Eckel observe that 'on many campuses, a new spirit of responsibility is emerging among talented young professors. Presidents notice that these new academics are more engaged, concerned about the effectiveness of their work, and interested in socially relevant questions or applications of their work than faculty from previous generations. They are unwilling to sit on the sidelines or hide in their classrooms and labs, and are strongly committed to positioning their institutions for the future.'¹⁶⁶ On the other hand, there is a fear that this may be more of a responsibility than a choice, and may take away from academics freedom to pursue their own research interests.

This increasing entrepreneurialism is also true of professional roles, particularly senior leadership roles. For example, the role of pro-vice-chancellor is changing from skills that were based primarily on academic capabilities, to management capabilities, and most recently business and commercial capabilities. Regarding the role of vice-chancellor – levels of interaction between universities and their communities and regions have increased so much that skills like negotiation, chairmanship, and engagement with diverse individuals and communities is now central to the role, as are intercultural sensitivity and collaborative leadership.¹⁶⁷

Pedagogical changes

The implications of changes in technology for pedagogy, scholarship and learning were explored in chapter five. We will now explore briefly what implications these might have for the role of the academic, particularly with regard to student-teacher dynamics. The first ACE report comments that 'the dynamic nature of knowledge changes the curriculum and pedagogy, but more fundamentally, it may change the role of the professor.'¹⁶⁸ The Report discusses the possibility that familiar roles will become blurred and that in some areas, students and professors are likely to become partners in teaching and learning. Sohail Inayatullah suggests that there are three possible future roles for the academic – the first is the traditional professor, the agent of authority; the second

is a web-content designer, where online learning becomes so prominent that this becomes the main activity of the professor; and the third is a knowledge navigator, where students and teachers together design the content of the courses through iterative processes.¹⁶⁹ This is not to suggest that academics will become exclusively any of these, but merely to emphasise some of the ways in which the academic role may be changing.

This theme can also be linked to a potential breaking down of boundaries – in this case between student and teacher, or expert and non-expert. 'The wide distribution of knowledge in societies erodes distinctions between expert and non-expert actors and organisations and thus the authority of experts and professionals.'¹⁷⁰ This shift is similar to a shift in the business world towards emphasising collaboration over competition, and is reminiscent of the Orange World scenario described earlier – where networks, communities and connections are more prominent than clear organisational structures and success comes more from an ability to navigate and lead the networks and flows (in this case of knowledge) than from power based on authority, hierarchy, or pre-defined legitimacy.

6.3 Changing Staffing Models

The traditional model of academic employment is based on a two-stage process, with a first period characterised by apprenticeship, and the second by access to a permanent position. In the US this is typically the tenure model, and in Europe there are other systems which also emphasise permanent positions for senior academics.¹⁷¹ However, in recent decades this system has come under criticism – with arguments that it can lead to lack of opportunity for younger professors, stagnation and under-productivity for permanent professors and the risk that they become out of touch with the most current research.

Recently there has been a clear move towards more time-limited and part-time academic staff, a trend which looks likely to continue. In the US, part-time and full-time non-tenured positions represented around 43% of the academic population in 1975, but reached 64% in 2003. In Australia, the number of casual positions more than doubled between 1990 and 2001.¹⁷² In Latin America up to 80% of the professoriate is now employed part-time.¹⁷³ This is broadly referred to as the 'casualisation' of the profession, and features in several scenarios. For example, in the CHEPS 2004 scenario 'Octavia,

164 McInnis (2010) p152

165 Enders and Musselin (2008)

166 White and Eckel (2008) p12

167 Middlehurst (2010) p237

168 Eckel and Hartley (2008) p9

169 Inayatullah (2008) p127

170 Henkel (2010) p7

171 Enders and Musselin (2008)

172 Enders and Musselin (2008) p136

173 Altbach et al (2009) pxiii

the Spider-web City’, ‘standard employment’ has eroded to such an extent that yesterday’s exception (part-time, temporary and self-employment; movement between sectors, employers and types of work) is today’s rule.¹⁷⁴

This ‘casualisation’ is tied up with many different dynamics: the criticisms of more permanent models of employment; the increasing differentiation of roles and concurrent emphasis on contract-based work; and the growing emphasis on accountability. However, perhaps most prominent are the fact of cuts in funding across many countries which are responded to with cost-cutting practices in universities, as well as the increasing rate of change and uncertainty surrounding staff needs. A Higher Education Funding Council for England (Hefce) report on the Higher Education Workforce Framework makes this clear:

*One of the key challenges for the future HE environment is the continued turbulence, instability and increasingly fast pace of change being experienced. In contrast to the relative stability of the historical, predominantly publicly funded model of HE, the future environment looks far less predictable ... consequently, institutional strategies and financial models and the workforce capabilities needed to sustain them will be subject to continuous challenge and review. Workforce strategies will need to be agile and flexible to adapt to new conditions and demands.*¹⁷⁵

How this increasingly flexible workforce is viewed, and what implications it will have for what it means to be an academic, is a subject of speculation and wide-ranging views. Middlehurst cites a study by Stromquist et al (2007) which highlights a shift in identity from academic faculty to ‘knowledge workers’ (and, for individuals in part-time employment, ‘just-in-time knowledge workers’) – and shows that the role of the professoriate as intellectuals is seen as under threat.¹⁷⁶ Sohail Inayatullah observes that in some ways the lecturer has become a wage labourer, and comments on the fear that casualisation will lead to the end of the university as a community of scholars. However, he also asks whether it may open up some new possibilities as well. A ‘portfolio career’ in which professors hold many jobs simultaneously, have multiple affiliations, and even live in several countries during the academic year¹⁷⁷ is, to many people, an exciting and appealing opportunity. Gappa observes that many faculty members now seek flexibility to meet their lifestyle and household demands¹⁷⁸ and Middlehurst comments on the new generation of professionals (the ‘Millennials’) to whom individual choices and lifestyles

are important.¹⁷⁹ For example, increasingly flexible academic careers may have implications for women who want to work and simultaneously bring up families. However, as Whitchurch cautions, ‘notwithstanding what commentators say about the predilections of younger staff for flexible portfolio lifestyles,

The balance of the positive and negative implications of an increasingly flexible workforce, and how these will play out, is a subject of speculation

there could also be a retreat toward a desire for greater clarity and certainty about career paths and futures.¹⁸⁰ The HEFCE report makes an important point that ‘there needs to be more

discussion and consensus around the increased demand for flexible working by employees (for example, to assist in family or caring responsibilities) against flexible, or **different**, modes of working to meet the new strategic needs of the organisation rather than the individual.¹⁸¹ Increasing flexibility also ties into academic entrepreneurialism, with enterprising academics potentially making significant gains. In the CHEPS 2004 scenario, ‘Octavia, the Spider-web City’ research-active academics now gain a considerable part of their personal income from capitalising on their know-how.¹⁸² The balance of the positive and negative implications of an increasingly flexible academic workforce, and how this will play out, is therefore a subject for consideration among higher education scholars and policy-planners.

An additional issue related to the potential shift towards more task-oriented academic work concerns intellectual property. Traditionally, academics pursued their own research interests, and either they or their university owned the intellectual property of their work. However, if academics are hired, for example, by an outside organisation to do a specific research project, it is less clear who owns that knowledge – is it the academic or their university or the organisation who hired them? Although guidelines are often developed, this issue still surfaces as a potentially problematic area – in keeping with broader problems related to intellectual property due to the spread of the internet and the breaking down of formal boundaries which legitimise knowledge.

6.4 Relation of Employees to the Institution

Several of the previous themes point towards fundamental changes in the relation of employees, particularly academic employees, to the university as an institution. Enders and Musselin comment on the professionalisation of the university as a whole, and argue that the university is transforming from

174 Jorgen (2004) p26

175 Hefce (2010) p12

176 Middlehurst (2010) p237

177 Inayatullah (2008)

178 Gappa (2010) p214

179 Middlehurst (2010) p239

180 Whitchurch (2010b) p181

181 Hefce(2010) p15

182 Jorgen (2004) p34

a guild of academics into something close to other work organisations. The following passage summarises this well:

*Do university managers conceive of their institutions as shelters for highly qualified individuals to whom they offer support for their activities? Or, at the other extreme of the continuum, do they behave like employers who provide income and working conditions to knowledge workers who in return have to meet production objectives in terms of number and quality of teaching, numbers and reputation of publications, etc.?*¹⁸³

There is an expectation that ‘the management of individuals is likely to become more obviously shaped by institutional goals.’¹⁸⁴ This increasing managerialism and, some argue, corporatism, is related to an increasing emphasis on accountability. Performance is more often measured, and outputs are more standardised. McInnis discusses this: ‘Concerns about institutional productivity and performance have also led to more systematic institution-wide arrangements for the management of academic workloads. This is partly in response to the reality of more demanding and complex workloads, and partly in response to government and market pressure on universities to improve productivity levels.’¹⁸⁵ A good example of this is the Research Assessment Exercise in the UK, which publishes rankings of the research productivity of academic staff.

Such changes are in part due to pressures to generate income and to demonstrate that income is generated. As the PA Consulting Group report says, ‘a key requirement for research-focused institutions will be the ability to direct their researchers to institutional priorities – specifically to reflect external funding priorities from government agencies and private research sponsors (charities, EU, business).’¹⁸⁶ It is also reflective of a wider ‘audit culture’. The following famous passage by Charles Handy discussing the ‘McNamara fallacy’¹⁸⁷ is an interesting comment on this phenomenon:

The first step is to measure whatever can be easily measured. This is ok as far as it goes. The second step is to disregard that which can't be easily measured or to give it an arbitrary quantitative value. This is artificial and misleading. The third step is to presume that what can't

*be measured easily really isn't important. This is blindness. The fourth step is to say that what can't be easily measured really doesn't exist. This is suicide.*¹⁸⁸

The increasingly close management by academic institutions of their employees parallels the Blue World scenario discussed earlier, and is in some ways at odds with the more networked, boundary-less and collaborative view of the future of the higher education workforce, which, as discussed, is close to the Orange World scenario. This highlights some of the tensions the higher education sector (and indeed society generally) may have to face in the future, and the uncertainty regarding which trends will gain prominence – reminding us of the importance of scenario work in the first place.

The benefits of an increasing performance culture are mentioned by some. For example, Oakleigh Consulting's report identifies the management of poor staff performance as something which is perceived by the human resources community to have improved, but that still emerges as a current and future priority for human resources directors.¹⁸⁹ This is perhaps particularly important in light of the relatively low staff turnover in higher education, and an ageing population of lecturers and researchers in western countries.

The cumulative picture of the casualisation of the workforce, funding pressures and increasing institutional management

The cumulative picture of the workforce, funding pressures, and increasing institutional management is leading many to question what the long-term effects will be on the motivation and identity of the academic community, and the nature of their relationship to the academic institutions

is leading many to question what the long-term effects will be on the motivation and identity of the academic community and the nature of its relationship to the academic institutions. McInnis says that ‘the pressure to generate income from teaching and research means that increasing numbers are teaching in

subjects for which they do not feel qualified and are involved in research and commercial activities that are not necessarily of great personal interest. These are pragmatic responses to

183 Enders and Musselin (2008)

184 McInnis (2010) p158

185 McInnis (2010) p158

186 PA Consulting Group (2010)

187 The McNamara Fallacy refers to Robert McNamara, the US Secretary of Defense from 1961 to 1968, and his belief about what led the United States to defeat in the Vietnam War. It refers to the quantifying of success in the war eg in terms of enemy body count, while ignoring other variables. Although arising out of a very different context from the questions addressed in this study, the criticism of approach nonetheless has relevance here.

188 Handy (1994) p219

189 HEFCE (2010) p40

current institutional and personal realities.¹⁹⁰ Similarly, Gappa suggests that ‘changing patterns of faculty appointments, a decline in faculty autonomy and control of their work, escalating workloads, increasingly entrepreneurial and high-pressure environments ... hinder faculty commitment to their institutions and communities.’¹⁹¹

In particular, there is widespread concern about the effect that changing work patterns will have on academic freedom in the future. This ‘short-termism’ of more specific, performance-related work means, for example, that involvement in risky projects with a long-term perspective for publication is less attractive.¹⁹² As the UNESCO 2009 report on Trends in Global Higher Education puts it: ‘In terms of accountability and assessment, the professoriate has lost much of its autonomy. The pendulum of authority in higher education has swung from the academics to managers and bureaucrats.’¹⁹³ How far this trend will go is of great interest to futurists and different scenarios paint different pictures: some suggest academic freedom will remain the norm in traditional universities but will suffer in more market-driven universities.

Academic freedom has historically been central to academic identity and a key motivator for academics. Although academic faculty are divided in their loyalties between their disciplines and their institutions, the latter generally takes second place.¹⁹⁴ Failure to recognise the importance of academic identity could have far-reaching effects in terms of academic motivation, but also in terms of the impact on the fundamental role and nature of the university. From an employer perspective, the Hefce 2010 report in the UK spells out the risk:

*Part of the uniqueness of the higher education sector is its academic staff and the freedom they have to pursue scholarship, create new knowledge and work in a highly collegial, committed and peer-regulated way. These elements of the normal academic working environment are thought, by unions and employers alike, to represent the ‘psychological contract’ that exists between the academic workforce and their employers; where a range of freedoms, customs, practices and expectations form an important, unwritten, relationship between the individual and the organisation. If the sector changes inappropriately it runs the risk of damaging the psychological contract and undermining what has made the sector so successful.*¹⁹⁵

In order to meet current and future challenges, every college and university must pay attention to the recruitment, retention and wellbeing of its faculty members.¹⁹⁶ How professional development will react to a changing workforce remains to be seen. It will be important to find innovative ways to motivate employees, even (perhaps especially) those who are part-time or working across several institutions. Bearing in mind the Green World scenario, in which the values of employees are paramount, Middlehurst observes that ‘conventional generic programmes for cohorts at a particular level may be a thing of the past. Instead, developmental opportunities may include volunteering, overseas secondment, or time out for personal development through challenging projects and activities. Individual choices around values and lifestyles are part of the Green World and will be as relevant to universities in the future as they are to companies and consultancies.’¹⁹⁷

Furthermore, it will be increasingly important to invest in and develop leaders with the necessary skills to bring higher education institutions forward in this increasingly complex and uncertain world. The first ACE report describes this well in the following paragraph:

*Campuses must also invest in their administrative leaders. The dynamics of knowledge and the knowledge economy mean that the traditional sources of competition, the financial investments needed in the future, and possibly even the leadership necessary for the future will be different ... Future leaders will need a keen ability to peer into the future. Attending to future trends and issues, while important now, may be even more key as the pace of change quickens and future changes are potentially more disruptive. Future leaders will also need the capacity to identify and frame what presidents call the ‘big-picture challenges.’ These are the looming challenges for which no easy or tested solutions exist and that have the potential to rock the foundations of higher education. Finally, to address these challenges, they will need the ability to create powerful networks and alliances throughout higher education both domestically and internationally, particularly across sectors, and with businesses, not-for-profit organisations, and governments.*¹⁹⁸

6.5 Internationalisation

Just as the internationalisation of the student population and increasing student mobility are a major theme in futures research on the university, so too is the internationalisation of the academic population, and increasing international mobility

190 McInnis (2010) p154

191 Gappa (2010) p210

192 Enders and Musselin (2008) p138

193 Altbach et al (2009) pxiii

194 McInnis (2010) p150

195 Hefce (2010) p15

196 Gappa (2010) p207

197 Middlehurst (2010) pp239-40

198 Eckel and Hartley (2008) pp21-22

of academics. Broadly speaking, the internationalisation of academia encompasses the internationalisation of research on the one hand (more joint publications between countries and cross-border collaboration, with research projects carried out by international teams) and increasing academic mobility on the other (a growing international market for faculty and growing international competition for talent).

It is hard to quantify numerically the internationalisation of academia given that it is complex and has a variety of facets. However, it is possible to give some indication of the current extent of the internationalisation and in what areas it is most prominent. The share of foreign doctoral candidates in developed countries has risen, but varies considerably – about 2% in New Zealand, 5% in Australia, 9% in the UK, 18% in Finland and the US, and 22% in Spain.¹⁹⁹ Data from many nations records an increase in cross-border research collaborations, in travel for conferences and exchange visits, and in doctoral study. However, it is less clear that postdoctoral mobility and longer-term academic migration are increasing (with the exception of mobility into the US). Researchers in science, technology and engineering are the most prone to cross-border movement.²⁰⁰

Most scenarios address the theme of internationalisation and assume that academia will become increasingly international. There is undoubtedly a very positive bias towards this movement – with both the European Commission and the OECD advocating academic mobility and exchange, on the assumption that the exchange of ideas and knowledge transfer will serve society and the economy, making countries more innovative and competitive.²⁰¹ There is also a sense in which innovation happens across national boundaries and across disciplines, and that this dialogue will help to address and understand some of today's problems. A very positive picture of this emerges in several scenarios – such as in the CHEPS 2004 scenarios: 'Their main thrust in transcending the academic's traditional national emphasis is global rather than European ... In the many worlds of academe, happily networking scholars search for partners wherever the knowledge is to be found.'²⁰²

However, as with international student mobility, the internationalisation of academia is not unproblematic. Although there is movement between industrialised countries and south-to-south (with some countries positioning themselves as regional centres of excellence), the predominant movement is still a south-to-north phenomenon. In terms of research, the US, and to a lesser extent the UK, are leaders in

As with international student mobility, the internationalisation of academia is not unproblematic

the internationalisation of research. Collaborative projects are most often initiated and led by the US or the UK, and nearly all 'international' journals and research are in the

English language – thus eliciting the same criticisms that are levelled at globalisation more generally.

Furthermore, in terms of international academic mobility it is important to ask – who is going where, and why are they going there? Enders and Musselin outline clearly the different reasons why academics might pursue work in another country: The first group are top academics who are truly global and of strategic importance for research universities and national governments. Secondly, many junior faculty use temporary international experience, especially at top universities, to increase their standing and career opportunities at home. Thirdly, there is another group of the internationally mobile for whom working in another country is a 'second-best' solution, owing to a lack of career opportunities at home. Finally, academics' international mobility also includes those who go from 'poor to rich' hoping to stay, at least for a while, in the new country.²⁰³ About the second group it is important to ask: why does experience in certain countries improve a CV, and if the same is not true the other way around, what are the inherent power dynamics and dominant discourses? The fourth category is large, and, when visiting academics do not return home as is often the case, constitutes the significant problem of 'brain drain' – with academics leaving their home countries to pursue better opportunities, with their home countries therefore not benefiting from their expertise. This is exacerbated by the fact that the earning potential for academics in western countries is so much greater than in developing countries, mirroring wage differences more generally. Indeed, there are even indications of some 'brain drain' from Europe to America because of the salary differences.²⁰⁴

However, despite the fact that, today, 'patterns of academic migration continue to work to the disadvantage of developing countries'²⁰⁵, there are several signs of positive change. Academics who leave their home countries are now more likely to maintain contact with their countries of origin and work collaboratively with home colleagues.²⁰⁶ Chinese Taipei, for example, has succeeded in partly reversing the pattern of brain drain via policies to draw back expatriate PhD graduates and researchers. There are also other strategies

199 Enders and Musselin (2008)

200 Enders and Musselin (2008)

201 Enders and Musselin (2008)

202 Jurgen (2004) p35

203 Enders and Musselin (2008)

204 Enders and Musselin (2008)

205 Altbach et al (2009) pxiii

206 Altbach et al (2009) pxiii

which could be pursued in the future, such as the creation of dual academic appointments, with American-based foreign researchers working in the country of origin during the summer term.²⁰⁷ Additionally, Gelb notes that there is, or should be, a need for the flow of academics from north-to-south as well: 'Regional studies are a way of pulling the faculty back to realities, because it gets them teaching history and culture and language, and gets them over to those countries perhaps more than they have been, maybe to live there, not just to visit other elites.'²⁰⁸ There is a long way to go before the international academic mobility is an equal and genuinely inter-cultural, cross-boundary exchange, but there are signs that, for some, it may be moving in this direction.

Issues for consideration

- Massification has resulted in an overall expansion of the workforce, a trend which will continue, particularly in markets which are not yet saturated.
- There has been a general diversification of roles to meet the growing complexity of the sector.
- There will be an increasing need for a flexible workforce, which is likely to be met by the casualisation of staff.
- Universities will need to think innovatively about how to develop and motivate staff, particularly where more flexible staffing models are concerned.
- There is particular concern over how the academic profession is changing and whether increasing institutional management and a growing audit culture will lead to a loss of academic freedom, and to academics becoming mere 'knowledge workers'.
- Allowing academics time and space for their own inquiry while simultaneously meeting institutional objectives and responding to the demands of different stakeholders will be a challenge for universities.
- The market for staff is likely to become more international, but questions remain around who this will benefit and how.
- Recruiting and developing leaders with the skills to respond to the big-picture challenges of the increasingly complex and uncertain sector will become paramount.

207 Enders and Musselin (2008)

208 Gelb (2009)

Changing Values

7.1 Where Do Scenarios Take Us?

One of the advantages of scenario thinking, if done well, is that it can help us to see beyond the values which currently dominate discourse to values which could be emerging. As discussed in the precursor to this study, *A Guide to Scenario Planning in Higher Education*, scenarios have the potential to challenge mindsets and help participants to question automatic assumptions and narratives. Indeed, the philosophy behind scenario planning reflects a paradigm shift in the social sciences away from strict objectivity, and towards a re-prioritisation of values in the discussion – unearthing what values underlie current thinking and action, eliciting responses to those values, and questioning whether other values might also emerge.²⁰⁹ Scenarios should therefore offer the opportunity for their authors to be creative and iconoclastic in re-visioning the future.

However, scenarios can also end up being surprisingly unimaginative – too obviously arising out of today's drivers and concerns.²¹⁰ This criticism could arguably be levelled at many of the scenarios discussed in this report. In particular, most of the scenarios are contextualised within the growing emphasis on the knowledge economy – few think outside this parameter. For example, few scenarios envision an alternative socio-economic paradigm in which higher education systems

Few scenarios raise real questions about the values underlying the contextual and systemic assumptions and the possibility that alternative values could gain in prominence

might operate; few ignore this paradigm to focus on other important dimensions of the university's contribution to society; and few raise real questions about the values underlying the contextual and systemic assumptions and the

possibility that alternative values could gain in prominence. One critique of the CHEPS scenarios is that they take for granted present forms of socio-economic organisation and simply extend these structures forward 15 years, instead of reconstructing them.²¹¹ Barnett also warns of this tendency to be 'unduly influenced by contemporary frames of thought and policy making' to generate ideological constructs with the scenarios representing variants within a common model. In the case of the CHEPS scenarios, this common model is rooted, he argues, in neo-liberal pan Europeanism. Such scenarios are constraining and potentially 'diminish debate and limit the range of thinking rather than open it up.'²¹²

James Grant identifies the importance of examining ways in which values and conceptions of knowledge might be shifting: 'educational institutions are products of their culture. As the knowledge, ways of knowing, and values change in a society, educational institutions change accordingly. As we look to the possible futures of higher education, we must identify these forces transforming culture.'²¹³

7.2 The Current Paradigm

Nearly all scenarios on the future of higher education contextualise themselves, either implicitly or explicitly, within the knowledge economy. The implications of this in terms of universities' structures, organisation, mission and purposes are discussed in chapters three and four. But what are the values underlying this discourse and what assumptions are implicit in treating the growing influence of the knowledge economy as a given? The following passage by Hans Weiler succinctly summarises the nature of the growing commercialisation of knowledge:

To be sure, certain kinds of knowledge have always had their economic utility, but it is an important part of our times that the creation of knowledge has come to be regarded and treated so pervasively in economic and commercial terms. This has something to do with the increasing cost of knowledge production and, hence, the dependence of knowledge producers on external financial sponsorship; such sponsorship very often does have an economic and political agenda of its own under which the support and the production of new knowledge is being subsumed. More importantly, however, the very nature of modern economic activity has become so massively dependent on up-to-date knowledge of constantly increasing scope and complexity that the linkage between knowledge and both productivity and profitability has become virtually inescapable. This is true not only for the 'hard' sciences and their utility for industrial and other forms of engineering, but also for the knowledge of social and psychological processes and its significance for dealing with labour problems, enhancing productivity, and other forms of 'social engineering.' It is this dependency that has become enshrined in the notion of the "knowledge society" as an extraordinarily important paradigm of contemporary analysis.²¹⁴

He goes on to observe that 'the discourse about the notion of the "knowledge society" reveals upon closer inspection that the politics of knowledge becomes less and less separable from the politics of production and profit.'²¹⁵ The term

209 Sayers (2010)

210 Sayers (2010) p7

211 Stoer and Magalhães (2005)

212 Barnett (2005)

213 Grant (2000) p207

214 Weiler (2004) p12

215 Weiler (2004) p12

'knowledge economy' is based on the idea that knowledge is a critical economic resource – but several questions remain: what kind of knowledge is useful economically? what happens to knowledge which has no economic utility? what is the impact on the nature of knowledge of its relationship with the economy? and crucially, what knowledge is being valued? A paper written for the International Environmental Forum points out that: 'intimately linked with the role of knowledge in human civilisation is that of values. The goals and pursuits of any society are driven by the values that society chooses to prioritise.'²¹⁶ Oversimplifying the picture to draw out the point – if the knowledge economy is a foundational driver for higher education, are 'values' becoming increasingly synonymous with 'value'?

Despite the fact that there are many critics of the predominant role that the knowledge economy is taking in thinking about and planning for higher education, very few scenarios start from a completely different premise and different priorities and suggest real alternatives – arguably demonstrating the dominance of the current paradigm.

7.3 Alternative Images

Of the scenarios which form the basis of this study, the one which stands out as starting from very different assumptions and consciously prioritising different values is the Universiti Sains Malaysia's 'University in the Garden' scenario which, interestingly, formed the basis for their future vision. The image is described below:

It must be a place that allows for the flowering of minds in a garden environment that recognises that every individual is unique and has talents that must be allowed to develop with a minimum of constraints. The University is likened to a big tree of knowledge whose roots are continuously being nurtured by dedicated and committed teaching professionals and whose branches represent the holistic development of young minds, without abandoning their interconnectedness with nature in a sustainable way.²¹⁷

Other authors have developed alternative scenarios. For example, Barnett puts forward some alternative visions (sketches for scenarios) which he claims fall outside the dominant framework.²¹⁸ These are:

***Critical conscience of society** – characterised by: mutual accountability with society; the university is seen as an added value for society (not an economic but a discursive added value) which contributes to an ever more open university; its mission and functions would*

centre on its responsibility as the critical conscience of society, academics would adopt the role of public intellectuals and engage with wider society and offer critical commentaries of social institutions and practices. In their income generating activities, academics would have a responsibility not only to fulfil the expectations of their clients but incorporate the public good.

***University of the public good** – characterised by: every course of study would require students to be active in the community, it would be an open university and a community resource, proactive in making available the expertise of staff and its intellectual resources, identifying where positive links might be made, again with academics becoming public intellectuals.*

***University for the human good** – characterised by: students being centre stage with higher education understood as a formative and developmental process, pedagogy would be as important as curricula; students would be encouraged to formulate and advance their own ideas; building inclusive communities where all members have a stake in the university will be important and strategic reviews will also be inclusive.*

***University for the learning society** – characterised by: key mission is to help bring about a learning society (does not take for granted that it already exists); curricula are designed not simply to develop potential of students as productive members of society to survive in a complex world, but to add to that world; students would learn throughout their lives and become critical citizens; curricula would be multi-disciplinary and students furnished with broader intellectual capacities; academics once again perform a public role and university has a direct role in helping society learn about itself.*

7.4 Emerging Values

The critique of scenario work that scenarios seldom fall completely outside the current paradigm is valid, and alternative images such as Barnett's are undoubtedly thought provoking. However, if one looks more closely, emerging values do feature in several of the scenarios – not that prominently, as perhaps emerging issues seldom do – but under the surface. For example, the following passage from the CHEPS 'Vitis Vinifera' scenario for 2020 suggests a potential shift in values and priorities: 'while innovation and the knowledge economy remain important priorities they have lost some of their iconic and "only show in town" status. The newer shows in the towns of Europe are more focused on

216 IEF (2001)

217 USM (2007) p69

218 Barnett (2005)

the quality of life – longer (working) lives, travel and leisure, the environment, paramedical therapies, media and design, cross-cultural relationships, critical consumerism, urban social cohesion.²¹⁹

Three areas of emerging values in particular are worth drawing out – as they feature in several scenarios and papers on future trends in higher education.

Sustainability

The first area is fairly obvious, and that is sustainability. White and Eckel summarise this well in the following passage:

*Interest in and concern for the natural environment, socially, politically, and economically, is growing and higher education institutions are finding themselves swept up by this trend for several reasons. First, campus scientists are at the forefront of research on the environment. Second, students are right behind them, as advocates for a more environmentally conscious society. And third, faculty members and students on campus are pushing colleges to be among the first institutions to embrace greener processes and technologies, whether in the consumption of energy or the construction of environmentally friendly facilities.*²²⁰

A growing interest in sustainability is not limited to the natural environment, but includes the socio-economic dynamics underlying the discussion. As Paul Volcker, former Chairman of the US Federal Reserve System, puts it, 'we're living in a kind of fool's paradise. Maybe we're not fools, but an unusual paradise that we can do all this consuming while other people can do all the producing – to exaggerate a bit.'²²¹

While the sustainability movement is becoming increasingly prominent in society in general, it shows signs of being paramount in universities simply because of their high potential to effect change. As Michael Levi says in his paper on Climate Change, Foreign Policy and Higher Education, 'the biggest impact universities can have in this realm may be through educating their millions of students, many of whom will become the business and government leaders of the next generation.'²²²

What is particularly interesting about the sustainability movement is that the push for change is being led in many ways from bottom up – by students, faculty and staff, rather than as an organisational directive. For example, Kelly writes that 'one concerned lecturer told me that students had

What is particularly interesting about the sustainability movement is that the push for change is being led in many ways from bottom up

challenged him as to why environmental issues were not included in a particular business subject.²²³ This is reminiscent of the Green World scenario mentioned earlier in which consumers drive corporate behaviour, and environmental, ethical

and social concerns are paramount.

In the UK, a future leaders survey (07/08) of university and college applicants which explores their hopes and expectations for the future confirms, generally, that 'our future leaders are not driven solely by materialistic concerns – in fact the survey paints a picture of a generation facing their adult lives with equal measures of anxiety and idealism.'²²⁴ Specifically, sustainability features prominently, with nearly two-thirds wanting to see more about sustainable development in their course curriculum, 78% believing that lifestyles need to change radically across the board, or in many areas, for human civilisation to survive the next hundred years, and 86% supporting the idea that material consumption must reduce. However, the current importance students place on sustainability is still relative – with only 5% thinking that how seriously a university/college takes environmental or sustainable issues is 'very important' for them in choosing where to apply, versus 54% who think 'quality of teaching' is very important, and 44% who think the 'reputation of the course' is very important. Although it is clear that sustainability is increasingly on the agenda, the extent to which it will become a prominent value guiding students and university education generally remains a subject of speculation.

Different 'ways of knowing': critical perspectives

In his paper, Challenging the Orthodoxies of Knowledge: Epistemological, Structural, and Political Implications for Higher Education, Hans Weiler argues that the ubiquitous invocation of the notion of a 'knowledge society' assumes that we know what we are talking about when we talk about 'knowledge', but that in fact contemporary discourses on knowledge, particularly in Europe and North America, does not take a critical enough view of what 'knowledge' means, and of the fundamental changes the concept of knowledge has undergone in the course of the 20th century. He argues that recognising both the epistemological and political transformation of our contemporary knowledge culture could lead to significant structural changes in higher education.²²⁵

219 Jurgen (2004)

220 White and Eckel (2008) p10

221 Futures Forum (2008)

222 Levi and Mullinix (2009)

223 Kelly (2008) p167

224 Forum for the Future and UCAS (2008)

225 Weiler (2004) p2

The rise of critical voices across many different disciplines have fundamentally questioned what validates knowledge

What he means by ‘changes in the concept of knowledge’ is the rise of critical voices across many different disciplines – including those in literary criticism, postcolonial thought, and postmodern thought – which have fundamentally questioned what validates knowledge, and in particular draw attention to the reciprocal relationship between knowledge and power. They also emphasise rehabilitating ‘suppressed forms of knowledge’ – for example, Weiler cites an article by Guy Gran (1986) entitled African Famine: Whose Knowledge Matters? in which he makes a case for recognising African farmers’ grassroots knowledge of what does and does not work in African agricultural development as both more legitimate and more effective than the agrarian remedies imposed on them by international agencies.²²⁶ In terms of what is being taught in the humanities and social sciences at universities, there is no doubt that over the last decades there has been a great rise in these ‘critical’ perspectives and challenges to traditional ideas about knowledge. However, there is currently a discontinuous leap between these ideas which are surfacing in universities, and the way in which universities are run, and what they prioritise. This arises in part from practical realities – problematising the concept of ‘knowledge’ is one thing, but running a university in an increasingly constricted financial environment is another.

Weiler argues, however, that if this leap is made and the transformation of the traditional system of knowledge is fully recognised, this could have profound implications for the organisational and institutional priorities of higher education institutions, and the values which underlie these choices. Several of the transformations he mentions are in fact mentioned in the scenarios – highlighting how even when values are not explicitly mentioned, they might be underlying some potential concrete transformations. For example, Weiler points to the rise in interdisciplinarity (mentioned in several scenarios) as arising out of challenges to the value of discretely organised subjects of knowledge (along discipline-based power structures) as the best means of addressing questions of central concern to human and social reality today: ‘vast new domains of knowledge and systematic inquiry have emerged that transcend disciplinary boundaries and have become the source of important insights into phenomena such as biogenetics, symbolic systems, organisational behaviour, and social engineering.’²²⁷ He also argues that internationalisation would move beyond ‘study abroad’ and

knowledge of foreign languages to equipping students with the skills they need to monitor the process of globalisation and to assess its conditions and consequences – which would require the western world’s institutions of higher education to become real centres of cultural encounter and multicultural discourse.²²⁸

Different ‘ways of knowing’: integral perspectives

This potential shift in values ties in with the former – both question what is predominantly valued and emphasise new ‘ways of knowing’. However, they have different emphases – the ‘critical’ perspective is concerned with things like power, culture, and language (all social constructs, they would argue) and focuses on deconstructing current language and structures, whereas the ‘integral’ perspective takes a more holistic approach and emphasises the mutual importance and interconnectedness of different ways of knowing – physical, mental, emotional, spiritual. The ‘integral’ perspective is a response to the scientific paradigm, which is believed by some to have become too prominent in academic inquiry and in the world more generally. What is objected to is the assumption of the scientific, mechanistic, paradigm that academic enquiry can or should be entirely disinterested. Daniel Yankelovich discusses it in the following chapter:

*The cultural trend may not be as familiar or obvious as the others. It involves the variety of **ways of knowing**. You are all aware of the resurgence of religion and other forms of spirituality in our culture. One of the many sources of this resurgence is the conviction that we’ve lost our way ethically and spiritually. There is a sense that higher education responds to a different drummer. It exists within a different paradigm – the paradigm of scientific knowledge. In universities, the dominant epistemology is that of the scientific mindset leading to specialization, objectification, and quantification... by and large, non-scientific ways of truth-seeking and knowing have been on the defensive in higher education, particularly in research universities ... (but) We have a public hungry for non-scientific ways to ground moral, political, religious, and cultural beliefs. The quest to understand the limits of the science-technology paradigm pressures higher education to do more with non-scientific ways of knowing. This has implications for a revival of interest in the humanities, and perhaps could inject them with a new vitality.²²⁹*

The integral perspective or ‘consciousness-based paradigm’ has implications for the teaching of established disciplines: ‘One general change is the emphasis on wholeness and connection ... wholeness is the ultimate reality and this

226 Weiler (2004)

227 Weiler (2004) p17

228 Weiler (2004) p20

229 Yankelovich (2009) p27

colours the entire curriculum.' For example, 'In the Natural Sciences the appreciation of the unity of man with nature softens the move of much of twentieth century science to dominate and replace nature. This paradigm leads to a deep respect for the environment and for natural approaches to fields ranging from agriculture to medicine.'²³⁰

As the following quote by Thomas Berry, a well-known deep ecologist and integral theorist, highlights, sustainability is inherent in integral thought:

*Of one thing we can be sure: our own future is inseparable from the larger community that brought us into being which sustains us in every expression of our human quality of life, in our aesthetic and emotional sensitivities, our intellectual perceptions, our sense of the divine, as well as in our physical nourishment and bodily healing.*²³¹

If one is looking to society more broadly for signs of the integral perspective gaining momentum, sociologist Paul Ray²³² has written about the emergence of a major new group in American society, the 'Cultural Creatives', who are influenced by the integral perspective, and who operate on the leading edge of cultural change. Grant observes that 'values held by the "core" cultural creatives (about 10% of the population) include serious concern with psychology, spiritual life, self-actualization, enjoyment in mastering new ideas, social concern, use of alternative health care and natural foods and strong advocacy of ecological sustainability.'²³³ Many readers will no doubt take issue with the term 'cultural creatives' (arguably a thin-sounding pseudo-classification), but it does serve a purpose in describing a very real movement within some parts of society. Others will be fundamentally averse to the mention of 'spiritual', 'conscious', or even 'holistic' development. It is another discussion altogether to enter into the merits, meaning and purpose of such terms and what they connote – the aim of this chapter is simply to raise questions and point to signs of possible shifts in values on the basis of futures research and scenarios.

The three potential shifts in values discussed are of course all interrelated, and could be described as signs of a paradigm shift. Several scenarios reference growing frustration among faculty with the current emphasis placed on the 'knowledge economy' and what is felt to be increasing managerialism in universities, not to mention disaffection with the dominance of the scientific paradigm and economic focus in society more broadly – people, it might seem, are looking for alternatives.

There is a sense that universities have lost (or might risk losing) their role as social critics, and, as Paul Wildman puts it, 'become part of the "new barbarism" or narrowing of rational enquiries to evidential ways of knowing.'²³⁴ In the following passage Sohail Inayatullah voices frustration with the questions of a participant in a workshop he attended on the future of higher education, who was, Inayatullah felt, erroneously focusing on efficiency itself as knowledge:

*His question was one of **how** to get things done in the world, without asking **which** things should be done, and **why**. However, it is this question of **why** (that the university can and must continue to ask) that is under attack.*²³⁵

It is interesting to note that the field of 'futures' studies and work, out of which the art of scenario planning comes, and which many scenario practitioners are involved in or influenced by, is itself rooted in this new paradigm. It is highly interdisciplinary, drawing on fields as diverse as economics, psychology, business studies, anthropology, literary criticism, philosophy, political theory, sociology and the new sciences; it emphasises narrative over prediction (in contrast to the 'old sciences'); and it re-prioritises values, reflecting a growing recognition in the human sciences of 'the need for *value laden* better futures.'²³⁶ It is significant in seeking to understand what values will guide the future of higher education, that even the way of thinking about the long-term future may be shifting from simple trend forecasting to the more complex and creative 'futures' methodologies.

Issues for consideration

- Some argue that most scenarios are surprisingly unimaginative – too obviously rooted in the values which are dominant today.
- A challenge for higher education futurists could be to reconceptualise the future, starting from completely different premises and suggesting real alternatives.
- In particular, questions are emerging about how pervasive the concept of the knowledge economy is, as well as the broader influence of the scientific / mechanistic paradigm; disaffection with this may prompt areas of dissent and alternative 'ways of knowing' to gain prominence.
- Sustainability, ecology, critical and integral perspectives, and interdisciplinarity may be areas to watch, as they are gaining momentum at the margins, which could be a sign of an emerging shift in values.

230 Grant (2000) p213

231 Berry (2000) p162

232 Cited by Grant (2010)

233 Grant (2000) p214

234 Wildman (2000)

235 Inayatullah (2000) p225

236 Ogilvy (2002) p117

Epilogue

Can We Really 'Manage the Future'?

Professor Sir David Watson

Introduction

The preceding work should provide much food for thought for leaders and managers in institutions of higher education. The cumulative effect of the lines of development set out at the end of each chapter is to pose a set of challenges as extreme as any that have faced colleges and universities at any stage in the past. There is also throughout the analysis a tension between those influences that are close to inevitable in both force and effect and those which are deeply uncertain, while this ambivalence is compounded by a recognition (not least in the final chapter, on changing values) that some traditional solutions to problems of strategic options in dealing with the internal and external worlds may no longer work.

So, in the time-honoured Leninist phrase, 'what is to be done?' my answer, in this brief epilogue, is emphatically non-heroic. I suggest that institutional leaders can manage the future only if they are serious and successful about managing both the past and the present condition of their universities and colleges. Strategising has to be about extrapolation from a well-understood institutional history, as well as about correcting the course, and, where appropriate, about fresh starts. Except in the case of heavily pump-primed private higher education, approaches based on 'Cambodia Year Zero' are non-starters. Knowing the real condition of your institution – where it came from, how it is performing, how well it could perform, and at what – is an absolute prerequisite for facing the future with both ambition and realism.

To take one example: in the UK it is striking how many institutional strategies are driven by a desire to be at or near the top of rankings and league tables, the statistical merits of which make the professional cringe and the implicit goals of which are naïve in the extreme. How many 'apex' institutions are there in a given country and how many could there be?²³⁷ The tempting vice-chancellorian answer is 'my institution, and every one above me'. Such claims often defy the evidence, and arguably demonstrate limited institutional self-awareness.

At its most useful, 'thinking systematically about the future' in higher education is an extension of institutional self-study.²³⁸ As well as assisting in the scoping of opportunities, it should

lead to an improved understanding of real vulnerabilities such as irrelevance, obsolescence, fair and unfair competition, generational fracture, and the constraining power of jurisdiction (the arrangements for institutional approval, quality assurance, funding etc.). Which of the successive 'issues for consideration' can an institution's leaders claim, genuinely, to control?

Institutional self-awareness is a necessary foundation for managing an ambitious and aspirational, yet also realistic, strategic direction. Approaching the future should be concerned both with understanding the real condition of your institution, and with understanding and being responsive to the macro and micro changes in the external environment. It is towards this endeavour that the thematic analysis of this report, based on recent scenario projects and the wider literature on higher education futures, is focused. It provides a useful resource for institutions as they think about their individual (and, indeed, collective) futures.

Thinking About the Future

As the companion volume to this report indicates, scenario-planning is a potentially valuable tool for higher education institutions in 'thinking about the future', but also one which needs to be used with care.²³⁹ Without appropriate discipline, it can easily degrade into uncritical projections (and look at the record here of the 'dismal science' of economics), guesswork, or dreaming (in its utopian and dystopian variants). As R.G. Collingwood noted, 'there are no future facts'.²⁴⁰

In particular, broad 'scenarios' are often problematic. They can oversimplify (and homogenise). They can overdramatise. They can force unlikely choices. Perhaps most dangerously they are susceptible to ideological capture. They should build on, rather than be seen as a substitute for, serious academic analysis. For example, managers should also take account of theories such as those of: paradigm shifts²⁴¹; disruptive innovation²⁴²; and black swans.²⁴³ It is an interesting thought game to consider what might be the higher education analogues of spectacularly unanticipated events such as the fall of the Berlin Wall, the uptake of the world wide web, and the credit crunch?

237 Cowen (2007) pp13-29

238 Watson and Maddison (2005) *passim*

239 Sayers (2010)

240 Inglis (2009) p135

241 Kuhn (1962)

242 Christensen (2003)

243 Taleb (2007)

One response from a head of institution or senior management team to this kind of theoretically and empirically based scepticism might be to say 'why bother?' Most such individuals and groups will also be aware that history will generally show that the 'risk aversion' for which institutions of higher education are often castigated has in many respects been a rational response. Certainly, 'keeping options open' for as long as possible has worked for many (as has the classic theory of 'last man standing').

Thinking systematically about the future is, however, an important and honourable obligation for leaders of universities and colleges. I like Walter Lippmann's formulation (from *Drift and Mastery*) of 'the vision of actual things'. Writing in 1914, with Europe on the brink of chaos and in America the 'progressive' ideal running into the sand, Lippmann set out a manifesto for a careful, determined, scientific, non-dogmatic approach to social and political problems. His title was *Drift and Mastery*.

All we can do is to search the world as we find it, extricate the forces that seem to move it, and surround them with criticism and suggestion. Such a vision will inevitably reveal the bias of its author; that is to say it will be a human hypothesis not an oracular revelation. But if the hypothesis is honest and alive it should cast a little light upon our chaos. It should help us to cease revolving in the mere routine of the present or floating in a private utopia. For a vision of latent hope would be woven of vigorous strands; it would be concentrated on the crucial points of contemporary life, on that living zone where the present is passing into the future. It is the region where thought and action count. Too far ahead there is nothing but your dream; just behind there is nothing but your memory. But in the unfolding present, man can be creative if his vision is gathered from the promise of actual things.²⁴⁴

Some Hard Issues

Reflection on the material in this report throws up a number of hard questions for leaders and managers thinking about the future. Several of these crystallise the 'issues for consideration' at the end of each chapter.

First there is the overarching question of *communication*, inside as well as outside the institution, on which this report is relatively silent. How do you best communicate the results of analysis of the present and future? The temptations oscillate between reassuring, coaxing and terrifying your colleagues.

Next there is the *stakeholder* question (explored in detail in chapter 2.1). This is about deciding who cares – and who you want to care. Who are your genuine stakeholders, in the sense of sharing risk, as opposed to those who simply have an opinion about what you should do?

Connected to this is the question of *partnerships*, of deciding when to lead and when to follow (and it will not always be the former). The report picks this up at several points: in terms of sectoral policy in chapter two, of collaborative strategies in chapter three, and of academic practice and internationalisation in chapter six. This is also about what Donald Kennedy, in his excellent account of *Academic Duty*, called 'leading and lagging'.

Universities are in a dynamic equilibrium with society. On the one hand they appear to lag behind it, acting as conservators of its history and archivists of its highest cultural achievements. On the other hand, they are seen as leaders, adventuring into new knowledge domains, developing transforming technologies, and serving as the seedbed for novel and often disturbing ideas.²⁴⁵

It is also vital to fix the correct *units of analysis*. These will generally be both more and less than the institution, as confirmed here by the description of increased fluidity of both student markets (chapter five) and staff roles (chapter six). The notion of an average university performance is nonsensical (and so too should be – but is not – an average university reputation). Once a management team has a proper view of the strength of its constituent parts, the sensible approach is to attempt over time to *right-size* them. This may well involve partnerships with other HEIs, as in the way in which low-volume disciplines like classics have managed to maintain their vitality through inter-institutional networking. A useful technique (perhaps the senior management team's only enduring capability) is that of *temporary, creative cross-subsidy* (where sticking to both adjectival principles is vital: nothing saps corporate morale more than the perception of uncritical, permanent cross-subsidy). Meanwhile to be able to use this device requires at least some element of available surplus, creating a zone of freedom of action.²⁴⁶ At the same time governors and institutional leaders forget the broader interests of the sector, and the public interest more generally, at their peril (chapter two is highly relevant here). In the words of Henry Mintzberg: 'How about what is right for the organisation being wrong for the world around it?'²⁴⁷

244 Watson and Maddison (2005) p10

245 Kennedy (1997) p265

246 Watson (2009) pp138-141

247 Mintzberg (2009) p224

Finally, there is the vital question of *legacy*. Mature leadership teams are always deeply conscious of the fact that they are temporary stewards of very long-standing institutions, and that managing the future means leaving something for their successors (and the successors' successors) creatively to manage.

Conclusion

To summarise: in my opinion, 'managing the future' on the part of any university senior management team involves:

- Understanding the present and the past condition of your institution.
- Getting the resources right, so that there is a zone of freedom of action in which to operate.
- Understanding the terms of trade of the business, especially its peculiar competitively cooperative nature.
- Helping to identify a positive direction of travel for the institution.
- Engaging progressively with that direction of travel (through what Peter Singer describes as an 'ethical journey'.²⁴⁸)
- Optimistically trusting the instincts of the academic community (of students as well as staff) operating at its best.

The material here should help with all of these endeavours, not least through its clear, cool and systematic reflections on the strengths and weaknesses of the 'futures' literature, its explication of empirical and conceptual lines of development, and its resulting contribution to understanding not only the constraints but also the 'promise of actual things'.

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Appendix One

| Organisation/ author (year) | Time- frame | Scenario – summary of key characteristics | Scope (inclusions and exclusions) |
|--|---------------------------|---|--|
| <p>Organisation of Economic Cooperation & Development (OECD) (2004 and 2006)</p> | <p>c. 20 years (2030)</p> | <p>2004</p> <p>1. Tradition Characterised by: continuity; public funding; strong government role in regulating the sector; catering for traditional cohort of youth population; and limited scope for lifelong and e-learning.</p> <p>2. Entrepreneurial Characterised by: mixed public-private funding and institutions responding to a range of funding sources; lifelong learning is generally marginalised and of lower status; commercial opportunities and international markets increasingly important; links to the local economy and local industry are strong.</p> <p>3. Free market Characterised by: market forces; private sector expansion; greater specialisation in university functions; strong hierarchy; polarisation of the status of staff; heightened competition; strength of international market in higher education services; research increasingly moving outside the higher education system.</p> <p>4. Lifelong learning and open institutions Characterised by: professional development becoming an increasingly important function; industry and corporate led demand; technology important for flexible provision.</p> <p>5. Global network of institutions Characterised by: flexible learning; emphasis on lifelong learning and diversity of provision; greater private involvement and sources of funding; learners in much more control over their provision and structuring their course of study and constructing a portfolio of courses from different institutions; higher education becoming more demand and market driven; polarisation of staff status, greater disaggregation of teaching and research.</p> <p>6. Diversity and disappearance Radical departure model that is characterised by: the disappearance of formal tertiary education; learning takes place in multiple arenas throughout life (home, work, mobile) and is not tied to a formal system offering standardised credentials. This model represents the culmination of a move towards greater flexibility and demand-driven higher education shaped by the learner/client.</p> | <p>International; systemic Looks predominantly at systemic changes. Focuses on the questions of who will be taught, how will they be taught, how will it be funded.</p> <p>The scenarios tend to project existing trends – with the exception of scenario 6. They focus less on the institutional changes that will accompany these systemic projections and more on the economic foundation of the system: who will it be funded by and how will it cater for their needs.</p> <p>Collectively the direction of travel of these scenarios is towards a more flexible and market-driven sector with greater (consumer) power bestowed on the learner at the possible expense of academic freedom and scholarship.</p> |

| Thematic focus | Methodology | Additional policy aids and perspectives |
|---|--|---|
| <p>2004 scenarios</p> <ul style="list-style-type: none"> • Educational participation (initial [18-22] tertiary education → lifelong learning) • Structure of education supply (limited number of elite institutions → wide range of institutions) <p>Variables on which scenarios are constructed:</p> <ol style="list-style-type: none"> 1. Type of population covered by tertiary education 2. The nature of funding 3. The integration of different missions 4. The international dimensions of the system 5. The homogeneity of status of faculty and institutions 6. Degree of take-up of technology <p>Other dimensions include the changing nature of the knowledge economy, the role of the market and the diversity of providers.</p> | <p>Projection of existing trends.</p> <p>The OECD scenarios contribute to a long-term OECD project on university futures that aims to facilitate strategic thinking among government and higher education decision-makers. The project is based on two types of activity: first, analytical and thematic study of major relevant trends and second, dialogue with stakeholders and experts in higher education. The scenarios are a product of the first process and serve to stimulate and focus the latter.</p> <p>Steps to developing the scenarios:</p> <ol style="list-style-type: none"> 1. Identifying the system (in this case post-secondary education with the university as its principal institution) 2. Identifying its driving forces and its key dimensions 3. Developing a limited number of contrasted and simple scenarios among the numerous possibilities. The scenarios are based on the selection of two key variables: 1) the range of recognised educational supply 2) the range of educational participation <p>The author acknowledges that the scenarios are familiar and reflect the historical and institutional issues facing universities in OECD countries today.</p> | |

| Organisation/ author (year) | Time- frame | Scenario – summary of key characteristics | Scope (inclusions and exclusions) |
|--------------------------------|----------------|---|---|
| | | <p>2006</p> <p>1. Open networking Characterised by: collaboration and internationalisation; emphasis on international networks; flexible management of the student learning experience; greatly enhanced role for technology and interactive teaching and learning.</p> <p>2. Serving the local community Characterised by: closer ties between the university and local community; the public service mission; elite institutions integrated within international networks; strong links with local business and industry; strong community engagement and lifelong learning; considerable academic freedom but academic research more focused on arts and humanities than science and technology, which increasingly fall outside of the sector.</p> <p>3. New public responsibility Characterised by: public funding but with management techniques imported from the commercial and private sectors that encourage responsiveness to market forces and greater competition; greater accountability; measurable performance and targets, the boundary between public and private provision becoming increasingly blurred; teaching and research increasingly disaggregated, but institutions continue to rely on research reputation to attract staff and students.</p> <p>4. Higher education inc. Characterised by: high levels of competition; institutions operate with an increasingly commercial outlook; emerging economies (especially in South East Asia) develop competitive advantages over their well-established counterparts especially in research; disconnection between teaching and research; vocational education becomes important as a lucrative source of income; international rankings increase in importance and English is established as the lingua franca of international higher education.</p> | <p>International; systemic and institutional</p> <p>Here there is greater focus on the institutional mission. The scenarios are again projections which emphasise the disaggregation and specialisation of mission.</p> <p>The points of contrast across these scenarios are: collaborative internationalisation vs. competitive internationalisation; localism vs. internationalism; and public good vs. market responsiveness and commercialisation.</p> <p>None of the models here reflects a radical departure from current systems. Instead they distil the multiple, sometimes contradictory, facets of modern university missions as public bodies that operate within an international market where they have to be collaborative and competitive and locally and internationally responsive.</p> <p>As in most of the scenarios featured here the critical fault line runs along the public/market continuum.</p> |

| Thematic focus | Methodology | Additional policy aids and perspectives |
|--|---|---|
| <p>2006 scenarios</p> <ul style="list-style-type: none"> • National/international focus of institutions • Role of collaboration • Engagement with industry • Technology and changes in Intellectual Property Rights • Funding (public vs. private) • Balance of core functions (teaching/ research/training mix) • Market forces • Demographic change | <p>No details provided but likely to be similar to above.</p> | <p>For each scenario a series of questions are posed to prompt discussion and thought into the implications of the scenarios.</p> <p>Questions:</p> <p>Open networking</p> <ul style="list-style-type: none"> • Would this model be sustainable in a knowledge economy? • What forces could drive differentiation in this system? • How do you ensure networks do not serve the interests of their members only and reproduce the national hierarchies at the global level? • In what geo-strategic context could such a model thrive? <p>Serving the local community</p> <ul style="list-style-type: none"> • Would this lead to greater inequalities across countries? • What would this disconnection from international networks imply for the progress of scientific research? • What would this refocus imply for the most internationalised countries, especially when they face a demographic decline? <p>New public responsibility</p> <ul style="list-style-type: none"> • Is there a tipping point after which real markets would replace quasi-markets, and governments lose some or most of their control over the system? • At what point should the concentration of research capacity in a few higher education institutions be encouraged? • Could this model allow the systems to become more responsive to the diversity of individual, social and economic needs? <p>Higher education inc.</p> <ul style="list-style-type: none"> • Are all systems equally equipped to compete globally in education and research? • Will all countries be able to retain some national educational and research capacity? • What would happen to areas of human knowledge that are not commercially viable? • How would national cultures and languages be kept alive? |

| Organisation/ author (year) | Time- frame | Scenario – summary of key characteristics | Scope (inclusions and exclusions) |
|--------------------------------|----------------|--|---|
| Riel Miller (2004) | Unde- fined | <p>1. Traditional In this scenario the socio-economic context is no more knowledge based than at present and the university and tertiary sector continues to dominate the production and distribution of knowledge and confers value and legitimacy on knowledge through credentials and recognition. The structure of the tertiary sector remains hierarchical and compartmentalised. The socio-economic and structural contexts in synch.</p> <p>2. Marginal open In this scenario the socio-economic context is the same as in the traditional scenario (relatively low knowledge intensity) but the structure of tertiary education is more de-compartmentalised and diffuse. While the tertiary sector is developing more open and networked structures the socio-economic context does not support this change, resulting in a more marginalised tertiary sector. Professional and specialist bodies and private knowledge producers step in to maintain a proprietary knowledge culture with intellectual property rights used as a key instrument to protect against the widespread diffusion of knowledge, thereby perpetuating long-standing patterns of exclusivity and stratification but with the tertiary sector now on the outside. Socio-economic and structural contexts are at odds.</p> <p>3. Marginal elitist This is the reverse scenario to Marginal open. Here it is society that has changed, with knowledge becoming much more integral to all aspects of society and much more open and accessible, but the tertiary sector has not changed and remains elitist and hierarchical and thus out of synch with society. The tertiary sector becomes a 'marginal backwater, where the old monastic and exclusive approaches to knowledge try desperately to insist on their pride of place and past glory'. New institutions emerge to serve the knowledge requirements of society and there is greater differentiation in the ownership and payment relationships, while the tertiary sector is used by a relatively small and marginal elite. Socio-economic and structural contexts are at odds.</p> <p>4. Ambient This scenario is at the opposite end of the spectrum to the traditional scenario. The tertiary sector and society are in synch but on opposite terms. There are higher levels of knowledge intensity (as in scenario 3) while the structure of the tertiary sector is more open and networked (as in scenario 2). The tertiary sector thus 'becomes one of the main institutional backbones of a much more knowledge intense society'. Perpetual research and learning are the norm. The tertiary sector establishes transparency (common languages) and trust (quality) among a community of learners (which includes teachers, students and researchers). The socio-economic and structural contexts are consistent.</p> | <p>International; systemic and institutional These scenarios address the function and organisation of the tertiary sector within society, in particular exploring the structure of the tertiary sector in relation to its control over the production, distribution, credentialing and storage of knowledge. Miller concentrates on two questions:</p> <ol style="list-style-type: none"> 1. How central are institutions of the tertiary education system to the production and consumption of knowledge within society? 2. What role does the tertiary education system play with respect to stratification? <p>This is a society-led set of scenarios where developments in society, namely the extent to which higher knowledge and skills permeate society, frame the relevance of the tertiary sector. Social change thus provides the impetus for structural change (or marginalisation) of the tertiary sector within these scenarios.</p> <p>These scenarios can be defined as socio-structural rather than economic and their defining characteristics are:</p> <ol style="list-style-type: none"> a) Degree of social knowledge dispersion b) Structure of the tertiary education sector <p>While these scenarios are perhaps the least detailed in terms of specific developments and characteristics, they provide a broad canvas on to which different contextual circumstances can be mapped.</p> |

| Thematic focus | Methodology | Additional policy aids and perspectives |
|--|---|---|
| <p>Variable on which scenarios are based:</p> <ul style="list-style-type: none"> • Learning intensity and distribution of knowledge within society (low → high) • Structure of higher education (structured and hierarchical → distributed and open) | <p>Miller goes into some detail regarding methodological approaches to scenario building. He refers to two common approaches for selecting scenarios. The first (Baby-bear, Momma-bear and Papa-bear or Bear method) takes an initial starting point such as population or economic output and builds scenarios around different growth rates (eg low, medium and high enrolment growth or low, medium or high economic growth). It is a quantitative approach of extrapolation. The second approach (the good, the bad and the ugly or GBU method) identifies preferences and expectations (eg elite vs. mass higher education or specialised vs. generalised provision). These approaches generate familiar and accessible stories because they are based on factors that are familiar and accessible.</p> <p>Miller suggests that these two well-established approaches cover only a relatively small area of possible futures and that a different approach, and the one he uses for his scenarios, is the 'possibility space' approach. This method involves three steps:</p> <ol style="list-style-type: none"> 1. Determine key attribute (in Miller's scenarios this is the change in the way tertiary education deals with the production, accumulation, preservation and distribution of knowledge) 2. Sketch a 'possibility' space that uses the primary determinants of change in the key variable under scrutiny. In Miller's scenarios this is represented by functional and socio-economic context as defined by the structure of tertiary education in the first case and the degree of societal knowledge intensity in the second 3. Develop scenarios that fit into this possibility space <p>The scenarios represent single points in the possibility space created. The aim of the possibility space is not to generate the most probable or desirable future but to question the current assumptions and facilitate thinking about how to consider different options within this space.</p> | <p>Miller raises two questions for policy makers and leaders to address as an aid to thinking about the futures:</p> <ul style="list-style-type: none"> • Will the tertiary sector and its main champion—the university be willing to play ball with new methods and institutions for producing and distributing knowledge/learning? • Will the policy makers who seek to serve the broader public interest fully explore possibilities that might radically alter the current order? |

| Organisation/ author (year) | Time- frame | Scenario – summary of key characteristics | Scope (inclusions and exclusions) |
|--------------------------------|-----------------------------------|--|--|
| CHEPS (2001 and 2004) | 2001 – c.10 years (2010) | <p>Three (2001)</p> <p>1. The Palatial Garden Characterised by: funding, status and regulation remaining essentially public, little diversity in the sector and strong hierarchical stratification; differentiation between the academic and internationally oriented university sector and the vocational and locally oriented college sector; tuition fees increase as the private gains argument strengthens.</p> <p>2. The Polder Garden Characterised by: more mergers between colleges and universities leading to a more integrated system; strategic alliances with the private sector and less control by the public sector – although the national government is still the main regulatory power; institutions have more autonomy over provision and less focus on demand-driven programmes; student mobility within Europe is significant at around 20% of the student population.</p> <p>3. The Natural Garden Characterised by: a much more mixed, open and diverse sector; private influence is stronger; networks and mergers expand in significance; foreign providers have a more prominent role and Dutch institutions are increasingly looking to establish themselves abroad; growing specialisation and catering for niche markets; growing numbers of professional programmes; more flexible learning and modularisation of learning; European standardisation and greater regulation by Europe and greater liberalisation of the higher education systems worldwide (following implementation of GATS).</p> | <p>2001 National (Dutch); systemic</p> <p>This is a nationally focused set of scenarios. It combines broad trends affecting most sectors with the specific characteristics of the national sector.</p> <p>The researchers describe the context of the Dutch sector (in 2001) as an overwhelmingly public system in a small country with an international environment that is experimenting with new types of cooperation and coordination.</p> <p>The defining characteristics of the scenarios are:</p> <ul style="list-style-type: none"> a) public and hierarchical b) merging and integrated c) diversified, networked and international |

| Thematic focus | Methodology | Additional policy aids and perspectives |
|---|---|---|
| <p>2001 Scenarios</p> <ul style="list-style-type: none"> • Diversity (institutional differentiation) • Excellence • Accreditation (state controlled → disaggregated) • Lifelong vs. traditional students • International vs. local focus • Public vs. private • Structure and level of stratification in the sector • Student mobility • Transnational provision • International trade in higher education <p>The scenarios operate within a framework that hinges on the level of government influence, market influence, and regional/international influence, and on the structure of the sector.</p> | <p>The CHEPS scenarios were based on the findings of a Delphi study carried out in 2001 with 64 respondents from national ministries, (quasi-) governmental agencies, buffer bodies, higher education institutions and research organisations. The study sought to establish consensus in the opinions about probable and desirable outcomes. In this way it most resembles Miller's 'GBU method'. Questions revolved around general higher education trends, diversity, excellence and accreditation.</p> <p>The findings of the Delphi study were used to identify consistent patterns or responses which were then transposed into the three scenarios.</p> <p>The authors wanted to avoid any preferential bias in their scenarios by emphasising different styles with a mix of pros and cons rather than levels representing different preferences.</p> <p>Each scenario incorporates distinguishable clusters of coherent assumptions as identified by the Delphi study.</p> | |

| Organisation/ author (year) | Time- frame | Scenario – summary of key characteristics | Scope (inclusions and exclusions) |
|--------------------------------|-----------------------------------|---|---|
| | 2004 – c.15 years (2020) | <p>Three (2004)</p> <p>1. Centralia, the City of the Sun Characterised by: a strong public sector within a centralised system of governmental and European-level control; Europe and Bologna are important in the structure of provision and increasingly in the accreditation and recognition of provision; campus-based teaching and learning dominates but with some elements of blended learning; lifelong learning grows in importance; limited private involvement; limited student mobility (at the undergraduate level); international competition and dominance comes from East Asia (rather than the US); universities have grown in size and mergers are not uncommon; growing professionalisation of institutional management, but academic freedom remains a key value of the university; clear distinction between public good type research and commercially applicable R&D – most of which is undertaken not only outside the university but outside Europe in countries with cheaper academic labour (Asia and Latin America).</p> <p>2. Octavia, the Spider-web City Characterised by: universities becoming a much more fluid concept with multiple missions and significant institutional differentiation; unbinding of university functions; networks become the linking element; globalisation is very important; political responsibility for higher education is more diffuse, operating through a multi-layered web of local, regional and national institutions; virtual provision is much more common; a more networked approach to managing university structures; proportional growth of mature lifelong learners and part-time students; more flexible and blended learning; multi-institutional affiliation for both students and staff and considerable opportunities for academic entrepreneurialism; accreditation is disaggregated to various agencies; public money remains the main source of funding but comes from more heterogeneous sources for heterogeneous purposes; increased private investment in research and stronger links with industry; across Europe there is a divide between a 'teaching-intensive' south and east and a 'research-intensive' north and west.</p> <p>3. Vitis Vinifera, the City of Traders Characterised by: a highly flexible, demand-led sector that is closely intertwined with the knowledge economy; greater institutional autonomy in terms of student selection, programme development and curriculum content; greater fragmentation and competition; more liberal operating conditions (subject to market forces) and greater financial autonomy, but higher associated risks; universities managed in a more business-like way, stressing efficiency and productivity with growing professionalisation of staff; less enthusiasm for merged giants, with successful institutions tending to be small and specialised; private provision increases significantly (around one-third of higher education providers are private); public funding is more closely tied to undergraduate student enrolment; tuition fees are increasingly important and differential fees are the norm; public funding for research is increasingly competitive and European Research Council has become important; R&D undertaken by the sector on a commercial basis with emphasis on applied research while other areas of research are weakened; further education as well as the training/vocational sector absorbed into higher education; lifelong learning and recognition of previous qualifications are common elements with the sector; virtual and open learning are very important; Bologna has expanded to include sub-degrees, there are multiple accreditation routes and quality assurance is left to the market but there are concerns about differential standards across Europe; higher education has become one of Europe's biggest trading commodities with the UK, Netherlands, Sweden and Italy the most successful but France, Germany and Poland gaining ground.</p> | <p>2004 Regional (Europe); systemic</p> <p>The CHEPS 2004 scenarios are perhaps the most detailed of all the scenarios under consideration. Their scope and coverage is quite broad but restricted – purposely – to the European context. However, as one of the articles responding to the scenarios points out: 'they take for granted that the present forms of political regulation and economic development will still be dominant in separate and independent configurations in 15 years time ... [and] ignore other potential ways to conceive the regulation of the European space' (Stoer and Magalhães p153). The organising principles of the university within these three scenarios are therefore rooted in the trends and structures of today. Citing similar criticisms Barnett offers four alternative 'sketches for scenarios' – see footnote 20 for summaries of these.</p> <p>Defining characteristics of the scenarios:</p> <ul style="list-style-type: none"> a) Centralised and public b) Networked, disaggregated and open c) Market and demand driven <p>Other dimensions distinguishing the scenarios were: the level of European integration and harmony, and economic and institutional developments such as the success of small vs. large organisations.</p> <p>Stable dimensions within the scenarios were: demography; economy (no major impact of recession or boom); and the degree of integration of research and higher education.</p> |

| Thematic focus | Methodology | Additional policy aids and perspectives |
|---|---|---|
| <p>2004 scenarios</p> <ul style="list-style-type: none"> • Education • Systemic structure • Research and innovation • Funding • Quality • The knowledge society and labour market • Institutional governance and management • International/regional integration and influence | <p>As with their earlier study CHEPS used a Delphi survey as the basis of their 2004 scenarios. The Delphi method is seen facilitating a controlled debate. The questionnaire consisted of 49 statements on higher education and research in Europe. The statements were organised around 6 themes:</p> <p>education; research and innovation; funding; quality; higher education, society and the labour market; institutional governance and management.</p> <p>The survey was distributed to higher education experts around Europe who were asked to estimate the desirability and probability of all 49 statements.</p> <p>Centralia reflected the majority opinions of the respondents (in terms of both desirability and probability); Octavia incorporated some majority opinions but generated less consistency in the probable and desirable scores; Vitis Vinifera incorporated the antithesis of the majority opinion.</p> <p>The researchers did not want to make any particular scenario more appealing than any other, describing the developments within each positively – as potential utopias. They note that the question of desirability – whether the scenario represents a utopia or dystopia – depends on the reader’s preferences.</p> <p>The argument supporting use of the Delphi method in futures studies is that it allows the researchers to identify some of the majority assumptions of experts and also to challenge those assumptions within their alternative scenarios. The corresponding criticism, however, would be that it is an approach that is fundamentally rooted in the majority expectations and preferences of the respondents (whether advocating them or reacting against them in the scenarios developed). It reflects continuous change rather than discontinuous change; as such the approach does not lend itself to conceptions of the future that are radically removed from current assumptions.</p> <p>A second, related, criticism (one acknowledged by the researchers) is that those conducting the Delphi study predefine the criteria on which they subsequently base the scenarios. Thus the whole premise is based around the assumptions and theories of the researchers.</p> | <p>CHEPS invited a number of higher education experts from both Europe and outside of Europe to respond to and critique the scenarios. The resulting articles provide useful additional insight and perspective on these scenarios. They include one which questions the value of these long term visions in shaping short term institutional policy. The authors argue that long term scenarios are often at odds with short term institutional governance and policy making structures. For scenarios to have more policy relevance they advocate something more short term and policy focussed.</p> <p>Most of the remaining articles provide a broad critique of the process and value of scenario building in general and these scenarios in particular. It is an enlightening and diverse set of perspectives on the benefits and limitations of scenarios for the higher education sector.</p> |

| Organisation/ author (year) | Time- frame | Scenario – summary of key characteristics | Scope (inclusions and exclusions) |
|--|--------------------------|---|---|
| Universiti Sains Malaysia (USM) (2007) | c. 10 years (2020) | <p>Five</p> <p>1. A la Carte University Characterised by: USM becoming a world-class research university, a hub within South East Asia attracting students from across the region; catering for different student communities (traditional, lifelong, international, professional); delivery of a diverse portfolio of courses; extensive collaboration with international providers cementing its 'world-class status'; increasingly technology-dependent. This scenario can be defined as an all things to all people model that is market responsive.</p> <p>2. Invisible University Characterised by: the disappearance of the formal university, replaced by a much more open model of higher education with most provision delivered virtually; resources are predominantly Open Source with flexible student-led and student-centred acquisition of knowledge; academic work is concentrated on content generation rather than teaching; administration of the university becomes streamlined and decentralised. This is a technology-driven scenario that centres on opening up and disaggregating the functions of the university. Limited attention is given to research.</p> <p>3. Corporate University Characterised by: institutional autonomy; private funding; operating as company; government does not relinquish its regulatory and scrutinising power, but quality is assured by private accreditation bodies rather than public bodies. This scenario is financially driven and reflects a shift from a public to private model of provision at USM.</p> <p>4. State University Characterised by: local state administration and ownership in partnership with local industries; integrated into and sustained by the local economy; responsive to local requirements; uneven funding across states, resulting in sectoral tensions; limitations in course portfolio which is more closely tied to the demands of local industry.</p> <p>5. University in the Garden: Flowering of the Minds Characterised by: academic freedom and university self-governance; the governance structures of the institution are more participatory; emphasis on the intellectual and cultural power of the university and its ability to cultivate first-rate minds to contribute to society. This scenario represents a shift away (or back) from the economic and utilitarian conceptions of the university towards a more intellectual conception. The university functions are driven by the academics and focused on generating and disseminating ideas rather than economic value.</p> | <p>Institutional (drawing on the broader national context) Defining characteristics of the scenarios:</p> <ul style="list-style-type: none"> a) Market b) Technology and openness c) Privatisation and private funding d) Localism e) Intellectual freedom and creativity <p>These scenarios speculate on different futures from an institutional perspective. While it draws on the broader national trends the approach is much more inward-focused and part of a university wide process of self-reflection. As one of the few examples of institutional scenario building its main value to external readers may derive from its detailed discussion of process and methodology rather than its conclusions in the form of specific scenarios. The USM project was a participatory exercise that involved a number of different stages and might serve as a useful example for other institutions looking to undertake a similar exercise within their institution.</p> |

| Thematic focus | Methodology | Additional policy aids and perspectives |
|---|--|---|
| <p>Principal variables</p> <ol style="list-style-type: none"> 1. Market-centred (market-led) 2. Financial-centred (corporate-led) 3. Creator-centred (scholar-led and autonomous) 4. Ethical-centred <ul style="list-style-type: none"> • Globalisation • Multiculturalism • The role of technology • Politicisation and political control • Links to the economy • Changing student populations | <p>USM used a five-stage process for developing their scenarios. It was a participatory model with the initial stages undertaken in a two-day workshop (with a range of representatives from across the institution). This was followed by a series of supplementary workshops.</p> <p>The five stages comprised:</p> <p>1. Mapping of the future Inviting input from a range of participants on various factors shaping the future, such as: leadership; broad developments in higher education; human resources; organisational structure; pedagogy; technology; research; university culture; politics and finance.</p> <p>2. Anticipating the future A session to reconfigure the map by analysing emerging issues, secondary and tertiary implications of trends.</p> <p>3. Deepening the future Trying to establish a deeper understanding of the future using ‘causal layered analysis’ and four quadrant analysis.</p> <p>4. Creating alternatives Developing the detail of the scenarios from the outcomes of the previous three sessions.</p> <p>5. Transforming the future Looking at ideals and where the university wants to be. This session represents the hopes and aspirations for the future and creates a vision of that future.</p> <p>The two-day workshop ended with the presentation of the scenarios and feedback from participants. It was followed by a series of further workshops with different university stakeholders who were also invited to respond to the scenarios and to the future vision for the university.</p> | <p>The second half of the USM report looks at how the scenarios can be used within the USM context.</p> <p>One chapter reports on the ongoing conversations within the USM community following the first workshop. Presentations of the scenarios were made to various groups – invitations were extended to the whole academic and administrative community – who were asked to give their views on the likelihood and preference for the various scenarios (the Delphi approach in reverse).</p> <p>These were facilitated by ‘visioning’ workshops which explored more fully the 2020 vision for USM (the 4S vision of a Symbiotically Sustainable Study Space) using the scenarios as a basis for the discussions. They emphasise the engagement of the university’s stakeholders in the vision for its future.</p> <p>This process was about developing vision rather than policies for the institution.</p> |

| Organisation/ author (year) | Time- frame | Scenario – summary of key characteristics | Scope (inclusions and exclusions) |
|--------------------------------|----------------|--|--|
| Universities UK | 20 years | <p>Three</p> <p>1. Slow adaptation to change Characterised by: student demand changing with demography; there are no significant new sources of student demand; government funding levels are proportionally retained at current levels; pressures on public funding lead to retrenchment at the possible expense of quality, government regulation remains similar to today; competition for students increases and some institutions seek to collaborate to put themselves in a more competitive position; there is modest investment in e-learning and campus-based, traditional provision remains dominant. There are few changes within this scenario from the current context.</p> <p>2. Market-driven and competitive Characterised by: an increase in non-traditional providers who focus on courses with low entry costs; increased competition between new and traditional providers; growing competition with employers for 18-year-olds; wider access; more flexible provision and increased requirement for staff to provide support on a flexible basis; greater investment in e-learning; more small and specialist or niche market institutions.</p> <p>3. Employer-driven flexible learning Characterised by: greater regulation of publicly funded higher education; institutions are directed to become more focused on employer demands for skills and qualifications; the availability of a full credit and accumulation system, combined with reduced public funding results in a majority of students being part-time and virtual, combining work and study; more sectoral stratification.</p> | <p>National (UK); systemic The focus is on the size and shape of higher education in the UK underpinned by an analysis of projected demographic trends.</p> <p>Defining characteristics shaping the demographic trends discussed in these scenarios are:</p> <ul style="list-style-type: none"> a) Public funding constraints b) Market dominance and competition c) Employer-led, skills-based and lifelong learning agenda. <p>The scenarios were built around a predetermined set of drivers, namely: funding, competition and employer engagement which were derived from an analysis of existing trends and policies.</p> |

| Thematic focus | Methodology | Additional policy aids and perspectives |
|---|--|---|
| <p>Principle variables:</p> <ul style="list-style-type: none"> • Pursuit of new markets of students • Increasing activity in other areas outside full-time undergraduate • Concentrating on niche markets and specialisation of provision to attract specific groups of students. • Increasing collaboration to engage more fully in the domestic and international student market. | <p>The methodological approach was divided into three stages:</p> <p>1. Analysis of demographic trends This assessed trends in the UK and Europe</p> <p>2. Analysis of uncertainties and drivers of demand Looking at current participation trends and relevant public policies.</p> <p>3. Development of scenarios These emerged from a series of seminars on the three key drivers identified for the system – funding, competition and employer engagement. The seminars involved ‘expert’ representatives from the countries of the UK and members of the project steering group. There was also an externally facilitated scenario planning event.</p> | <p>Identifies institutional opportunities and risks for each scenario:</p> <p>1. Slow adaptation to change Opportunities: ability to develop new programmes and capture new markets; increased demand for part-time and postgraduate provision; increased numbers of international students. Risks: some institutions are unviable; reducing standards and quality to attract students; loss of reputation; low-demand subjects at risk.</p> <p>2. Market-driven and competitive Opportunities: catering for niche markets; lower-cost delivery of quality programmes; employer-supported postgraduate provision. Risks: more degree-awarding private providers; loss of UK reputation; long-term financial sustainability elusive; publicly funded sector less attractive and elite institutions seek to secede.</p> <p>3. Employer-driven flexible learning Opportunities: strategic alliances between universities and employers and their supply chains; institutions become major regional providers in alliance with further education colleges and private providers; partnerships with commercial providers lead to enhanced technology-based learning; wider participation. Risks: private providers cherry-pick vocational provision; private take-overs; extreme stratification; employer support does not match fall in public funding, leading to loss in quality and reputation.</p> |

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Biographies

Jay Kubler, Association of Commonwealth Universities

Jay Kubler is the Senior Research Officer for the Policy Research Unit of the Association of Commonwealth Universities. Jay has a B.A. (hons) in History from the University of Cambridge and in 2001 obtained an M.A. with distinction in African Studies from the School of Oriental and African Studies.

Since joining the ACU in 2002 Jay has worked on a wide range of research projects and consultancies on international higher education policy, with a particular focus on the impact of higher education on development. She has published reports on donor activity in African higher education, international trends in academic recruitment and retention, and international trade in education services. She was involved in developing a database of donor projects in African higher education and manages an interactive database of higher education policies in universities across the Commonwealth. Jay also has a longstanding involvement in the ACU's higher education management benchmarking programme which examines and looks at ways of enhancing good practice in university management and strategic development.

Nicola Sayers, Leadership Foundation for Higher Education

Nicola is the Research Manager at the Leadership Foundation for Higher Education, where she oversees the Leadership Foundation's research series. She is the author of the preceding publication to this one, 'A Guide to Scenario Planning in Higher Education'.

She is also an experienced strategy consultant in both the private sector and the public sector. As a strategy consultant with the international consultancy Monitor Group she worked on a number of projects, including a National Economic Strategy for the Libyan government.

She has a B.A. (hons) in Philosophy, Politics and Economics from Oxford University and an M.A. in Psychology, with an emphasis on Organisational Psychology and Leadership, from New York University.

Professor Sir David Watson, Green Templeton College, Oxford

David Watson is an historian and Principal of Green Templeton College, Oxford. He was Professor of Higher Education Management at the Institute of Education, University of London, from 2005-2010, and Vice-Chancellor of the University of Brighton between 1990 and 2005. His most recent books are *Managing Civic and Community Engagement* (2007), *The Dearing Report: ten years on* (2007), and *The Question of Morale: managing happiness and unhappiness in university life* (2009).

He has contributed widely to developments in UK higher education, including as a member of the Council for National Academic Awards (1977-1993), the Polytechnics and Colleges Funding Council (1988-92), and the Higher Education Funding Council for England (1992-96). He was a member of the Paul Hamlyn Foundation's National Commission on Education (1992-1993), and the National Committee of Inquiry into Higher Education chaired by Sir Ron Dearing (1996-1997). He was the elected chair of the Universities Association for Continuing Education between 1994 and 1998, and chaired the Longer Term Strategy Group of Universities UK between 1999 and 2005. He is President of the Society for Research into Higher Education, a Trustee of the Nuffield Foundation, a Companion of the Institute of Management, and a National Teaching Fellow (2008). He chaired the national *Inquiry into the Future for Lifelong Learning*, and co-authored its report *Learning Through Life* (2009). He was knighted in 1998 for services to higher education. In 2009 he received the *Times Higher Education* Lifetime Achievement Award.

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