THE BRIDGE
FORUM DIALOGUE

Higher Education in Europe:

can we be equal and excellent too?

Lecture held on 28 September 2005 at the Conference Centre of the Jean Monnet building, Kirchberg

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INTRODUCTION

By Yves Mersch, Governor of the Banque centrale du Luxembourg and President of the Bridge Forum Dialogue

First, a few words to introduce the Bridge Forum Dialogue which is a non-profit organisation established in Luxembourg. The Forum was created in 2000 with the aim of creating a dialogue between, on the one side, the European Institutions in Luxembourg and, on the other side, the actors and institutions of Luxembourg political, financial, economic and legal life concerning subjects of importance and topical interest. The President of the Forum is the Governor of the Central Bank of Luxembourg and, acting in their private capacity, the Vice-Presidents are the Presidents of the European Court of Justice, the European Court of Auditors and the European Investment Bank. The Forum normally organises some three meetings a year with distinguished guest speakers.

On 28 September 2005 the Forum organised a conference entitled “Higher Education in Europe: can we be equal and excellent too? “. The debate stimulated widespread interest, and its essential elements appear here. First, the reader will find a revised version of the opening speech by Sir Tim Lankester, President of Corpus Christi College, Oxford, with the same title as that of the conference. There follows, next, the paper of Professor Dr. Rolf Tarrach, Rector of the Université du Luxembourg (“Strategic Framework for the Université du Luxembourg 2006-2009, 2010-2015”) on which he based his speech. Third, follow some comments sent to the Forum, after reading the texts of the two guest speakers, by Dr. John Gulliver, formerly Senior Lecturer in Education at the University of Plymouth. His paper is entitled: “A response to the

debate". That John Gulliver sent in written remarks to reply to the debate is an excellent demonstration that there really is a dialogue within the Forum.

Professor Dr. Peter Glotz, Director of the Media and Communications Management Institute of the University of St Gallen, and previously an eminent socialist statesman in Germany, was to have been one of the principal speakers in the debate but he died, tragically young, a month before the meeting.

The subject of the meeting and of this booklet is both topical and important. It is also controversial. Heated discussions followed proposals made in Britain and in Germany – considered as "elitist" by many- that "super universities" be established in those two countries. But whereas the average quality of teaching in European universities seems to be of a reasonably high level, and less uneven than in the USA, research in Europe suffers from underfunding.

A few words on "equality" and "excellence". We must, in Europe, do our best to achieve "excellence" in teaching, publications and research – though not necessarily all of these in any one university. But we are not born "equal" in intelligence or the aptitude to learn. Thus, at the risk of being simplistic, the best we can do to achieve "equality" in Education is to provide equality of opportunity for all those who wish to enjoy Higher Education by providing it at the level appropriate to their gifts. Social and economic inequalities must not be allowed to prevent access to the most suitable form of Higher Education.

Quality Higher Education is one of the best investments a society can make. It is evident that good teaching and good research are needed if Europe is to continue to compete successfully in global terms. But are we pursuing the right policies to achieve them?

Shanghai University's rating of the world's universities gives 17 of the top 20 places to America, 1 to Japan and only 2 to Europe[i].

To achieve “excellence” in European Higher Education since we cannot endlessly spend more we have to focus our spending. In Europe we spend only 1,1% of GDP on higher Education whereas the Americans spend 2,7%. Furthermore, the Americans spend between 2 and 5 times as much per year on a university student as we do in Europe. The Americans depend much less on state finance than we in Europe. Their funding comes from diverse sources, from fee-paying students, alumni giving and donations from business and industry. It could be useful for us to study the varied American model and possibly to draw some lessons from it. In particular we might aim at freeing European universities from the threat of having to educate ever-greater numbers of students with relatively diminishing budgets. As for research, Sir Tim Lankester points out that in Europe we suffer from underfunding. Here it is worth considering whether it is more rewarding, in terms of results, to spread the finance available for research thinly between a large number of universities or whether to concentrate expenditure on a smaller number of institutions in which higher quality results might be produced.

To look at university research leads us, inevitably, to Nobel Prizes. Although nationality is supposed to play no part in the award of Nobel Prizes it is nonetheless interesting to note where the Prizes go. Since 1970 over half the Prizes for medicine and science have been won by Americans and most recently nearly two-thirds. Britain comes second but its share has fallen from 20% before 1970 to under 10% now. Germany, which won 30% of the Prizes in the early part of the twentieth century, now makes a relatively poor showing.

[i] Jiao Tong University annual report. The 2 European universities are Cambridge and Oxford.

Author: Sir Tim Lankester, President of Corpus Christi College, Oxford

Introduction

The American philosopher, Thomas Nagel, an egalitarian in spirit and by philosophical inclination, has written: “A society which supports creative achievement and encourages maximum levels of excellence will have to accept and exploit stratification and hierarchy. The educational system…. will have to include a frankly inegalitarian element, even if its broad base is geared to provide fair equality of opportunity." [ii] In other words, there **is** a trade-off between excellence and equality.

William Bowen, a former President of Princeton, in an important new study of higher education in the USA, appears to take a somewhat different stance. He defines excellence in higher education as "educating large numbers of people to a high standard and advancing and disseminating knowledge".[iii] The goals of equality and equity on the one hand, and excellence on the other, have to be seen as complementary. Excellence that privileges the few, in Bowen's view, is not real excellence.

Nagel's and Bowen's views are not as far apart as they might appear at first sight. Equality of opportunity features strongly in Nagel's thinking, as it does in Bowen's. Bowen accepts that, provided access to higher education is fair, there is bound to be a hierarchy of institutions in terms of quality. And he does not altogether deny that there is a trade-off between excellence and equity. He cites, with qualified approval, the practice of leading universities in the USA in giving preference to the sons and daughters of alumni/ae: such preference is at the expense of equity but it provides a boost to fund-raising and therefore can help to improve quality.

[ii] Thomas Nagel, “Equality and Partiality.” Oxford University Press, 1991, p 132.
[iii] William Bowen, Martin Kurzweil and Eugene Tobin, “Equity and Excellence in American Higher Education”, University of Virginia Press, 2005, p 72.

It is surely right to assert that, in any higher education system, equality of opportunity and excellence are each essential goals; but also we have to accept that there **are** some potential trade-offs. If these trade-offs can be minimised, so much the better.

I will attempt to throw light on these trade-offs by examining some of the features of higher education in Britain over the past few decades.

Definitions

But first, we need to consider what we mean by equality, equity and excellence in the context of higher education.

Bowen's definition of excellence - which takes equity (or its absence) as a component of quality - is not very helpful. It seems better to consider the quality of learning and research independently of whether there is equality or equity in the system.

International quality rankings tend to focus on research. League tables produced in Britain on British universities focus on research, but also on teaching and other aspects of learning provision such as libraries and IT, plus quality of student intake and completion rates. Our very best universities usually score high on all of these; but it is possible to be "excellent" in respect of one type of activity, say research, and less good in respect of another. A study in the mid-1990s found that across the university sector as a whole there was no relationship between ratings in research and teaching.[iv] It is also possible of course for a university to excel in some disciplines but not in others. And are we talking of "excellence" in absolute or relative terms? For example, relative to what is being achieved at top American universities? Furthermore, how reliable are the assessments of quality? There are many problems in measuring research and learning quality. In Britain, large resources have been put into assessment in order to provide information for prospective students, to drive up quality and to provide a basis for funding decisions; but ratings and rankings will never be more than approximate.

Equality and equity are not the same thing, though the two concepts certainly overlap. We can talk about universities aiming to achieve the same standards in learning and research. We can talk about universities being funded on an equal basis. But if equality of funding means that the more talented students attending certain institutions are unable to fulfil their potential, this is arguably unfair on them. Alternatively, one can argue on equity grounds that more resources,

[iv] "The Relationship between Research and Teaching: a Meta-Analysis". Review of Education Research, 1996.

rather than less, should be given to institutions that cater for less talented students as compensation for their inferior talent and the need for more intensive teaching.

In the case of admissions, equity is synonymous with equality of opportunity. But what precisely do we mean by equality of opportunity? At a minimum, it should mean that all who are qualified to benefit from an undergraduate education should be able to do so whether or not they can afford to pay for it. The position is more complicated when one tries to apply equality of opportunity to university admissions decisions. Most British universities select solely on the basis of academic merit, albeit taking into account academic potential as well as prior achievement. In judging potential, some account is taken account on an individual basis of contextual factors such as family and school background. However, in contrast to many American universities, there is no overt preference given to candidates from minority communities or from poor families. Some have argued that it would be more equitable if our top universities did give overt preference for such candidates - on the grounds that it would help to correct the educational and other disadvantages they have suffered and are likely to continue to suffer; and that a more diverse student body provides a better learning environment for all students. However, the consensus view is that it would be unfair on other applicants who are better qualified and that it would compromise standards if there were any such overt preference.

There is also a consensus amongst our universities and the wider public that other forms of preference that are common in America - namely, preference for sons and daughters of alumni/ae ("legacies") and of potential donors, for recruited athletes, and for early applicants - would be unfair and unacceptable.[v]

These examples show that notions of equality and equity are not straightforward and different societies will have different views on how they should be interpreted. In considering the possible trade-offs with quality, we need to bear this complexity in mind.

[v] Bowen found that “legacies”, recruited athletes and early applicants had a 20-30 percent better chance, for a given SAT score, of being admitted into a sample of top universities than other candidates. Candidates from underrepresented minorities had a 28 percent better chance, but the chances of candidates from poorer families were no higher than those from wealthier families despite the stated policies of these universities that they are given some preference. See Bowen, p 105.

The British Experience

There has been a huge expansion of higher education over the past few decades. In the 1960's, about 8 percent of 18 to 21 year olds were enrolled in universities. Today over 40 percent are enrolled. There has also been a very large increase in the number of "mature students" taking first degrees.

The policy of successive governments has been that all who are qualified to attend university (defined as anyone who achieves passes at "A level" - the public examination taken in the last year of secondary school - in at least two subjects) should be enabled to do so. The expansion in undergraduate places and free or highly subsidised tuition has made this possible. The policy has been successful in the sense that, as of today, 90 percent of those with two "A levels" are attending university.

In addition, there has been a large expansion in the number of students taking post-graduate degrees.

To accommodate the expansion in student numbers, the size of individual universities had to increase, and the number of universities roughly trebled. In the early 1990s the Polytechnics - whose primary role had been in vocational education (often at sub-degree level) and industry-related research - were given the status of universities and given the opportunity to expand into other, non-vocational areas.

This expansion and transformation was accompanied, however, by severe cuts in unit funding. Over the past two decades, government funding per student was cut by about 40 percent in real terms, and until 1998 universities were not allowed to charge tuition fees.

The reduction in funding resulted in larger classes and less contact time with lecturers (the average staff/student ratio worsened from 1:10 to 1:18 between 1987 and 2000); the more or

less freezing of academic salaries; and in some disciplines, difficulties in recruiting and retaining academic staff.

While funding overall was squeezed, there was at the same time a measure of equalisation across the universities. The funding of teaching at the former Polytechnics was increased to bring it into line with funding at the existing universities. The tuition premium paid to Oxford and Cambridge to compensate them for their more intensive teaching regimes was gradually phased out.

The funding of research, after severe cuts in the 1980s, started to recover in the 1990s and more so after 2000. The limited funds that were available were spread more widely when the Polytechnics were designated as universities. But in the last few years, research funds have been concentrated to a greater degree once again in the top research institutions. The government's White Paper on Higher Education in 2003 clearly signalled the need to concentrate high quality research in fewer universities. There remains, nonetheless, a large backlog of investment in research infrastructure and the compression of salaries and larger teaching loads have created serious problems for the research community.

Despite all these funding pressures, the quality of learning and research appears not to have deteriorated to any major extent, and in our top universities it remains very high. As a measure of our standing in research, the most widely quoted international rankings for 2005 show Cambridge at number 2 and Oxford at number 10, with two others (Imperial College and University College, London) in the top thirty, and seven others in the top one hundred.[vi]

The quality of learning – at least in terms of the level of knowledge and understanding of their subjects - has held up for various reasons. Oxford and Cambridge, with their substantial endowments, have been able to offset the reduction in government funding and maintain student/lecturer ratios at a favourable level. They and other leading universities have also become more rigorous in their selection of students, and through their widening participation

[vi] International League Table of Research Universities, Institute of Higher Education, Shanghai Jiao Tong University, 2005.

activities they have achieved a larger pool of talented applicants. As a result, they have had a greater concentration of talent in their student bodies. New technology, improved teaching methods and the dedication of academic staff - despite the fact that salaries have fallen very significantly relative to those of other professions - have all helped to offset the effect of the funding reductions.

Post-graduate students on the whole are better taught and supervised than they once were - especially in the humanities and the social sciences where in former times students were too often given little or no training in research methods and were left to “sink or swim”.

There is a longer “tail” of universities than there used to be where levels of achievement are significantly lower. Perhaps not surprisingly in view of the advent of the new universities, the concentration of talent in older institutions and the opening up of higher education to a much larger cohort, the gap in learning and research quality has probably widened across the sector.

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The overall picture in relation to quality is not altogether rosy even at our best universities. Whilst quality in absolute terms has held up, the failure to invest adequately in facilities and in academic staff poses dangers for the future. Relative to the top American universities, in research there are signs of slippage. Too many of our top researchers are attracted to America by higher salaries. Britain produces fewer Nobel Prize winners than it used to. And the international reputation of Oxford and Cambridge, as well as other leading research universities, is not quite what it once was.

If the understanding and knowledge of his/her subject that the average undergraduate in one of our better universities achieves today is comparable to that of the past, there is one important aspect of learning where I believe there has been decline. I refer to what John Henry Newman, in his famous 1852 lectures on the ideal university[vii], called “formation of the intellect”.

Newman argued that cultivating the mind and what he called the “philosophical habit” are more important than anything in a university education. The acquisition of knowledge is necessary but

it is not enough. It has to be “informed…and impregnated by reason”. The cultivated mind is of intrinsic value for the individual - to be valued for itself; but Newman went on to say that a cultivated mind is also “emphatically useful” for the individual and for society. “The man”, he wrote, "who has learned to think and to reason and to compare and to discriminate and to analyse…. and formed his judgement and sharpened his mental vision” will be far better placed to undertake work in any number of professional and other activities than someone who has not.

One does not have to be nostalgic for some unreal 19th century ideal or agree with everything Newman said. But in a world of fast changing technologies in which it is impossible to forecast what specific skills in future will be needed, from an economic point of view teaching students **how** to think and how to learn - quite apart from its intrinsic value - are more important than ever.

This is something our universities have traditionally been rather good at. There is sometimes criticism that higher education in Britain is too narrow compared with that of the United States - in that it involves too much specialisation too soon. The flip-side, however, is that students are intellectually challenged at an earlier stage and over a longer period, and this enables them better to develop their thinking skills.

The decline in this aspect of higher education is due to various causes. The fact that students have less contact time with their professors and lecturers is one reason. Another is that many students are less well prepared for university than were their predecessors - because of failings in the secondary school system. (The demise, on egalitarian grounds, of the selective grammar schools has contributed to this). Consequently, they have to work harder once they arrive at university to achieve a similar level of attainment, and therefore have less time for reading, discussing and thinking more broadly. And lastly, we have a social and political culture that can only be described, as anti-intellectual and which does not sufficiently value learning as an end in itself. In their approach to higher education, successive governments have made things worse. By thinking of higher education mainly as an economic instrument, and by putting so much emphasis on job related skills, they have failed to recognize just how important broad intellectual

[vii] J.H. Newman, “The Idea of the University”, Oxford University Press, 1976.

skills are for society as well as for the individual. This is not to deny to the importance of vocational training - for too long the Cinderella of the British education and training system. But we need strengthened vocational training **and** a revival - or at least reemphasis - of the idea that training of the mind is one of the key purposes of higher education.[viii]

Many of the problems that face our universities come back to inadequate funding. In the name of equity and political expedience, they have been prevented from making up the shortfall in government funding by charging higher tuition fees. It would of course be inequitable if students were charged fees they and their families could not afford, but there are many families - such as those who have sent their children to private schools - who would be able to afford higher fees. Holding down tuition fees for higher income families has done nothing for equity and has compromised quality by reducing the universities' resources.[ix] Our universities will be allowed to raise their tuition fees to £3,000 in 2006, but this will still be a long way below economic costs.[x]

Where the universities have been at fault is not putting greater effort into fund-raising. Harvard's and Yale's endowments are five times those of Oxford and Cambridge. In 2002/03, Harvard raised five times what Oxford raised - and Oxford is one of most successful of our universities in tapping private donors. Although the giving culture is less favourable than in the USA, this does not fully explain the difference in achievement.

[viii] There **are** of course vocational subjects that can be taught in ways that challenge intellectually – subjects like Economics, Law, Materials Science and Medicine. But there are others, such as the many degree courses now available in various aspects of Management, where it is difficult. Many of the latter are taught at universities, which were formerly Polytechnics where the emphasis was and continues to be on training for the work-place. One of the purposes of giving them university status was to raise the status of, and remove the prejudice, against vocational training. Some have argued that it has had the opposite effect by removing their distinctiveness and encouraging them to offer courses that the traditional universities were better equipped to do – at the expense of maintaining excellence in, and attracting students for, vocational training.

[ix] This is an example of how equity can be compromised without any gain to quality. There is another example in the USA where, according to Bowen, the preference in admissions given to recruited athletes forms a "distinct threat to academic values and educational excellence". See Bowen, p 171.

[x] At English universities, the undergraduate tuition fee in 2005/06 for students from the UK and the rest of EU is £1,175 (universities are not allowed to charge more), but students from less well off families do not have to pay. In 2006, the tuition fee at most universities will rise to £3,000, but students will only have to pay once they have graduated and their income is above a certain level. Subsidised loans are available to cover living expenses and poorer students will continue to receive grants to cover their tuition.

It is often argued that our funding problems, both in regard to teaching and to research, would be less if our resources were better managed. No doubt they would; but as someone who has worked in government, in the private sector and in two universities, I can affirm that achieving real efficiency improvements in universities - by which I mean improvements without damaging quality - is not easy. It is very difficult to get the balance right between a managerial approach - setting clear objectives, monitoring progress towards them, establishing clear accountability for their achievement, etc - and retaining the sort of academic autonomy and collegiality that is necessary for the fostering of creativity and for maintaining a shared commitment to excellence. This is especially so in research universities. This is not to say there are not procedures and policies in older universities that unnecessarily inhibit efficiency. But the potential for efficiency gains, without damaging core values and academic quality, is not as great as many outside the university sector would have us believe.

Trade-Offs

What then has to been the overall record in regard to equality and equity and quality, and to what extent have the first two been compromised for the third, and vice versa?

In regard to equity and equality, the outstanding achievement has been in opening up higher education to all who are qualified and at a cost they could afford.

Selection for admission has come to be on academic merit, without regard to school, wealth or family background. And universities have made great efforts to encourage applications from students from disadvantaged backgrounds.

Though funding and status changes, there has been an attempt to improve the standing of the newer universities in relation to the older.

On the other side of the equity and equality ledger, there continues to be a distinct hierarchy in terms of quality of learning and research and in terms of how different institutions are perceived - with institutions that concentrate mainly on vocational studies generally having lower status. The government's 2003 White Paper said that we should "acknowledge and celebrate differences between institutions", but to many readers this meant an acknowledgement that the drive for equality and standardisation had gone too far. The funding of research has become more concentrated on top research universities.

Universities have not been willing - and government has not required them - to discriminate positively in favour of under-represented groups in their admissions decisions. They have taken this position in order not to compromise standards, and because public support for such a move does not appear to exist.

As regards quality, I have argued that, to a considerable extent, excellence at our top universities has been maintained both in learning and in research. But I have also suggested

that there are signs of slippage, and greater risks looking ahead unless action is taken to address the problems.

In summary then, it is a mixed picture in regard to equality, equity and quality. Equality and equity have been pursued, and successfully so, but not to such an extent that quality has yet been seriously compromised.[xi] In two key respects –widening the undergraduate talent pool and selection based on academic merit alone – the pursuit of equity has reinforced the pursuit of excellence. On the other hand, quality could have been better in absolute terms, there would not have been the same slippage relative to the USA, and there would be fewer risks looking forward, if there had been more resources. There is little doubt that, without the enormous expansion of the universities to cater for the increase in student numbers, the funding of a smaller number of universities would have been more favourable. Also, whilst from one point of view (i.e. admitting the most academically talented students) the refusal to follow the American path of giving preference in admissions to "legacy" and donor family applicants has served to protect excellence, from another point of view (i.e. enhancing resources) it has been at the expense of maintaining excellence.[xii]

Taken overall, there has been a significant trade-off between equity and excellence. Yet by not pushing the equity and equality aims too far or too hard, and because the universities and their staffs have made huge efforts to maintain quality, the trade-off has been kept within bounds. The trade-off would have been less if there had been more government funding, if universities had been able to charge fees – or more recently, higher fees - to students from better-off families, and if they had been more successful at fund-raising.

[xi] This is not to say that politicians of a liberal persuasion find the inequalities in quality and status altogether comfortable. Hence, some of the criticisms of so-called elite institutions – even when they admit students entirely on academic merit - that are a feature of British politics. But as Nagel (ibid, p 135) has observed: "The tendency towards equality and distrust of the exceptional found in the public educational systems of some modern liberal societies is a great mistake. Equality of opportunity is fine, but if a school system also tries to iron out distinctions, the waste from failure to exploit talent to the fullest is inexcusable". He argues that, if a society wishes to be more egalitarian, the differences in status and income that derive from the exploitation of talent should be addressed, rather than the opportunity to exploit the best talent being eroded.

[xii] Bowen (ibid) takes the view, in relation to the top American universities, that the sacrifice of equity that such preferences have resulted in has been modest and that it has been outweighed by the extra resources which have been generated to support academic excellence.

Finally, there are two further issues relevant to the equality/equity argument that I would like to comment on. First is the question of how to justify the funding of research in areas such as the humanities and the pure sciences where there may be no perceivable economic benefit and where the research is valued by perhaps only a small minority. This is difficult philosophically and politically. But it seems to me that a good society - even if it is broadly egalitarian in intent - needs to support excellence by artists and scholars even if they (and their subject matter) are appreciated only by a minority. Without great art and without advances in knowledge - whether or not that knowledge is of immediate interest or practical import - our societies are the poorer. Funding for these things implies and requires a degree of inegalitarianism.[xiii]

Secondly, I return to the question of the "formation of the intellect". The anti-intellectual culture that I mentioned earlier is partly a product of the mistaken view that intellectual activities are elitist and anti-egalitarian. And yet, as Nagel has observed, "the greatest injustice in society is neither racial nor sexual but intellectual."[xiv]Those who have achieved good degrees, and are able to use their brains well, typically earn much higher salaries than others. So spreading the "formation of the intellect" more widely should be the aim of egalitarians.

[xiii] See Nagel (Ibid) pp 132-134 for a discussion of this issue. He argues that some goods have intrinsic value that is not related to the number of people who can or will enjoy them, and that "reasonable persons ought to agree that the resources of the state which they support and which represents them should be used to further such ends".

[xiv] Marshall Cohen, Thomas Nagel and Thomas Scanlon, "Equality and Preferential Treatment", Princeton University Press, 1977, p 12.

Author: Professor Dr. Rolf Tarrach, Rector of the University of Luxembourg

Strategic Framework for the Université du Luxembourg, 2006-2009 / 2010-2015

Michael Porter cited weaknesess of Luxembourg's economy such as:
average skills, no world-class university(it can take 10 years to make the university work, 20 to 30 years to really reap its academic harvest),
paperJam, juillet-août 2005

We will try to speed it up

Or…, un Etat pourra difficilement rester deux fois plus riche que la moyenne de ses voisins sans s'appuyer sur une forte éducation supérieure.
Lionel Fontagné, Mensuel FEDIL, décembre 2004

A strong higher education is a must

Preamble

Wenn auch nur wenige von uns imstande sind, eine Politik zu entwerfen oder durchzuführen, so sind wir doch alle imstande eine Politik zu beurteilen.
Karl Popper quoting Pericles

This is a very personal view of what the Université du Luxembourg should be in 4 and 10 years from now. It is based on 7 months of observing and scrutinising Luxembourg's higher education and research landscape, and on my own international experience as researcher, evaluator, professor, head of department, dean, vice-rector, academician, president of CSIC and member of EURAB and of other European boards and panels.

I wrote this plan during one quiet week in the middle of the summer and I decided to use English, because it allows me to concentrate exclusively on the content and, more importantly, because it facilitates criticism from colleagues. This plan is only worth the effort if it leads to continuity and coherence in university policy, beyond the mandates of the Minister responsible for Higher Education and the Rector. I do not say anything about the past; that would now be a waste of time and it is not part of how I envisage my task. The document should be the core of the University's *Plan quadriennal.* Bologna's aims, Lisbon's spirit and Barcelona's targets - to two of which I contributed, though very modestly - are well registered in my thoughts, as are those aspects of the Anglo-Saxon model which I like.

I hope my understanding of Luxembourg is now broad and deep enough to have taken due account of its specificities. I ardently hope that the politicians, journalists, entrepreneurs, the citizens of Luxemburg in general understand that few, if any, of its projects are more important for the future of the country than a university of which they can be proud.

Einstein is often quoted; this is my homage to his *annus mirabilis* exactly 100 years ago.

This paper, my speech has benefited from the input of a dozen friends and colleagues. They have improved it substantially. I owe them my most sincere gratitude.

Content

1. Introduction

Il y a trois façons de dépenser l'argent, avec …, avec les banquiers, la plus rapide, et avec les scientifiques, la plus sûre. Georges Pompidou

A young university, with some old problems, in a pragmatic and wealthy country without a university tradition, but with a wealth of para-academic institutions, under sceptical scrutiny by society and by some competing institutions, will nevertheless fight to become an international, research-centred, innovative and creative, distinct university. Known for the quality of its teaching it will play the leading role in putting Luxembourg in the upper tiers of academic, research and higher education rankings, without alienating itself from society and human worries.

What follows are the main ideas behind our strategy. Platitudes will be avoided as much as possible. Hopefully, however, most of the difficult issues, where alternative choices are roughly equally arguable, will be dealt with. This will lead to a strong and well-defined profile. The

challenge then will be implementing it, without corrupting it. There are always so many exceptions that demand consideration that soon the strong profile becomes a fuzzy, fluffy one.

For the most part, this paper covers the four years 2006-2009, which correspond to my remaining mandate as rector, but always keeps in mind the next six-year period, or our ten-year goals. Beyond that we enter the realm of fantasy, and we prefer to leave that realm to others or for later.

The philosophy of the strategy is centred on human beings, students, staff and young researchers. The rest is subsidiary. At least a majority of the leading professors and researchers must agree with the main ideas of the paper, otherwise its implementation will not get off the ground.

The command structure in a good university is less hierarchical than in a good company; professors should have lots of freedom, only limited by the minimal administrative procedures of a publicly funded university and by the global strategic aims of the university. Authority is shared by the Governing Council, the rector and his team, and the professorial staff. At least partial consensus building is a must; otherwise filibustering and unchecked sprawling of committees will make the university grow old before it grows good.

The paper is as short as possible, *intelligenti pauca,* but its implementation will require a number of issue-specific plans, which will constitute the body of the *Plan quadriennal.* This latter one will also take into account the constraints due to potential lack of space in the next few years.

2. Research

Schau ganz tief in die Natur, und dann verstehst du alles besser. Albert Einstein

The University of Luxembourg would quite likely not have been created without having research in mind. This is fortunate, since pushing forward our frontiers of knowledge is the activity which is most passionately pursued by academics.

Whether research is centred in the humanities, social sciences, natural sciences or technologies, it will be the lifeblood of the University. Research benefits society in many ways. For example, it has been calculated that at least 50% of economic growth in the OECD countries comes from technological innovations based upon R&D.

Each of the three broad categories of research is essential for a research-centred university.

1. *Curiosity driven or blue-sky research* is essential if the university is to be internationally known and admired. Even institutions like MIT, Caltech or the ETH excel in this and that is why they have their share of Nobel prizes. And that is why companies that look at their long term future seek to work with them. The themes of this research are international in scope and best chosen by the researchers themselves. There are few excuses for mediocrity; this research is either of top quality or usually not worth the cost. It is almost always financed with public money or by private foundations. The FNR, the Ministry in charge of research through the university budget, the Framework Programmes (FP) of the EU, and hopefully one day the European Research Council (ERC) should be the main funding agencies for this research. This financing structure is not ideal in its details, but difficult to improve upon, given the size of the country. Luxembourg being a small country, it would help to develop this research, when it involves costly infrastructures, in the framework of some of the European research institutions, or even some worldwide research institutions located in Europe. Most of the research in Arts and Humanities falls into this category.

Some research-policy goals would help. For instance, developing modern biology is expensive and very competitive, and would furthermore require pooling scattered human resources in Luxemburg. This is a major political decision which is urgent.

2. *Research driven by societal problems* is sometimes more local and its benchmarking is more difficult, and yet it has to be performed by a public university. Taxpayers expect it. It is financed by all kind of public institutions and private charities. Quality assurance is more difficult. The European Science Foundation (ESF) can help in this respect. We should concentrate this research mainly on those issues which are relatively unique to Luxembourg: the *Lëtzebuergesch* language, pedagogy in a multilingual and multinational setting, accommodating a huge foreign working force, the sensitive integration of large minorities, the sustainability of social developments, etc. Of course, some service research in this category is expected too.

   One can include *opportunity-driven research,* very prominent in Luxembourg, in this category. It is related to the presence of European and financial institutions in Luxembourg. Opportunities should always be seized upon. Law, Finance and Governance in a transnational and international context are a must for the University.

3. *Business-driven research* is the last, yet essential, pillar of the triad. Business is of course also part of society, but its special features suggest treating it apart. It contributes to the economic development, and thus wealth, of the country. And wealth is what allows the financing of the other two research categories. The local business landscape, membership of ESA, the development of *Galileo* and our existing know-how make ICTs and computer sciences an obvious choice. Materials sciences are another choice, although the research intensity in this area is so important in companies with R&D activity in Luxembourg and so much less significant at the University, that caution will be required. Since some of the CRPs are active in this field, cooperation and coordinated decision making would be most beneficial. Bringing outstanding researchers to the University would be costly and might lead to a situation similar to the one in modern

biology. Service research in this domain should be mainly provided by the CRPs. This research should be co-financed by, and developed in cooperation with, business. It is essential that companies are ready to do so and that tax breaks are as attractive as possible.

Most research belongs to more than one of these categories, as e.g. Computer and Materials Sciences, which are both business- and curiosity-driven. Another interesting example is that of Earth and environmental sciences. These are international and global by definition, set in networks, use satellites, need precision measurements and deal with issues of utmost interest for a society which wants to be sustainable and farsighted.

The period up to 2009 should allow us to buttress and build a reasonably solid research basis for the University. This should be done at two levels: a broad one, further developing existing research activities, like philosophy or pure mathematics, and a selective one, where resources are concentrated on a few areas, not less then 6, not more than 8, which should become poles of attraction in the *Grande Région* and around which doctoral schools should be set up in co-operation with neighbouring universities.

These priorities should be initiated either by the faculty, and this process has started in 2005, or by external researchers, which could start in 2006. Maybe an agreement can be reached with the European Heads of Research Councils, EUROHORCS/ESF, to draw - from their European Young Investigators (EURYI) awards scheme short lists - excellent young researchers who have gone already through a rigorous double selection process. We could then make offers on a sure-bet basis. The first *Centre interdisciplinaire* should be set up during this first period and possibly a second one should be in the pipeline.

A couple of research areas should have been selected for very intensive development at the latest in the period starting in 2010. The University should then be in a condition to attract top scientists. By 2015 selected students should be able to come from anywhere to carry out their Master or PhD studies in these two areas.

Co-operation and, even better, common decision making with the CRPs should be expected in those areas where overlap exists, especially if they are resource intensive. In a small country nothing else is acceptable from publicly funded research and higher education institutions. If by the end of 2006 this does not work out, we shall have to analyse the reasons. Among the measures that might be implemented a redistribution of research groups among the CRPs and the University, with the aim of reaching critical masses, enhancing efficiency and clarifying the institutional remits, should then seriously be considered.

All possible models of cooperation in R&D and training with industry and business should be explored in this first period. This will allow us to stretch the limits of the university law and see if additional, more flexible, legal structures are needed for satisfactory co-operation. It will also allow us to distinguish lip-service from genuine interest, on both sides.

A patents and rights policy of the university should be introduced by the end of 2006 or beginning of 2007. Its guiding idea should be that no roadblocks should hinder the innovative and creative activity of the staff of the University.

On the broader research landscape a snapshot of where research stands in Luxembourg should be commissioned preferably from the Institute of Scientific Information (ISI) or from other experts. It should take into account data on patent registration and licensing. It should, for the hard sciences, include area-weighted impact factors and citations of all listed publications of at least the period 2000-2005. For the soft sciences and humanities this task could be given to the ESF, which has enough expertise and experience. This evaluation should be the responsibility of either the Ministry in charge of Research or the FNR. If nothing has been commissioned by the summer of 2006 the evaluation will be carried out by the University, for itself only, but that would fall short of what is needed. This snapshot is essential for any setting of initial conditions, quantitative goals and time series; neither we, nor any other serious research institution, will be able to do without it.

Research units are the natural organisational structure for research and, where and when applicable, for the corresponding doctoral schools. A few *doctoral programmes* should be in

place at the latest by the end of the first period, 2009. LIASIT, with whatever adjustments deemed necessary, could play a rallying role in the ICT domain. The success of the University will very much hinge upon the quality of these first doctoral programmes.

3. Teaching and learning

Wer auf ein Jahr plant, pflanzt Reis; wer auf 10 Jahre, pflanzt Bäume; wer auf 100 Jahre, bildet Menschen. (Aus dem Chinesischen)

The main ideas of the Bologna process, in particular the focus on learning, or even better, understanding, rather than simple instruction, will be part of our policy. Learning is not only about acquiring knowledge and understanding, but also about sharpening skills and gaining wider competencies.

The policy governing the creation of Master's programmes will be part and parcel of research policy. This holds *a fortiori* for the doctoral programmes policy. At these levels teaching and research should form a mutually reinforcing unity.

The University should be *multilingual* and have a low student/academic staff ratio, eventually near 10, which would allow us to offer, if not full, at least partial undergraduate (Bachelor students) and graduate (Master students) *tutoring*.

- As a general rule French and German should be the simultaneous languages at the Bachelor level, their weight ratios going from 3:1 to 1:3.
- At the Master´s level English is included as a teaching language and as a general rule two languages out of the three should be used in each programme.
- In those Master's programmes which aim at attracting students internationally beyond our neighboring countries, English should be used almost exclusively. At the very least one quarter of the Masters should be of this type.
- By 2015 there should be around 40 Bachelor's and Master's programmes running, with a predominance of the latter ones. There is, however, no hurry in increasing the present offer of 23 in the next few years.
- Master's degrees will have development priority.

In addition to multilingual education and tutoring, *mobility* is the third key feature of learning at the University. That is, at least one semester of Bachelor's Studies for all those students coming from the *Grande Région* should be spent outside the University. Other students, coming from farther away, could be encouraged to participate in mobility as well, under certain conditions. The universities in the *Grande Région* should, in general, not be eligible for mobility for the first group of students, but are well suited for the second. This multiple source of complexity, multilinguism, tutoring and mobility, will require a very professional student service and, very likely, a supportive language training centre. The choice of partner universities beyond the neighbouring ones, and the work on agreements, will be a major, time-consuming, challenge. At least one Chinese and one U.S. university should be on the list. Maybe the ASEF could be of help in setting up partnerships with Asian universities. For Europe one possibility would be to approach the Coimbra group of historical universities. They are traditional universities with research strengths and would offer our students an experience in a university with a venerable tradition, something we will not be able to offer in the near future. Multilingual universities could also be interesting partners. European universities of single university countries, or recently created ones, are other groups with which we share problems and privileges. But other criteria certainly exist.

This network of partner universities, not set in stone, should be in place by the end of the first period. Comprehensive tutoring and possibly generalized multilinguism might need some more time.

The University should also further the shaping of strong personalities, with healthy ambitions, who come with a sense of solidarity and who understand that there are few limits to the power of the will. The catch is only that one does not know exactly how to bring this about, except by exposing students as much as possible to personalities who themselves possess these traits. Intelligent tutoring will be a cornerstone in the development of this role of the University.

Bachelor's training should be broad, while Master's training should dig deeply within narrower boundaries. A first contact with research should be part of the last two semesters of a Master's

programme. This includes having senior Master's students taking part in the usual activities of a research unit, supervising first year students or enjoying a temporary traineeship in a company.

Special attention will be given to the creation of a possible Research-MBA, or other products of the post-MBA era. This will take at least the whole first period since such a programme cannot be offered by us alone. Suitable and experienced partners will have to be found. However, Luxembourg's special position can play in our favour for such an initiative. The LSF should be buttressed with strong research activities in finance.

Continuing, education (mainly professional, lifelong and/or cultural) will also be part of the University's offer, particularly in those disciplines where a university training level is the best choice. A certain offer exists already in Luxembourg. Avoiding unnecessary competition, being pedagogically innovative, looking for adequate evaluation paradigms and setting up a complementary and targeted set of offerings with the best partners will require a decided effort and some time.

4. Infrastructures

Science demands 5% inspiration and 95% perspiration. Thomas A. Edison

There is no good university without good infrastructures, necessary for both teaching and research. In particular a good library with advanced information technology services and access to electronic journals and data bases, like the *web of knowledge/ web of science,* is a must.
Many of these services should be offered to all research and higher education institutions countrywide by the *Bibliothèque nationale et universitaire,* which would allow us to lower costs substantially. If not, the University will have to proceed on its own, in 2007. A library needs to be set up in each of the two campuses of the university, ideally one of them being the central premises of the *Bibliothèque nationale et universitaire.*

Some research areas are very demanding with respect to infrastructure, and often very expensive. Long-term financial planning will be required in these cases.

The IT services should be of the highest professional level: one should not be aware of them.

Given the size of the university, the uncertain future of academic publications on paper, the danger of localism, the costs and risks involved and uncertainties about paying customers, a publishing activity under the university label is unlikely.

The three, eventually two, University sites will increase the cost of infrastructures. They have to be well linked, otherwise *interdisciplinarity* will be a white elephant. Existing buildings must be adapted for physically handicapped students and staff; otherwise we could not even try to hire a scientist like Stephen Hawking. Public and private transport, bike or foot, will be encouraged when and wherever possible.

5. Students

Ich habe keine besondere Begabung, sondern bin nur leidenschaftlich neugierig.
A. Einstein

Students are the reason for the existence of a university, which should become their *alma mater.* There is no good university if *alumni* are not proud of it. Thus, Student Services are, together with tutoring, another of the necessary cornerstones for our University. In this context, student life is of the utmost importance. The campuses should provide the necessary ambiance. As the university will have two campuses, the size of the student body will have to reach, over time, the thresholds necessary to provide this atmosphere, between 3000 to 4000 students per campus. This is an issue which is not a minor one; it is on campuses where society is critically analysed, and being able to do this in an informed and rational manner is an essential part of a comprehensive higher education.

Students should be selected according to criteria based on merit and potential. This is a major, difficult and sometimes controversial issue, as well as an important challenge: if not enough qualified demand exists, the University will not be what is described in this paper.

- EU residents should, as a matter of principle, have the same rights as residents from Luxembourg. This could cause problems, given the disparity in size of the national groups of potential applicants. If so, some informed, corrective measures would have to be put in place.
- A certain percentage of places should be reserved for non-EU citizens.
- Comparing the qualifications of a candidate from one country with those of a candidate from another country might be almost impossible or otherwise absurdly costly. General, broad and generous criteria should be used for the selection of first semester students. More rigorous selection should be applied after the second semester. For these selected students low drop-out rates should be expected. This selection policy may be somewhat more costly, but socially and individually more just and certainly scientifically more correct. Its dark side, a high discontinuity rate after the first year, merits further thoughts.

- Some steering in the distribution of the number of students among the different programmes will be needed.
- Visa problems should be solved efficiently for the selected students; this might require some regulation or even legislation.
- Students should be allowed to work part-time, if they do not have a scholarship.
- Fees should remain at a low level for the whole first period. They should be raised when the university offers more quality and state expenditure on Higher Education approaches the figure of 1% of the GDP.
- Selected, well qualified and promising students, not able to pay fees, will be offered arrangements which will allow them to join the University.

Alumni will continue to be part of the University. Keeping in contact with them will require important resources, but that should be worth the cost. The satisfaction and success in the lives and professions of our *alumni* comprise one of the best benchmarking indicators of the quality of the University, and their later support - material, societal or intellectual - to the University, is essential for its success.

The fastest possible growth scenario for the number of students is given in Annex 1. It leads to nearly a doubling of the number of students in the ten-year period. Our limits come from both the space and teaching staff available, taking into account that tutoring relies intensely on staff.

6. Staff and young researchers

Der Mensch als Mittelpunkt. Nicht als Mittel. Punkt. Berthold Brecht

Providing optimal working conditions for staff will be a high priority of the University. The huge diversity of tasks in a modern university allows gerrymandering the distribution of tasks to adapt somewhat to individual interests and skills. This flexibility will be fully exploited.

Staff should be - unless there are reasons for doing otherwise - controlled as little as possible, but performances will be assessed regularly, for efficiency as well as efficacy. This evaluation should of course be adapted to the individual distribution of tasks. Misdemeanours should be rigorously dealt with.

Ideally, all salaries should have a substantial part dependent on performance. This is however easier said than implemented, and there is little margin for error.

- A very careful evaluation procedure will have to be worked out. This will take most of the first period to put in place.
- At the professor level and for some administrative, scientific and technical positions we cannot do without flexibility in salaries. That is, adapting to market values should be relatively straightforward. A professor in Finances is likely to demand, *ceteris paribus,* a higher salary than one in Philosophy.
- Professors and Assistant-professors should never, unless it is their wish, spend more than 10% of their time with administrative duties; this would be wasting a professor's salary. This holds *a fortiori* for postdocs and other junior researchers.
- Having and nurturing a family should have as little negative consequences as possible. Kindergarten, the redistribution of tasks to gain flexibility in working hours and other informed measures are part of a modern, serious university. A special effort should be made to break glass ceilings.
- Sabbaticals are part of the *flexibility* which should characterize our university. They should be an integral part of the professorial life.

- A policy for recruitment of *vacataires* will be worked out. One should tell apart professionals which provide a value not to be expected from university staff from professionals substituting staff which has not yet been recruited. These last ones should be swapped for staff as soon as possible. The first ones should be treated exquisitely.

Recruitment should conform to best practices and should take serious note of most of the recommendations of the *Code of Conduct for the Recruitment of Researchers* published by the EC in March 2005.

- In particular an effort should be made to assess efficiency, i.e. output vs. input, rather than effectiveness, i.e. just output, since the future of the University hinges largely upon the quality of the recruited staff.
- Research couples should be specifically targeted, in particular in collaboration with other research institutions, like the CRPs, whenever possible.

Among the people working at a research university young researchers, and *postdocs* in particular, will very strongly determine the quality of the research done at the University, and thus the prestige of the University. They will be selected with great care and the best possible working conditions will be offered to them. Usually they will become senior researchers or university staff somewhere else, and only exceptionally will they be offered staff positions at the University immediately after their postdoctoral period. Their career process should follow the guidelines of the *European Charter of Researchers* published by the EU in March 2005.

Correctly receiving and hosting new, usually foreign, *postdocs* and staff will be another characteristic of the University. There is more to this than meets the eye.

We propose quintupling the research force and more than doubling the teaching force in the ten-year period.

7. Society

The way to influence the past of tomorrow is to act today. Anonymous

In a public university, society, which pays for it, is the main stakeholder. Eventually, any benefit from the activities of the University - knowledge creation, knowledge transmission, training, problem solving, critical appraisal, knowledge-based development of processes and technologies, to mention a few - should revert to society.

But there are a few activities which aim at society directly: outreach activities, including public debates, and communication. The first one can benefit from collaboration with other entities, like the *Musée national d'histoire naturelle,* the *Musée national d'histoire et art* or the *Centre national de littérature* and should be financed by public or private institutions. The second one requires a strong communication service. It should be full-fledged by the end of 2006. Sustainability of demographic trends, of energy consumption rates and of use of mineral and biological resources should be among the major themes for these activities.

Finally, outside our country, it would be surprising if the University of the future would not actively provide substantial academic and intellectual know-how to one university in one underdeveloped country, which we would support with *in situ* actions. This is a complex issue, which requires substantial preparatory work to avoid failure. It will take the whole first period to launch a realistic project with secured long-term financing. Its gradual implementation will take at least the better part of the second period.

8. Budget and Finances

Money is like muck, not good except it be spread. George Soros quoting Francis Bacon

A good research university is expensive. Most of the latest studies show that the more successful its researchers are, the more it costs. During the growing period the budget will be almost exclusively public. But in the long run, financial diversity is of the utmost importance. This is not small beer and will take a lot of confidence building.

- An overhead, in agreement with the FNR, and a fundraising policy will have to be set up.
- Some financial partners may also demand legal structures, like foundations, which would allow them more leverage and a closer control of resources.
- An endowment policy, probably with private-public partnership, should also be an aim. Chairs, bursaries, *postdocs*, special equipment for laboratories, upping of salaries in market-driven disciplines or for top-level professors are further examples of items that might benefit from the financial products of an endowment.
- An association of *les amis de l'université* could help in approaching donors and sponsors and certainly *alumni* would also play roles in this undertaking.
- Soliciting legacies is another aspect of this policy.

A support office will have to be put in place at some point for these difficult and resource-intensive fundraising tasks, which must be performed in the most professional way.

Some roughly calculated aspects on the budget follow. They are based on only two independent indicators: the number of students and the number of equivalent full-time researchers. As any university activity is somehow related to one or the other, this is a plausible initial approximation.

- The annual full cost of a student starts at 9000€, and grows over the 10 year period to 11000€, because tutoring will require the student-to-teacher ratio to diminish.

- The annual full cost of research starts at 120000€ per equivalent full-time researcher, and grows over the ten-year period to 140000€, because improvements in the quality of research are unlikely to be for free.
- Any other expenditure, like administrative costs, is included in these two. By the end of the ten-year period the budget coming from the government will approach 0,5% of the GDP.
- A capital or endowment of 25 M€ should have been generated by then too.

There is a part of the budget, which in a larger country would come from the general, non-prioritized, research budget of a research-funding agency, and would thus be external. Some thought will have to be given about how to deal with this in a one-university country. By the end of the ten-year period roughly 10% of the budget should come from external sources.

The cost of large, new buildings is not included.

9. Administration and governance

Things have to be made as simple as possible, but not simpler. A. Einstein

The administration should be ruled by the right equilibrium of two somewhat opposing principles: the one of subsidiarity and the other of economies of scale. What can best be done at the faculty level should not be centralised. But what can be performed more efficiently by pooling resources or requires coordination should be centralised. The administration should facilitate the learning, teaching and research activities of students and staff in the most effective and professional way. This will require the development of a vigorous middle management. Administration is like health: unnoticed when performing, but very troublesome when doing badly.

The governance of the University is defined by the law. It should be assessed and evaluated from the very beginning. A university with inadequate governance will be wasting its human and its financial resources. The autonomy of the University is an essential requirement for success.

10. Conclusion

If a machine is expected to be infallible, it cannot be intelligent. Alan Turing

We will very likely not succeed in properly implementing all the ideas set out here. But a few are a must and will provide a welcome quality benchmarking of our performance. Some of the essential questions we need to ask are:

- Will we be able to select good students and good postdocs?
- Will the University be their first or last choice?
- Will excellent professors come to the University?
- Will our Masters and PhDs be employed in the right positions?

Indeed, we should not forget that PhDs are the most effective knowledge- and technology-transfer system known, making them a very significant future benchmarking criterion for the University.

If we succeed in these issues, which usually come together, then nothing will stand in the way of our becoming a strong, internationally renowned research university. There are few, if any, better assets for the country than having thousands of bright, ambitious, critical young students from all over the world in Luxembourg. We will concentrate on the essentials. The proactive support of Luxembourg's society, business and government will all be needed. I take them for granted, it cannot be otherwise.

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A response to the debate

I wish to add some comments to the contributions of Sir Tim Lankester and Rolf Tarrach to the debate about higher education. They relate to their consideration of higher education's purposes, especially as they pertain to the development of the intellect, and to the conditions required to bring this development about. They bear on the Sir Tim's elegant exposition of the tension between the calls for excellence and equality and on Rolf Tarrach's fascinating depiction of what is involved in securing high quality of teaching and learning at the Université du Luxembourg. My intention is to contribute to the debate about whether what is arguably higher education's most cherished goal, which I take to relate to the philosophical habit, is achievable within an expanding university provision that gives increasing weight to vocational courses.

First, then, to higher education's purposes. Given Sir Tim's subject, this matter cannot be avoided, for judgments about excellence or its absence presuppose assumptions about what these purposes might be. It is right, too, that we should bear in mind that universities do not have just one purpose, but many. This said, it is good to find someone in so eminent a position drawing attention to the shortcomings of the prevailing tendency within government circles to think of higher education mainly as an instrument of economic advancement. Sir Tim's words remind me that, twenty years ago, Enoch Powell[xv] wrote about this very matter. It is rare for me to align myself with this academic and politician, yet I hold that his rejection of the primacy of the economic case for education is to this day worth revisiting:

> All this talk [of education as an engine of economic well-being] is the sound of barbarism. Education is a Good Thing because man has an insatiable appetite to learn and to

> understand, and because prominent among the joys that console him on his earthly journey is the joy of communicating to others, and especially to the young, what he has learnt and understood, and even more, how he managed to come by that learning and understanding. Like all things joyous, beautiful and good, education is self-justified. It not only needs no secondary justification. It actually shrivels at the touch of secondary justification ...
>
> ... All true learning and all true teaching are to the glory of God. No other terms exist that can so convey the total absence of collateral motive or the inner compulsion to obey one of the strongest instincts of our human nature.

The last two sentences here remind me of reports of Haydn donning his best suit in honour of his god whenever he sat down to compose. Whatever one's theological stance, one must acknowledge that Powell makes a noble and passionate claim for education's value, and, by implication, for the value of its higher reaches. Furthermore, whether this is seen as intrinsic or as still requiring more than an assertion of self-justification, it is likely that most involved in higher education would regard such intellectual striving as supreme among their purposes.

I would further say that the priorities about which Powell writes are not characteristic of higher education alone, but of all practices deemed to be educative. That is to say, there is a unity in all that we mean by education and the processes involved, and the purposes that inform them are as relevant to young children who, in awe, watch a chick hatching from its egg and are helped to make sense of what they see, as to the brightest and most advanced undergraduates as they master one or another mathematical proof or find confirmation - or refutation - for this or that historical hypothesis. The difference, I suggest, is one of degree, not kind. In higher education, the processes are merely more searching, more widely informed, more disciplined and more consciously reflective.

With these qualities in mind, I welcome especially Sir Tim's references to Newman's 1852 lectures on the ideal university. Newman, he reminds us, argued that cultivating the mind and

[xv] Powell, Enoch (1985) Why Sir Keith finds education too much of a Good Thing; *The Guardian*, 7.1.85

what he called the “philosophical habit” were more important than anything in a university education. His paper offers intriguing glimpses of what Newman meant: ‘The acquisition of knowledge is necessary, but it is not enough ... [It] has to be “informed ... and impregnated by reason .... [It involves learning] “to think and to reason and to compare and to discriminate and to analyse ...” This is splendid stuff. One longs only for more of this argument. Meanwhile, I would draw attention to a notion of ‘intellectual virtues’ advanced a hundred years or so later by Richard Pring[xvi]. That it was put forward with schooling in mind should not worry us, for, if I am right in claiming a unity for the educational process, his proposal may be seen to be relevant to all its levels, including the highest.

Pring points to four virtues in particular. Taken together, these may be regarded as complementary to Newman’s proposals. The first is ‘openness to criticism, and respect for other people as the possible source of criticism’. ‘The closed mind,’ Pring writes, ‘the mind that is satisfied and certain in its own knowledge and know-how - lacks a quality which is crucial to its further education, no matter how learned, well read and clever that person is.’ A second is ‘the disciplined pursuit of truth - learning and respecting the rules of accurate observation and recording, refusing to rest in the easy and unjustified answer’. A third involves recognition of ‘the essentially social nature of our mental achievements’ and, in consequence, ‘an attitude towards learning which is essentially cooperative rather than competitive’. Last comes the one that is perhaps the hardest of all to take on board and sustain. It involves acknowledging that the extent and complexity of human achievement ‘warrants a certain awe, a certain feeling of inadequacy concerning one’s own puny efforts.’

Put together, the proposal advanced by Newman and Pring make something very powerful. On the one hand, rationality; on the other, certain intellectual virtues: one to do with critical thinking (which does not exclude conjecture - a necessary element to the advance of human understanding - but rather subjects it to disciplined scrutiny); the other a matter of quasi-moral imperatives for how we engage in it. In putting this forward as foremost among higher educations purposes, it may be that I am merely enlarging on what Tim Lankester says about the importance of teaching students how to think and to learn, and on Rolf Tarrach’s assertion

[xvi] Pring, Richard (1976) *Knowledge and Schooling*, Open Books, London: p. 22 ff

that learning is about sharpening skills and gaining wider competencies as well as the acquisition of knowledge and understanding. Nonetheless, expressing these and other wider goals in terms of intellectual virtue and philosophical habit, as do Pring and Newman, may be seen to reflect higher education's highest aspirations more powerfully than any more mundane formulation. One might even say that commitment to nurturing the dispositions involved is a necessary condition for higher education's claim to validity and that, where this is lacking or scarcely achieved, any claim to excellence is negated.

It is one thing, however, to espouse such principles, and quite another to realise them. A letter, quoted in a recent work by Lord Skidelsky[xvii], from Pigou to Keynes, the famed economist, provides a picaresque, if anecdotal and old (1940) reminder of how even the most established of institutions may stumble in this field. About the Cambridge tripos papers he had examined, Pigou wrote:

> The chief bad thing we found was that a very large number of people had been stuffed like sausages with your stuff in such a way that (1) they were quite incapable of applying their own intelligence to it, and (2) they perpetually dragged it in regardless of its relevance to the question ... My own guess ... is that the parrot-like treatment of your stuff is due to the lectures and supervision of the beautiful Mrs [Joan] Robinson - a magpie breeding innumerable parrots. I gather that she puts in the Truth, with an enormous T, with such Prussian efficiency, that the wretched men become identical sausages without minds of their own.

One should not load too much on this informal communication, not least in view of Skidelsky's evidence that Pigou and Keynes did not always see things eye to eye. It is more important, rather, that we should recognise that nurturing the philosophical habit is difficult. Viewed in this light, Rolf Tarrach's assertion of our relative ignorance about how a university may shape strong personalities is sobering. Among other things, it invites consideration of the conditions that must be met if such personalities, the characteristics of which I here take to involve the philosophical

[xvii] Skidelsky, Robert (2003) *John Maynard Keynes*, abridged one-volume edition. London, Macmillan: p. 602

habit and the intellectual virtues noted above, are to be shaped. The expansion of provision for higher education and the ever-broadening range of courses on offer give the matter particular urgency.

Mindful of Rolf Tarrach's caution in this matter, I shall propose just five such conditions, but do not doubt that others will be able to advance more or improve on them considerably. One involves the 'stuff' (to use Pigou's word) of the courses undergraduates encounter. I suggest that it must embody material that warrants the exercise of our latent facilities 'to think and to reason and to compare and to discriminate and to analyse ...' (Newman, quoted by Tim Lankester). A second is that, although such courses may, as Rolf Tarrach advocates, be broad, their material must allow the exercise to be sustained long enough to enable the learners to make these facilities their own: in short, to internalise them. A third is that this 'stuff' is especially likely to be found through encounters with material and issues that have been of lasting concern to thinkers who value the understandings that have been gained, are thoroughly familiar with the means by which they are constructed and are aware of how common is their provisionality. In brief, it is about exposure to disciplined forms of social thought. A fourth is that learners must rub up against those who embody this habit in their professional activity. Rolf Tarrach puts this more elegantly when he asserts that 'exposing students to personalities who boast these [valued] traits' seems to be vital: 'Intelligent tutoring will be the cornerstone ...'. The only thing I would add is that 'intelligent tutoring' should, above all else, manifest both Newman's rationality and the quasi-moral intellectual virtues advocated by Pring.

The fifth lies within the learners themselves. However tutored, they must be open to the questioning, reasoning stance that is at the heart of the philosophical habit. We have to be firm about this, in the way that Searle is in his new introduction to the philosophy of mind[xviii]. Starting with a range of issues in this field, he suggests that, 'If [these] problems look interesting to you, you are likely to find this book interesting. If you cannot for the life of you figure out why anybody would be interested in these problems, then this is probably the wrong book for you ...'. I suspect that one might say the same for undergraduate courses of all kinds. They require certain dispositions on the part of participants and may well not be for everyone. This is not to

say that good tutoring cannot evoke traits in individuals hitherto not apparent, but rather that at least some of the responsibility for what they are open to must be shouldered by the students themselves.

It is at this point that, while convinced by much that Tim Lankester says, I become slightly uneasy. My concern relates to what he makes of the distinction between non-vocational and vocational courses, especially in relation to the formation of the intellect. Citing (in footnote 8) Economics, Law, Materials Science and Medicine, he acknowledges that there are vocational subjects that can be taught in ways that challenge intellectually. He adds, however, that vocational courses are now available, commonly in the newer universities, for example in aspects of Management, in which intellectual challenge is harder to come by. I think that he is probably right about this, but would suggest that it is far from a matter of necessary truth.

The first point I would make is that there is a case for saying that, in principle at least, vocational courses may have a particular potential to engender the philosophical habit. It could even be that, in some circumstances, they have an advantage over traditional degree paths. In outlining this case, I draw on an argument advanced some time ago for the necessary centrality of personal interests to the educative process[xix], extended for my purposes to encompass activity

[xviii] Searle, John R. (2004) *Mind: A Brief Introduction*, Oxford, Oxford University Press
[xix] See Wilson, P.S. (1971) *Interest and Discipline in Education*, London, Routledge and Kegan Paul

at first degree level. It rests on an assumption that those philosophical habits, those intellectual virtues, the inculcation of which we hold as education's highest goal, are not superficial matters that can be draped over learners like a suit of clothes, but altogether deeper affairs. To play significant and lasting parts in learners' lives, they must become part of the very fabric of their being. This is more likely to happen if they are encountered and nurtured in the course of engagements with personally significant subject matter, which, for many, may be of a vocational order. The role of the tutor in this scenario is to help learners to pursue their personal interests in a manner that is increasingly disciplined, more informed by the accumulated knowledge and understanding of the culture, and so on. In short, with appropriate tutoring, the learners' personal interests, which vocational courses may directly relate to, provide the soil in which the philosophical habit may be nurtured and made their own.

It may be objected here that, for certain individuals, traditional, non-vocational degree subjects have intrinsic appeal and thus of themselves provide the ideal conditions for the habit's growth. From experience, I, for one, would not want to deny this. Nevertheless, it should be noted that none of the stipulations I have made is inconsistent with my earlier claim that all education is concerned with nurturing the philosophical habit. Nor does any of them undermine the proposition that this prized disposition is most likely to be internalised if it is fostered in the course of learners' engagements with personally significant subject matter. Further, since for some students at least, this may best be facilitated through vocational courses, I can have no objection in principle to such ventures. Indeed, and again in principle, I can support them.

Yet, on the basis of developments in the UK at least, I harbour reservations about the consequences of this position in practice. It may be that they mirror Sir Tim Lankester's reservations about courses in management. I outline them, however, in relation to an 'Honours Degree in Surfing and Tourism'. My example is fictitious, for it is not my purpose to point a finger at any particular institution. I chose it because it is not far removed from a growing number of such novel awards on offer, especially from the 'newer' universities, because it is of a kind that is frequently lampooned in the press and because courses like it are especially likely to be supported by local government and the business communities on the grounds of their potential contribution to the (often sluggish) local economies. My concerns, however, are not

about their economic impact, but rather about the difficulties of making them educationally valid, by which I mean maximising their propensity to nurture the philosophical habit.

I do not doubt that courses like this could be designed to meet the conditions set out above. I have no expertise in these matters, but, with my particular example in mind, anticipate that potentially contributory fields of study like oceanography, economics and psychology might well have their relevance. My concerns are rather that, unless they are constructed in ways that ensure deep and critical study of such subject matter, and unless they are tutored by people who embody Newman's philosophical habit and can evoke it in others, then the ways in which they are manifested will fall far short of the ideals to which higher education should aspire. The challenge to universities is to ensure that this is not the outcome.

By universities here I mean both the traditional and the new, for the whole corpus of higher education provision can be regarded as a single entity in the light of a common commitment to the philosophical ideal. But, while all must be its champions, there can be few who would deny that it is the former that have the more secure title to its possession. The problem is to build it into the warp and weft of all the institutions involved. I would suggest that three bodies have especially important roles to play. The first involves those who design and accredit courses and the second those who examine their participants. It should be noticed that both these bodies commonly work inter-institutionally, not least through the practice of external examination. In this lies strength, the potential of which is most likely to be realised through the collaboration of traditional and newer institutions.

The third is government. Here, too, there is potential strength, yet also a possible threat. The latter may be seen especially where, in relation to vocational courses, government and quasi-governmental agencies take it upon themselves to prescribe course content and method. An excess of such specification, particularly when it is linked to the close scrutiny of practice and the facility to remove the funding that sustains it, may, through its tendency to underwrite compliance, be inimical to the promotion of the ideals that have been the main topic of these comments. I regret to say that I believe that, in England at least, nowhere is this threat more apparent than in education itself, especially as it relates to the preparation of teachers, an

activity in which both the traditional and the new universities have stakes. In circumscribing - however inadvertently - the promotion of the philosophical habit in this most vocational of fields, it denies the possibility of excellence to courses to which it should be central. At a more general level, one might observe that any course that neglects to attend to this habit's promotion must forfeit its claim to excellence, whatever its provider.