



Resilience of the University

Speaking at Europe's oldest University, it is difficult to avoid speculating on why Universities are amongst the most long-lived of human institutions. In Europe, there are about 65 institutions that survive from the 16th century, operating in much the same way and in much the same place that they always have. Of these, 56 are universities; the others being such as the Papacy, the British monarchy and the Bank of Siena. The reason that universities have been so resilient is that they have been clever in reinventing themselves and adapting to contemporary needs. They have adapted by making themselves indispensable to the needs of an autocratic state; or an autocratic church; or, as many at the present day do, to a state that is their paymaster or gives them formal license to operate.

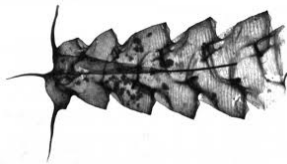
I intend, as a devotee of the idea of the university, to assess some of the challenges, pathologies and opportunities that face the university in

maintaining its relevance to the needs of its students and the society of which it is part.

Judicious adaptation?

Although modern Universities should adapt to contemporary needs, they must be careful how they do so. As a geologist, a Darwinian analogy from organic evolution comes readily to mind that shows the danger of over-adaptation. When species become very highly adapted to their environment, they flourish, but, when that environment changes, they may lack the flexibility to adapt, with extinction as a frequent end-point.

Extinction of highly-adapted species



Graptolites (marine)
Extinction 411-407 million years



Rugose corals
Extinction 252 million years



Dinosaur (terrestrial)
Extinction – 64 million years



Dodo (bird)
Extinction – about 1662

Long-term consequences of over-adaptation

It is always tempting to think that the future will be a seamless continuation of the present, and that strong adaptation to contemporary demands will always be a safe bet. But we should beware of historical myopia. Relatively stable societies tend to underestimate the magnitude, violence and unpredictability of the erratic swerves of history that can result in dramatic social and economic changes and fundamental changes in political priorities. Short-term priorities can rapidly become irrelevant. Does the university have a clear enough view of its long-term value to society that permits it to adapt to

unexpected shifts in priorities from generation to generation. Or is it so wedded to the short term that it is unable to adapt?

What happened to the knowledge economy?

Several years ago, the dominant discourse was about the so-called Knowledge Economy. It would be a high growth, high wage economy based on deep technical skills, with a massive demand for graduates and research. 10 years ago the European Commission estimated that Europe needed 10,000 more PhD graduates per year. Such evaluations were accompanied by assertions such as that from the Australian chief scientist (The Chance to change – 2000):

“The universities have huge potential to play a central role as dynamos of growth in the innovation process and be huge generators of wealth creation”.

Such views led to research being ever more directed towards commercially defined objectives, and teaching towards the production of graduates, particularly with highly specialised skills in science, technology and business, to directly serve the needs of national economies. A highly utilitarian view of the human role that was wonderfully represented by Charlie Chaplin his 1937 film *Modern Times*.



But to almost universal surprise, history has yet again failed to live up to expectation. The biggest economic crisis in recent history intervened, with the impoverishment of millions. It has been followed by an extraordinary failure to

learn lessons from the crash. The very processes that led to collapse were given a new lease of life, with the disparities of wealth between the 1% at the top and everyone else growing more extreme by the year. (One of my daughters is a highly trained nurse – who offers considerable social value. A top banker – who has been shown to offer little if any social value – earns my daughter’s annual salary in 2 days). Accompanying these changes, the supply of graduates has continued to increase, but demand has fallen. The demand for bachelors graduates is weak – in some European countries less than 50% get what have been called “graduate jobs”. Strong supply and weak demand have generated qualification inflation, with a Masters rather than a Bachelors degree being required for formerly bachelor jobs, and with Graduate unemployment exceeding 50% in some countries in Europe. The most financially successful entrepreneurs concentrate on lucrative but economically unproductive renting out of capital resources or providing cleaning services at less than a living wage, rather than investing in and promoting new uses of biotechnology.

But more recent analyses of the role of university research have moved away from the Knowledge Economy model with its stress on the direct utility of research as the driver of the economy. I would argue that a more realistic conclusion was drawn by McKinsey Global Institute (2010 - How to Compete and Grow):

“Even in the USA, the research intensive technology sector is not a prime driver of growth. It is the diffusion of technology, carried by talented people, into major economic players, and non-technology innovations by those same talents that are its prime cause. Major economic growth directly through licensing spin-out, start-up and stimulation of research is, and always has been, a pipe dream.”

In other words, rather than research being the direct economic driver, the important process is the way that the annual flux of graduates carries research-derived concepts into society, and who are clever and bold enough

to generate their own ideas for developments of productive business or public policy.

Perhaps the trends of recent years will turn out to be transient. But perhaps they will persist. Have we thought clearly of the role of the University if they were to be the future?

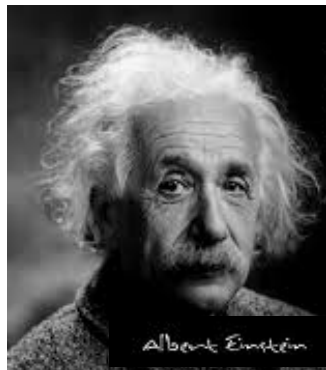
A definition of purpose?

If these trends are not transient, what might be the university's response? The answer will depend on what purpose we take for higher education. But here, rather than a simple, agreed definition of purpose, we hear a cacophony of voices. The outsiders want the students trained for their first job out of university. Academics teaching them want the student to be educated for 50 years of self-fulfilment. The problem is that the students want both. It is the ancient collision between each student's short-term and long-term goals, between 'training' and 'education', between the 'vocational' and 'general', between honing the mind and nourishing the soul. It divides the professional educators, divides the outside critics and supporters, and it divides the students too.

For me however, these are false dichotomies. It is not one thing or the other, but both. I assert that our fundamental purpose in higher education is to make students think, by feeding and training their instinct to understand and seek meaning. It is a process whereby students are taught to question interpretations that are given to them, to reduce the chaos of information to the order of an analytical argument, to identify problems for themselves and to resolve them by rational argument supported by evidence; not to be dismayed by complexity but to be capable and daring in unravelling it, and to verify for themselves what is stable in that very unstable compound that often passes for knowledge.

I profoundly disagree with the assumption that useful knowledge is only that knowledge which forms the immediate basis for the technologies and skills believed to be crucial for economic success. The deeper abilities I have described should be the bedrock of university education, and the bedrock on which the professional skills that society needs are most securely built. They enable the practical skills needed by society to be most intelligently deployed: those of doctors, engineers, nurses, scientists, teachers, accountants, lawyers, ministers, businessmen, public servants, politicians and those who promote and perform the creative arts. The combination of deep, personal understanding and technical skill is a powerful alchemy that sustains a creative and innovative society.

I believe therefore that we concentrate too much on what is taught, rather than how it is taught. My sympathy lies more with such views as expressed by Albert Einstein.



“Education is not the learning of facts, but the training of the mind to think”

“ I never teach my pupils, I only provide the conditions under which they can learn.”

“Imagination is more important than knowledge.”

The bedrock of learning?

Somehow we must escape from the position where University teaching is like a fast food outlet – a standard product for the largest number, rather than a process that adapts to the diversity of human talents and gives them the opportunity to flourish.

Too much of the time of academics is taken up by the communication of information that is already available electronically to students. If we were bolder, we could be more effective by pointing students towards information

technology as a source of curricula facts and theories. It would free up academics' time to return to more intimate styles of learning. The consequences of the encounter between minds, between a mind, a problem and evidence, and between the minds of successive generations can be profoundly and marvellously unpredictable and creative, and should again be at the heart of university learning.

The annual flux of skilled graduates armed with these capacities continually refreshes society's technical excellence and its economic, social and cultural vitality, and are crucial to its capability to take bold, imaginative and principled action in the face of an uncertain future. They are deeply personal, private goods, but they are also public goods. They are the skills that every society needs in its citizens. And if I were unemployed or under-employed, they would be the skills that I would want to have to enable me to adapt to whatever circumstance I found myself in.

Statements about the deeper, personal values of education can easily be traduced as sentimental attachment to an ivory tower, detached from a world of employment and the insistent utilitarian demands from a variety of stakeholders. I retort that such values are themselves utilitarian. They are a means whereby technical knowledge can be made more powerful, a basis for a more effective professional contribution to the societies of which we are all part, and as a vital preparation for the role of graduates in an unknown future, captured here by Drew Faust, President of Harvard.



**“ A university is not about results in the next quarter;
it is not even about who a student has become by graduation.
It is about learning that moulds a lifetime;
learning that transmits the heritage of millennia;
learning that shapes the future”.**

In the recent past higher education was regarded as a public good, which justified the expenditure of public money to support students through universities. The political shifts of recent years have, in many countries, re-defined it as a private good, which should be paid for by the individual benefitting from it, many of whom pile up intimidating debts. Universities have been markedly absent from these debates. We should energetically engage with them, rather than meekly and implicitly accepting the premise of private benefit, and where fees are paid, simply pocketing the money.

Changing priorities

The dominant cause of many of the recent changes in universities are a reflection of the changing views of the state, as their principal paymaster. For most governments, Universities have moved from the margin of their concern to near its centre. It reflects a firmly established view amongst governments around the world that high quality, internationally competitive research and higher education, mostly contained within universities, are pre-requisites for long-term success in globalised economies. Our universities and their representative bodies have enthusiastically taken up this refrain and routinely extol universities' direct economic impact. Indeed we have put so much emphasis on this aspect of our activities that many governments now believe that universities exist **mainly** to directly bolster the economy.

A consequence has been dramatic global expansion of university provision, greater diversity of style and purpose, increased mobility of students and staff and a massive increase in public investment in research, particularly in science, technology and medicine.

Academics and their universities, particularly in Europe, are deeply attached to the idea that university teaching has long been and must continue to be research-led in any university that is worthy of the title. This is a historical illusion. So-called research-intensity is a recent phenomenon. A 1971 study using data from the mid-1960s in the UK, where the teaching-research link is fiercely defended, showed that universities were overwhelmingly oriented towards teaching and not research. The term for staff, now long since forgotten, was “university teacher”. A mere 10% of staff were even “interested” in research, whilst only 4% regarded research as their primary responsibility. A similar study in the USA as late as 1979, found a similar result, and I suspect that this was also true elsewhere.

Things have fundamentally changed. Not only there has there been a tenfold increase in student numbers with only a doubling of academic staff numbers, but research activity has exploded, and taken over from teaching as the higher status activity. They are trends that have produced a dramatic decrease in the proportion of staff time dedicated to teaching. Arguably, rather than research being a necessary support for teaching, it may have become its enemy. It is vital that we correct this perverse balance, and change the incentives that motivate universities and academics to act in this way.

There is an illuminating tale of Princeton University that reflects a more balanced view, from the 1970s when William Bowen was its President. He was approached by one of the University’s mathematician’s, a distinguished Fields Medallist (a Nobel Prize equivalent in mathematics), who had been offered a post at the University of Chicago, with the lure that he would be

exempted from teaching. “I would far prefer”, said our mathematician to Bowen, “to stay at Princeton if only you would make me a similar offer”. Bowen replied that though he would be sad to see him leave, Princeton could probably survive his departure, but it would not survive as the place it was, if it permitted its professors not to teach.

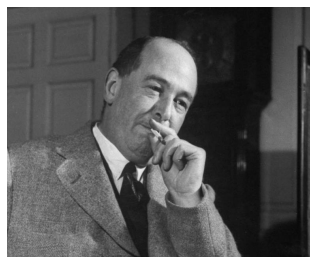
We could define the university purpose very simply, as **the re-invigoration of inherited and the creation of new knowledge, and their communication**, and, in the profound words of Ben Okri, the Nigerian poet, “the setting up of their students for the act of self-discovery”. Further, that we have an indispensable responsibility to help our students learn to think, and then to build on that to develop the creative & practical skills that all societies need. To do the latter without the former is to betray our students.

The value and values of research

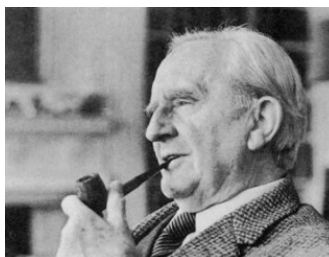
I now want to focus specifically on research. What is the value of a university’s research effort?

Commercialisation of university research is important, it should be done, but as I have implied, it is neither the principle target of the university nor of its research efforts. And before we run away with the idea that commercialisation is the province of science, technology and medicine, I offer the interesting counter-example that two of the largest returns on intellectual property by staff of the University of Oxford; from two historians, one of renaissance history, one of medieval history.

Two historians



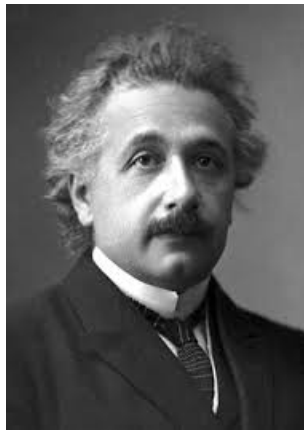
C.S Lewis
The Narnia Chronicles



J.R.R. Tolkien
The Lord of the Rings

In research, universities have explored the deepest and most intractable problems that challenge human understanding, and yet seek the practical applications of discovery. It is an enterprise that has produced many towering intellectual achievements that have had, sooner or later, powerful practical applications or deep philosophical, scientific or social insights that change the frameworks of human perception or the practicalities of life.

However, we should resist the sin of hubris. As recent systematic attempts to reproduce research results have found that in the majority of cases they are **not** reproducible; with the fascinating possibility that most of the conclusions of university research are just **wrong**. Does it matter – maybe not! The greatest advances in understanding often come from bold and imaginative leaps of imagination. Playing comes a poor second. But we must reveal our arguments and data so that we can be shown to be wrong. It was pithily summed up by Einstein:



“No amount of experimentation can prove me right; A single experiment can prove me wrong.”

Albert Einstein

- and its consequence graphically described by Arthur Koestler as: **“The progress of science is strewn, like an ancient desert trail, with the bleached skeletons of discarded theories which once seemed to possess eternal life.”**

University research – ivory tower, playground and serendipity

Most of the greatest research achievements have not come from research directed towards specific ends, but from so-called curiosity-driven research, from the much maligned Ivory Tower. It is from the researchers' and scholars' love of mess and uncertainty that speculation and new knowledge emerge. It contrasts to governments' love of order and predictability. But it has served our societies well, and it is vital that the freedom of academics to research and speculate is not excessively constrained by prescribed research targets.

Universities have also proved to be highly cost effective settings for research. The reason may lie in their non-hierarchical nature, and the pervasive presence of the irreverent young, whose minds are not so full of the means of refutation that original ideas are denied entry. This contrasts with specialist research institutes, where the peace and quiet to focus on a mission, undistracted by teaching or other responsibilities, and with relatively assured funding, may be a questionable blessing.

Responsibilities

This does not mean that university researchers should be free from the responsibility to seek solutions to the pressing needs of their societies. At this juncture in history, the largest challenge to universities undoubtedly lies in the potential instability of rapidly changing global systems. The planetary population continues to boom, we increasingly intervene in the natural systems of the planet, and the geopolitical balance shifts, with rapid and profound social transformations and deep cultural faultlines. Climate change, ideological extremes, conflict, migration, maintenance of the productive capacity of the biosphere, green energy, the threat of pandemic from greater mobility and growing antibiotic resistance, all combine in a wicked nexus, whilst our capacity to manage risk in global economies has been exposed as dangerously fallible in creating a bubble of false prosperity.

One university characteristic equips them well to tackle these problems: that is their uniqueness amongst human institutions in the range of knowledge

they encompass. They have an unrivalled capacity, when they break out of their disciplinary silos, to combine their skills in creative ways to address these issues. They are not the unique preserves of chemists, mathematicians, political scientists, philosophers and so on, but require powerful cross-disciplinary mobilisation and intense collaboration between them. It is only through such efforts that the real problems of a world in crisis are likely to be addressed. There is an ethical imperative for the university to be much bolder in doing this. It is uniquely equipped to do so. It must try harder. We academics **in** our disciplines tend to be very conservative, and can be profoundly resistant to managed change. It could be said that **changing a University is like moving a graveyard – you get no help from the people inside!**

Have universities done enough, not just to research these matters, which they do, but to be vociferous in the public domain about the deep and unsettling issues that all societies need to confront? Or has the market model become the defining identity of higher education such that we have become too captive to the immediate economic objectives to which governments increasingly point us? Are we academics, cocooned in a mantle of corporate appeasement, too fearful to be activists on the broader social or global stage? Are we merely drones who do research in specialist prescribed fields, publish in learned journals, gather in the citations and await promotion?

These are central issues for the future of universities. Do we contribute most to society as agents for the implementation of government policy, particularly in the economic field, or should we stimulate a distinctive public discourse by articulating a depth, breadth and diversity of vision absent in an inevitably myopic political discourse that is driven by electoral cycles? I hope that my priority is clear.

Governance – the corporate approach and marketisation

Then I want to touch on the way in which universities govern themselves and

how they make decisions, for those are the keys in responding to the challenges that I have outlined.

If universities are to have a greater sense of themselves and of their real value to society rather than merely being instruments that serve transient government policies, the way they are governed and how they manage themselves are crucial. But the variety of almost irreconcilable demands on them, to be practical as well as transcendent - to assist immediate national needs but to pursue knowledge for its own sake - to be open but yet to protect commercial confidence - to both add value and question values, all place great pressure on university governance. An understandable response has been to increase the size, diversify the roles and extend the reach of increasingly centralised management in order to control the practices and define the purposes of universities so that they converge with national priorities.

Whilst greater professionalism in management is to be welcomed, the risk is that universities come to behave as corporate organisations with centrally-defined priorities to which all their members must acquiesce, rather than acting to protect their members' untrammelled freedom to think, to explore and to broadcast their views in novel areas of critical enquiry.

Many universities have been seduced by the fallacy of managerial primacy: that things that make management difficult, necessarily need to be removed or reformed. One of the dangers of corporatism is that it can crush one of the most powerful agents of university creativity, that of academic freedom.

Moreover the recent incidences of corporate corruption, incompetence and greed in business do not provide encouraging models of efficient or ethical behaviour for university management. It would be ironic if universities were to pursue the corporate route just as many growing companies are adopting flat-lying structures and the absence of bosses, much in the way of the

traditional university model.

Unfortunately, we see many attributes of the corporate approach being adopted by universities.

There have been growing numbers of cases where universities have felt it proper to defend the corporate entity through disciplinary actions against staff and students, justified on nebulous and inappropriate grounds such as “breaching confidentiality” or of “undermining a university’s good name”.

Higher education is coming to resemble any other service industry, where branding, a tool of a company’s sales and marketing department, is regarded as an important device. A distinctive brand is a means of providing customers with reassurance prior to product purchase or experience. At its simplest, it seeks the response “the handbag must be all right if it's from Chanel”. Applied to universities, or even to handbags, a brand does not reflect the real utility of either.

A symptom of this increasingly marketised environment is a plague of PR that eliminates truthfulness as a measure of worth, giving absolute precedence to the image over the real. There are no commonplace objectives that are not “**visionary**”, no research that is not “**cutting edge**”, no prize that is not “**prestigious**”, and “**international excellence**” lies around like litter. It is a corruption of language that corrodes the capacity for a university to speak truthfully, plainly and fearlessly about subjects close to its heart.

The University as Advertising Agent

- *** is an ambitious, truly globally minded institution with a relentless focus on the highest international quality
- *** is a boldly creative and intellectually adventurous community of scholarship with a commitment to exploring big ideas
- *** is at the forefront of global academic scholarship and is a vibrant world centre for innovation
- *** is a dynamic institution, globally renowned for its courses
- *** is a dynamic, globally engaged community of unrivalled excellence
- *** is an inspiring place, abounding in creativity & international excellence
- *** is an exciting, vibrant, dynamic research-led community whose visions are shaping tomorrow's world

Whatever happened to the merely "good"?

This developing higher education market also now has its own stock market quotation in the international ranking tables that purport to reflect the relative excellence of universities worldwide. They commit errors that we teach our students to avoid. Whilst their logic and their claims to relevance and utility can be readily demolished, league tables are a seductive device. Their **pathology** is to encourage universities to converge towards the research-dominated model that generates high ranking scores, thereby reducing the vital diversity of a university **system**. I was delighted to see that German university sociologists have **all** agreed not to collaborate with the rankers. We should all follow their example.

A sense of integrity?

Patterns and processes of funding have become increasingly prescriptive, with injunctions to re-design, re-package and sell university products in response to shifting governmental or consumer priorities, to the temporary benefit of one part of the university enterprise, but potentially to the detriment of the whole. The knowledge on which human society depends is not separable in such a way. It is a complex interacting whole that needs to be understood as a whole. Although public policy might put a premium on this or that aspect at any one time, it would be profoundly unwise to neglect the rest purely on the ground of present concern.

I argue that Universities are not just supermarkets for a variety of public and private goods that are currently in demand. They deal with the universality of knowledge; they are concerned with human beings in all their manifestations – biological, mental, emotional, objective and subjective – and their social, cultural and economic organisations and interactions with each other; they are concerned with the physical world within which human beings find themselves. They seek to understand that which we do not understand; they seek to explain complexity; they seek to discover that which is hidden from us. They seek to establish what is common to all of us and what distinguishes us each from another or each group from another. These things are common to the whole of university endeavour whatever the discipline. They are not “academic” in the pejorative sense of the word, but are of profound, practical utility. They are the foundation upon which the university enterprise rests and upon which its significance for society is built.

It is in the interests of both universities and society to push back against the pressures towards marketisation of universities and the pathologies associated with it. Are we prepared to take a bold stance about fundamental values in higher education, and to ignore any consequences this might have for so-called international rankings, even though politically, simplistic bombast about university excellence and international rankings are more seductive than more nuanced statements about deeper values? You should expect an Englishman to give the last word to William Shakespeare. So here is Polonius, in *Hamlet*, who answered this question:



*This above all:
to thine own self be true,
And it must follow,
as the night the day,
Thou canst not then be
False to any man.*