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Breaking the mould: from extrapolation to lateral thinking about the future of higher education.

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Introduction

The world is rapidly changing, technological advances over the last two decades have transformed the way we live and work. Employers predict constant cange and recognise the need to be able to cope with this change (Harvey, Moon and Geall, 1997). Academics, in the main, also admit that the world of higher education has changed and will continue to change. However, future predictions about higher education, from within the sector, tend to be very conservative.

Predicting the future?

Most predictions about the future are based on four types of activity:

- extrapolation from current data;
- incorporation of external evidence;
- taking account of a wider context;
- lateral thinking.

Extrapolation is an easier task than lateral thinking but no more likley to be correct. Extrapolation would suggest, for example, that there will be 250 higher education institutions in Britain in the year 2010. Alternatively an amended extrapolation to take account of comparisons with other countries, might suggest that there will be only half the current number of institutions in Britain, about 75, as mergers will take place as they have in Australia. (MacFarlane, 1994). However, extrapolation about one area of the future in isolation from other developments will lead to unsound predictions. Extrapolation in one area must be set in a wider cultural, political and structural context.

To be able to predict the leap from the Pony Express to the development of the World Wide Web goes way beyond extrapolation. Prediction requires the most intangible element of all, some lateral thinking: conceptualising shifts into 'another dimension', away from the trend of any extrapolation.

Higher education has arguably been going through what Thomas Kuhn (1970) described, in a different context, as a paradigm shift: mere extrapolations from the current will not be sufficient as a guide to the future shape of higher education.

What is being predicted?

An examination of trends around the world and an analysis of the commentaries of pundits who predict future change, reveals a recurring set of conservative extrapolations.

'Official' views

For example, a conference, sponsored by the European Commission (CEC, 1992), in Siena in November 1990, planning for the year 2000 concluded, *inter alia*, with the following.

- Member states should encourage *increased participation* in higher education.
- There is a need to *update and upgrade the skills* of the existing work force and for higher education to play a wider and more extensive role in the area of continuing education
- More flexible *delivery* is necessary, in particular recognising the special needs of small and medium-sized enterprises.
- More flexible learning *systems* are needed, thus the Conference endorsed the principles underlying the accumulation of 'credits' in respect of 'units' of study for the purposes of academic awards.
- Account should be taken of the development of information technology.

Similarly, in Britain, the CVCP (1995) in *Learning for Change*, identified key influences on the future shape of higher education, which included:

- the need and demand for lifelong learning;
- the requirements of learners for alternative types and modes of provision;
- the impact of new technology.

In the same year, a UNESCO (1995) Report, *Policy Paper for Change and Development in Higher Education*, proposed a responsive 'pro-active university'. Again, the same traditional themes are augmented by closer co-operation with industry and incorporation of life-long learning, albeit within an international setting.

The recent Dearing Committee in Britain, focusing on specific action to take higher education forward, stated, among its many recommendations that:

> the Government, ...when allocating funds for the expansion of higher education, give priority to those institutions which can demonstrate a commitment to widening participation;
> further work should be done... to address the creation of a framework for data about lifelong learning, using a unique student record number;
> an integrated qualifications framework that further enabled credit accumulation and transfer' should be established;
> institutions should have in place overarching communications and information strategies by 1999/2000 (NCIHE, 1997).

Although, change, and responding to it is a key concern for, the EC, UNESCO, CVCP and the Dearing Committee, the vision of the future they offer tends to restate the traditional pluralistic vision of higher education, amended to account for economic needs and consumer requirements. The overall vision, remains one of the single autonomous university. Change in higher education is not envisaged as impacting on the structure of the universities.

Pundits

In addition to these, necessarily, conservative 'official' approaches there are projected views from individuals and research institutes that are more speculative. However, the majority of these also tend to be *extrapolations* from current trends, albeit somewhat more imaginative or extreme projections. However, most of them tend to *individualised treatment* of issues without locating them in a totalistic analysis.

For example, at a recent conference in Singapore, 'Universities in the 21st Century: Education in a borderless world' a large number of papers focused on the impact of information technology with titles like 'On-line education at the beginning of the next century', 'A pilot program in computer-mediated communication for teacher training' and 'A collaborative electronic classroom'.

These papers were not advocating a structurally different notion of a university. They envisaged the same core notion of a university but with rather more fluid boundaries. They were suggesting, tentatively, that the 'Fortress University', one that errected walls against the outside world and looked inwards, had little future. Arguably, we are already beyond that vision of the university, albeit reluctantly acknowledged in some places.

The other end of the spectrum to the 'Fortress University' is the extreme consumerist-led view of the future of the university epitomised by George Ritzer's (1996) McUniversity. It sees students as customers rather than participants and higher education as a commodity or service that will be packaged, marketed and consumed in much the same way as a hamburger.

However, despite being apparently 'radical' or 'threatening' to academia, this approach tends not to transcend the dominant structure but represents it with different emphases. Predictions about the 'consumer-led university' rarely exhibit lateral thinking nor do they undertake a totalistic reassessment. In effect, they tend to extrapolate from current marketing and retail trends. Despite consumer choice, the edifice of the university as a monolithic, autonomous (albeit rather more responsive) institution remains unscathed.

Overview of future predictions

There is a distinct lack of lateral thinking when it comes to the future of higher education. Perhaps this should not occasion surprise. When, in a recent piece of research, 'captains of industry' were asked to predict future changes in the world of work over the next decade, they were convinced that change would continue but could do nothing other than extrapolate, cautiously, from existing trends. They pointed out that, in 1987, they would have been unable to predict (i.e., extrapolate) the current situation. [1]

However, the big difference between industry and higher education is that, while the leaders of industry did not know how things might turn out, they were aware that major structural changes in industry and commerce would continue.

Higher education fails to see changes as at root structural. The basic notion of the 'Autonomous University' has survived 600 years and there is a reticence to suggest

that it might have to change. For many in higher education, any expected changes involve tinkering with higher education at the edges. Few, it appears, expect to see a radically different higher education structure emerge as we go into the next millennium.

The nearest the Dearing Committee, for example, comes to suggesting a radical reappraisal is through its recommendations about learning and teaching. For example, the Committee recommends that:

> all institutions of higher education give high priority to developing and implementing learning and teaching strategies which focus on the promotion of students' learning. (Rec 8);
> the representative bodies...immediately establish a professional Institute for Learning and Teaching in Higher Education... (Rec 14);
> all institutions should...identify opportunities to increase the extent to which programmes help students to become familiar with work, and help them reflect upon such experience. (Rec 18);
> institutions develop a Progress File consisting of two elements: a transcript recording student achievement; a means by which students can monitor, build and reflect upon their personal development. (Rec 20);
> higher education institutions consider the scope for encouraging entrepreneurship through innovative approaches to programme design and through specialist postgraduate programmes (Rec 40);
> all institutions should review and update their staff development policies to ensure they address the changing roles of staff... (Rec 47).

These offer the possibility of a structure that empowers participative learners — that offers the possibility of 'real' lifelong learning.[1] However, in most future predictions, empowering students to ultimately become transformative agents in the face of change is a secondary concern to the self-preservation function of the research cloister and its system of academic apprenticeship (Harvey and Knight, 1996).

So most commentators focus on how the current system might accommodate change but do not appear to suggest any structural changes to the university of the 21st century. Yet, if we look at the range of potential changes, it is hard to see how the University of the 21st Century could be contained within the current autonomous institutional model.

The University of the 21st Century

The following are a selection of the changes predicted or underway in higher education. Viewed in isolation they may or may not lead to fundamental changes or even seem remarkable. Some have already been 'absorbed' by individual institutions.

Participation

The participation rate in most countries is increasing. The following changes and predictions are indicative of a taken-for-granted that participation will continue to increase:

- There will be continuing expansion in student numbers — there will be a shift from *élite* to *mass* to *universal* involvement in higher education.

- There will be a consequent growth in taught post-graduate courses on the assumption that credentialism will create an upward pressure on qualifications in an era of mass higher education.

- Higher education will be redeveloped and redesigned as a mass system — rather than a haphazardly amended élite system.

- Conversely, an élite core of international universities will emerge (as 'finishing schools' for the rich and powerful 'ruling classes').

Access

Althiough participation is increasing, access to higher education will continue to be a significant issue. Although access is widening, it is not deepening. Access to higher education, around the world, is dominated by the middle classes. Thus:

- Access to university for a wide range of people will continue to be a priority.

- The broadening of access will lead to a widening of the range of entry qualifications.

- Funding will be used to provide universities with incentives to recruit from disadvantaged groups.

Funding

Paying for a higher education system that caters for more and more people will become *the* major issue in higher education. Predictions include:

- Economies of scale will lead to mergers between institutions — even on an international scale.

- Public funding per student will continue to decline.

- Most, if not all countries will move to some sort of pay-as-you-learn system (although payment may be deferred for collection through the tax system or some equivalent *post hoc* arrangement).

- Tutorials will be by remote access (telephone or Internet) to a professor on the equivalent of a premium rate telephone number, where 'you pay for his [sic] intellect on a minute by minute basis' (Ford, undated).

Learning and teaching

There is, currently, growing recognition of the need for good teaching in a mass higher education system. However, the future trend will beb to focus more on the learning outcomes and identify ways to facilitate that, than to evaluate teaching performance *per se*.

- There will be an accelerating shift from teaching to facilitating learning.
- There will be a clearer emphasis on student attainment: outcomes will be more explicit, including the acquisition of a wider range of 'skills' as well as knowledge.
- The emphasis will be on empowering students as life-long learners.
- Lectures will disappear — there will be far more effective ways of disseminating information and ideas. Lectures will be seen as an inefficient, ineffective and amateurish 'cottage industry' (Gordon, 1995, p. 25).
- Tutors in higher education will have a central role in facilitating learning, which will include the acquisition skills and abilities as well as knowledge by students.
- A new focus on empowering learners will require extensive staff development and re-training away from the 'academic apprenticeship' model.

Flexibility

With a wider and deeper access and increased costs to students higher education institutions will need to offer more flexible study arrangements.

- Universities will be more responsive to 'customer' requirements in terms of mode and duration of study.
- Higher education will increasingly move towards a more flexible Credit Accumulation and Transfer System.
- Accumulation of units will lead to phased awards (e.g., Certificate for 'X' level-one credits, Diploma for 'X' 'level-two- credits, etc.).
- Students will 'buy' into modules or units of study that will best suit their life-style and resources, rather than enrol on long-term courses.
- Module-oriented, rather than course-oriented, funding will do away with the distinction between full- and part-time students, where it still exists.

Life-long learning

An undergraduate degree is not a 'learning zone' isolated from learning in general and increasingly higher education will be seen as part of lifelong learning.

- Higher education institutions will become increasingly involved in continuing professional development.

- Higher education institutions will work more closely with business to provide bespoke training and staff development.

- There will be a smoother transition from compulsory school education, through post-school qualifications, to undergraduate, postgraduate and continuing education and life-long-learning.

- The traditional undergraduate full-time, three-year, on-site, undergraduate degree will only survive if it fits into this process of life-long learning.

- Higher education institutions will become learning resources for the community, not just for the academic élite.

Research

As research becomes more expensive, there will be less possibility for all higher education institutions to be involved in it to the same degree. However, there will necessarily be a need for scholarship to ensure that universities reflect a rapidly changing world.

- Research will be more concentrated — especially high-cost research — and will be more closely integrated with commercial research and will be on an international scale.

- Teachers in higher education will be *scholars* as well as tutors, but fewer will be *researchers* as the cost of research continues to increase.

Standards and Quality

Although the 1990s has been the decade of quality, this, as an issue will have a lower profile in the future.

- Standards will become a major focus of concern (more so than quality) in a mass/universal system, especially given the need for international comparability.

- There will be less emphasis on bureaucratic external quality monitoring and more on quality culture within institutions — quality monitoring will change from external accountability-based systems to audit of internal improvement-based systems.

Information Technology

Developments in information technology and increased access to rapid communications will have a major bearing on participation, learning and teaching,

flexibility of delivery, life-long learning, the conduct of research, quality monitoring and the internationalisaton of higher education.

Higher education institutions in the USA, Australia, Britain and elsewhere already run postgraduate courses on the Internet and IT is also being used increasingly for course delivery and assessment at undergraduate level throughout Europe (Brittingham and Cook, 1995).

These changes can be and, in some cases, have been accommodated within the current structure of higher education in an isolated, piecemeal way. However, when these changes are considered, not in isolation but *holistically*, it suggests that the University of the 21st Century is not going to be a modified version of what we already have, but a radically different concept.

The following suggested model builds on some of the innovative elements to be found in some predictions of the future but abandons the core of the élitist, autonomous view of a university.

The Regional, Federal Omniversity Model.

The university of the future will, I suggest, be a regional Omniversity (See Figure 1 appended). Physically, it will be a federation of semi-autonomous institutions based in a geographic region. The institutions will be electronically networked (the lines on the diagram) and, through cable or the Internet, linked to anyone. This is important. It will not just be 'conventional' long-term enrolled students who will be able to access the university, but anyone who registers for any amount of time that suits them. In short, the omniversity of the future will have no fixed boundaries, it will be in your home as well as a variety of identifiable, but often multi-purpose, sites.

The omiversity will encompass all levels of post-compulsory school education and also include learning and research in the work place as well as within the conventional boundaries of the university. The regional omniversity of the future will, thus, have much closer links with industry, commerce and the public sector. Furthermore, the omniversity will be a community resource and it will link into other community resources, such as local libraries and resource centres.

Principal features of the federal omniversity

The omniversity model will embody diversity, be more cost effective, provide a framework for strategic thinking, be regional and co-operative rather than individualised and competitive, and most of all, be learner-oriented. That is, it will place primacy on the learner as participant rather than 'customer'. Among other things, the federal omniversity will:

- encompass learning at all levels (post-compulsory) both award-gathering and short- course training;

- have clearly defined staged awards (for each year of study or equivalent);

- accommodate a variety of learning approaches;
- offer a wide range of subjects that can be tailored to requirements;
- facilitate access to non-compulsory education and seamless progression (transferability problems are minimised because the omniversity is an integrated system);
- encourage the facilitation of learning rather than teaching;
- disseminate information via electronic means — dispensing with lecturers and other information-providing events;
- provide on-line tutorial support;
- require group meetings as an integral part of courses, used for workshops or discussions, as regular or occasional events (such as summer schools);
- involve 'new', coherent, structured approaches to learning and teaching (Ratcliff and associates, 1995) and to research;
- provide a framework for continuous education and training into which the full-time, 3-year, on-site, undergraduate degree will have to fit;
- integrate work-place learning;
- establish separate research institutes — both education-based and industry-based, (which would be organisationally rather than geographically separate);
- accommodate individual distance/flexible learning;
- lead to a simpler funding and external quality-monitoring process — fewer separate, autonomous units with more internal responsibility.

It is possible that much of this will occur whether it is planned or not. It will be messy and probably inequitable if left entirely to the 'market'. If it becomes as dominated by the 'customer' as George Ritzer suggests, then it is possible that academic credibility will disappear altogether.

As with anything else, targeted funding could encourage a rational development of the omniversity through the provision of premium funding to organisations who set-up and operate as regional omniversities. They would benefit by rapidly drawing in industry and would take-off very quickly.

At root, higher education must produce graduates who are enhanced and empowered by their experience to cope with and anticipate change. Employing organisations do not need victims of change, they need people who can contribute to the transformation of the organisations in the face of rapid and continuous change.

Higher education is in a unique position to transform students to become transformative agents. To do this, though, higher education must itself be transformed (UNESCO, 1995, p. 42; Harvey and Knight, 1996). Structurally, this is inevitable. What is needed is that academics embrace the new paradigm of higher education and embrace transformation as a positive rather than regrettable step away from the traditional values of the cloister.

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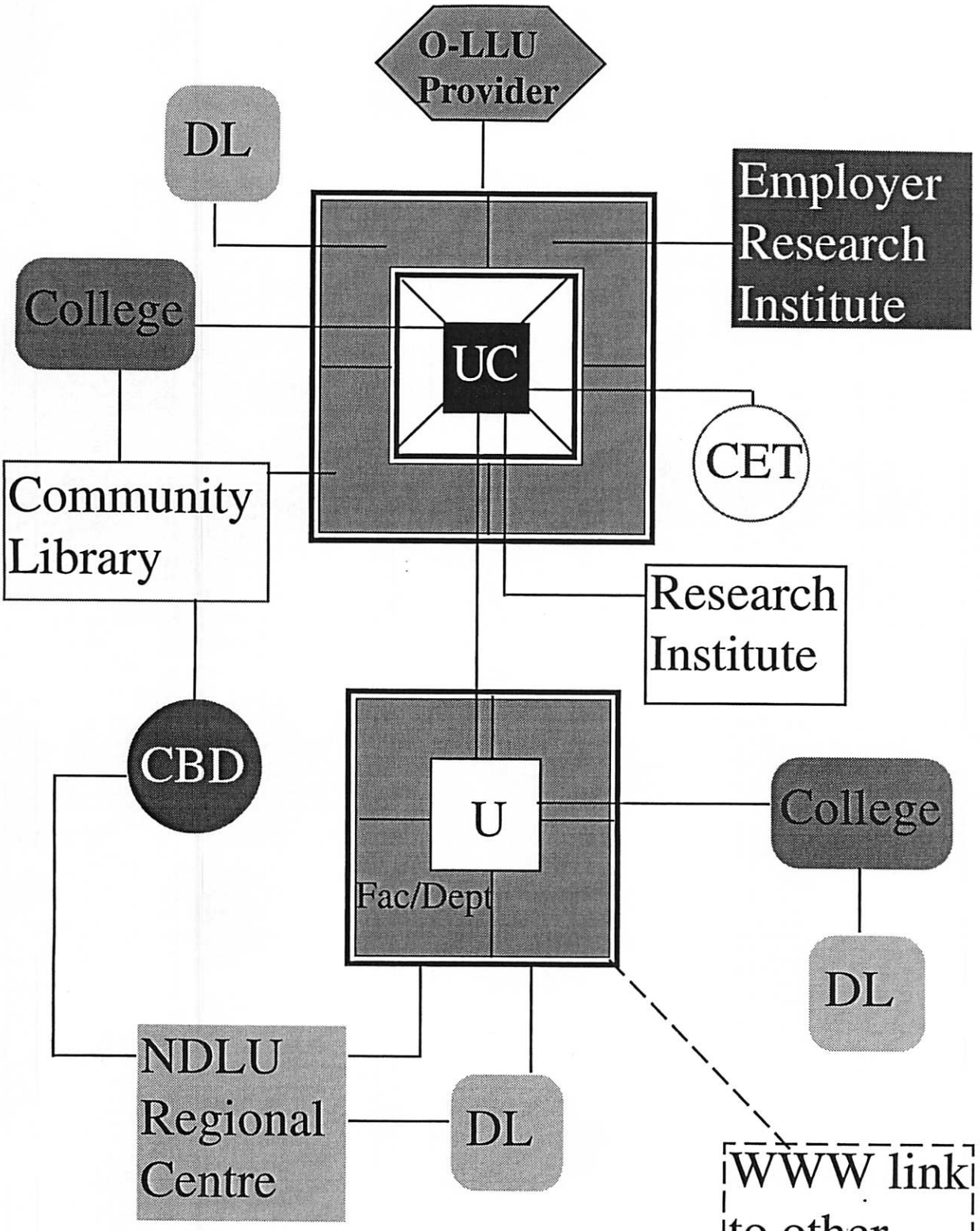
Federal Omniversity Model



Key:

UC	= University Central Administration
U	= University
DL	= Distance learner
O-LLU	= On-Line Learning Unit
CBD	= Competence-based degrees in the workplace
CET	= Continuous education and training, on-site or in college
NDLU	= National Distance Learning University