

SYMPOSIUM ON THE IDEA OF A UNIVERSITY IN THE 1990s

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1. INTRODUCTION

I should like to begin by expressing to SSISI the honour conferred on me in asking me to contribute some personal thoughts on 'The idea of a University in the 1990s' and especially because this seminar commemorates the 100th anniversary of Cardinal Newman's death. In defence of the rather inadequate views which I will give expression to, I would comment that to do justice to the theme of the seminar would demand another book of the proportion of Newman's classic - not to speak of his intellect and his power of expression. In the period allocated to me, I thought that I should concentrate on a relatively small number of topics from a vast range of possibilities. I wish to emphasise this point in order that the listener will not be left with the impression that these views encompass my total view of the university.

The topics which I will refer to are:

- The university *in* and *of* the community
- Essential characteristics
- The relationship between academic and managerial autonomy
- Research and the research community
- The workforce - a major focus for the university in the 1990's
- Demand for higher education - some speculations.

2. THE UNIVERSITY 'IN' AND 'OF' THE COMMUNITY

Perhaps I might begin by reflecting on the title 'The idea of a University in the 1990s. An implication one could take from this is that the university of - or is it 'in'? - the 1990s is expected to be different from the university of the 1980s or, indeed, the 1880s. The latter expectation could be responded to quite readily in so far as expectations would be that any institution ought to have seen the need to change and ought to have changed in over 100 years. If one had an observation to make on some universities, it would be that beliefs which were not permanently essential to the proper definition of its role were held to be immutable.

But to return to the more immediate comparison. Why should the university of the 90s be expected to be different from that of the 80s? This question provokes the further question as to whether the role of the university should be defined as being 'of' as well as being 'in' a particular timeframe. Clearly, universities must retain the essential values of the university - devotion to the discovery and dissemination of knowledge through learned study, research and teaching in a free and non-restrictive intellectual environment. Too often, in the past - and I am happy to acknowledge that this attitude is confined to the past - this freedom has been interpreted as meaning that research and teaching be confined to the academic community or to the 'learned' classes. Knowledge was disseminated primarily to the university student and to the reader of the great books or the learned journals but not to the public as a whole; and the interests of the community and of industry and business were perceived not to be of pressing or immediate interest. In short, 'relevance' was regarded with suspicion; to be learned and useful was regarded as a desire which was unattainable, at best, and indicative of a lowering of intellectual standards of excellence, at worst.

I think - and I hope - that such stances have been consigned to the past. Universities must retain and nurture the best of what preceding generations held dear but they must - firmly and enthusiastically - be a part of the society in which they exist and for which they exist; they must also look to, anticipate and lead people to the future. So many tasks and so little resource!

Perhaps I could best deal with this topic by referring to the emergence and development of the NIHE Dublin. We had to define our objectives, attitudes and activities in order to be consistent with Government's objectives for NIHE Dublin. This, in short, was to be a university but a different kind of university with a consciousness of and a responsiveness to community needs. Our objectives were to develop excellent programmes of teaching and research simultaneously; that the teaching programmes would have a strong basis in theory but, in addition, that they would also contain a significant applications component reflecting our belief that the elegance of any theoretical study finds additional expression through application - perhaps its most eloquent and, indeed, elegant expression - speaking as a redundant scientist! Our research commitment embraced both basic and applied research and, yes, development also. In our teaching we have tried to reach out to working people adjacent to us but also remote from us through conventional part-time and the more innovative and pervasive Distance Education - happily in a unique undertaking in partnership with many institutions throughout Ireland. We established bodies - a Business Advisory Council; its role should be clear from the title. In our teaching we established heretofore unique programmes - Business and Language, Applied Languages, Biotechnology, Computer Applications, Accounting and Finance, Analytical Science, Communication Studies - most of which are genuinely interdisciplinary. It is interesting to note, in retrospect, that this latter approach was consistent with Newman's view regarding the importance of interdisciplinarity in a university; one might be tempted to comment that single subject or multi-subject degrees run counter to the Newman spirit. A further indication worth noting is that many of these programmes which were criticised because (a) they should only be taught at postgraduate level or (b) were too narrow or (c) were not required - are now being offered by a number of universities in Ireland. And yet we are all universities still!

This short description of a personal experience in giving effect to the definition of a modern university illustrates my view regarding the emphasis which a modern university should have and how universities have changed in many respects during the 1980s. I use the term 'modern' being fully conscious that a university must be of the times, in addition to looking to the future while respecting the past.

To impose the 19th century model of a university on the latter half of

the twentieth century is not a defensible position. This, I rush on to say is not to assert that any or all elements of the 19th century model are irrelevant or that they should be discarded. But our 1990s university must influence and be influenced by the communities - broadly defined - and by the age in which it finds itself. Reflect for a moment on the history of the development of the PhD in the United Kingdom - a qualification which, much to the surprise of many academics, has not existed for many centuries but which was adopted by universities in the United Kingdom a mere 70 years ago - in 1918. Was this not a remarkable change and did it not happen with immense academic and political upheaval in universities? The 19th century model of the university was altered remarkably - and for the better, I believe - to respond to the demands of the new century. Reflect, too, on the fact that the first Chair of English Literature in Oxford was created as recently as 1895!

My model of the modern university is, therefore, one in which teaching, research, consciousness of community needs, outreach to people - whether they be school leavers, workers, unemployed, socially advantaged or disadvantaged - sensitivity to and responsiveness to the requirements of the developing national economy, industrial and business development, social, cultural and artistic well-being of people, are adopted as a consistent set of objectives and attitudes. If I have one criticism of the older models - which no longer exist in Ireland, if they ever did - it is that some of these goals or attitudes were believed to be incompatible as between themselves and, moreover, incompatible with a concept of quality and excellence. My one major point of departure from Newman is his adherence to the view, as I understand it, that excellence in teaching was not dependent on a strong commitment to research.

Each university must find its own balanced portfolio - so to speak - as between those elements but each university must, I believe, hold each of these elements (and perhaps others) to be precious and vital. No two universities can be identical; no two universities should ever be required to, or strive to, be identical. A mix of theory and application, a mix of humanities, business and technology is, I believe, a sine qua non for any university; the balance as between each will vary and must vary as will the balance which is struck between the other elements to which I have referred.

I hold, for instance, that technologists should be informed and involved in humanities and business if we are going to maintain a balanced society. Equally, I believe that the student of the arts and of the humanities should have a similar commitment to business and technological appreciation or knowledge. Illiteracy in a university graduate in either of these directions is unacceptable. We must realise that technology of itself is amoral; its application by people confers its morality or its immorality on it. The heat detector is used in warfare to guide missiles to their targets with death and destruction in mind; the same technology is used to locate and, thereby to save, people buried under the rubble of earthquakes. But it is also true that the technologically illiterate can oppose desirable, creative and developmental technologies because of that illiteracy. I was saddened recently to hear a (technical) spokesman for Sellafield leaving a radio interviewer nonplussed when he asserted that the radio-activity from Sellafield was only a small number of parts per million. A more technologically literate journalist could have pressed the argument on the basis that radioactivity is dangerous at these apparently miniscule impurity levels. The university of the 90s must strike this balance; few, anywhere, do - MIT being, surprisingly, one of the few who do so.

I have always been bemused by the humanities-technology argument, namely, that technologists have little or no interest in the humanities and wish to downgrade them to the level of triviality or, worse still, to eliminate them because they are irrelevant. I believe this to be an entirely incorrect perception; furthermore, I know of no technologist who would wish to see such an outcome. The dynamic which we have been observing for many decades is not an evil conspiracy to eliminate the humanities but rather the sciences and technologies asking or requiring the humanities who, heretofore, occupied centre stage, to concede some part of it to them. Not unreasonable, I would suggest to you.

I must also reflect on my horror as a teenager and especially as an undergraduate and postgraduate to meet people who, having committed themselves to the study of the humanities, were dismissive of scientists who were not fully familiar with Robert Frost, for example, and who, at the same time, were blithely dismissive of any suggestion that they ought to have some appreciation of science. How cosmetic is the appreciation of the artist who paints and 'appreciates' paintings but who is blissfully unaware of the 'scientific' activity and structure, which cavorts, coalesces

and fluoresces under the surface of or within flowers and colours? Let us have balance in our universities and put to rest the arid and unhelpful debate to which C.P. Snow referred. It is an anachronism in my perception of the university in the 90s.

3. THE RELATIONSHIP BETWEEN ACADEMIC AND MANAGERIAL AUTONOMY

The concept of academic autonomy is usually taken to refer to the freedom to teach and to undertake research without external pressure or coercion. But this is only a partial definition which does not take account of managerial autonomy - that is, the freedom of universities to manage resources within an agreed framework. It is this lack of autonomy which has been in evidence for many years in our universities and it is the absence of this autonomy which has had an adverse effect on academic autonomy. I believe, though, that there is a detectable shift in policy within Government and the Civil Service to devolve greater managerial autonomy to our educational institutions. In this hope-for system, Government will still have full control of the amount of national resource which it feels appropriate to invest in its universities; goals regarding minimum output measures will have to be agreed (and, perhaps, including fee levels for full-time students). However, thereafter, universities must be given the freedom to achieve these goals independently of further intrusion. In such a model, I believe that universities with innovativeness, now further freed from unnecessary constraint, will normally and naturally exceed those targets agreed by it. They will retain profits or additional income for the benefit of their teaching, research and service activities. This flexible system will also free university management to reward achievement and either directly or indirectly punish the laggard. Our current system is such that it is quite difficult, and well nigh impossible to discriminate, in reward terms, between the achiever and the under-achiever. The clear outcome of this inability is the demotivation of the achiever. We must change this in the interest of achieving excellence. Universities are, properly, expected to be excellent; excellence can only be achieved and sustained, innovation and entrepreneurship will flourish only within a framework of managerial and administrative freedom. What I am arguing for and what, I hope, government may be disposed to granting, is responsible autonomy for the university of the 1990s.

4. RESEARCH AND THE RESEARCH COMMUNITY

I expect that the vast majority of researchers in Ireland are to be found within universities in Ireland. Consequently most of our indigenous research is undertaken in universities. This is not typical, in extent, of most developed nations. The consequence is that the nurturing of this activity in universities is especially important in Ireland.

I am glad to say that one of the most remarkable changes in very recent years is the creation of the Office of Science and Technology, the appointment of a Minister of State for Science and Technology and the substantial increase in research funding for Science and Technology which has followed. Whereas we are all too aware that we have a long way to go to achieve pro rata parity with other developed nations in this regard, it would be improper and ungracious not to acknowledge the great advances in funding which have occurred. The increased research funding has directly enhanced the level of and extent of research activity in our universities and, thereby, enhanced the productivity of academic institutions.

There remains the problem of the financial support for research students and the retention of excellent postgraduates in our universities to help fuel the development of R & D in enterprises in Ireland. The research support for humanities graduates represents a real need, also, because of their contribution to national development - in art and culture.

The Irish university of the 1990s must achieve a significant increase in the numbers of research students if it is to respond to the demand which - I believe - Irish industry will make of it.

We are all aware of the fact that many of our graduates are emigrating. This is healthy if their motivation is to add to their value and to their experience with the objective of returning to Ireland; it is worrying if there are other motivating factors. Retaining our students for somewhat longer in Ireland enhances the prospect of their remaining in Ireland long term. Quite a number of our brightest graduates go abroad because our Irish universities do not have sufficient postgraduate studentships and those grants which are available are too low in value to support students properly. A lack of infrastructure to support research also has its effect. Apart

from the obvious effect which this has on graduate emigration, it has the effect of unnecessarily constraining and limiting the ability of universities to conduct research. In an age when the productivity of academics is being actively discussed, the fact of there being too few research students undermines much of our effort to enhance productivity. Whereas Government has a role in reversing this situation - and, as I have already mentioned, it has redirected significant resources to give support to research in science and technology - it has not the sole role. Industry and business must enhance their support of research and R & D in a variety of ways, including the support of research students.

What is at stake here is the viability of the research competence of the universities in the 1990s and, consequently, the future development of Ireland. Without research students - or, rather, with too few of them - the acquisition and dissemination of new knowledge will be constrained and the value and excellence of our teaching will also be adversely affected. One of the pillars of the university will be weakened.

5. THE WORKFORCE - A MAJOR FOCUS FOR THE UNIVERSITY IN THE 1990s

The university of the 1990s and thereafter must face one of the greatest challenges which society has ever set for it. In recent decades the new, major demand has been the move from, let us say, elite higher education to mass higher education. The university system has responded well to that demand though not without cost to its research thrust.

The new demand is for universities to respond to the vast needs of those at work. This demand arises from the increasing need for new skills, from the obsolescence of knowledge and, most especially, from the realisation by business and industry that the education, training and development of the workforce is a sine qua non for good industrial relations, for enhanced productivity, for the recruitment and retention of good staff and, most especially, for business survival and development. This new demand - a new demand from most employers, that is - cannot be responded to merely by educating more full-time undergraduates. We must enhance our provision of part-time programmes leading to postgraduate and undergraduate qualifications; the provision of continuing education must be a priority for us. The form which this provision must take will vary - educational

programmes on campus and off campus using conventional and modern methodologies based on distance education techniques. The university of the 1990s must adopt this role as yet another means of disseminating knowledge and, thereby, supporting national development.

6. DEMAND FOR HIGHER EDUCATION

In recent times, some rather ill-informed comment has been made regarding the future demand for higher education by school leavers. The concern I have is that such incorrect views, if left unchallenged, will direct us towards an all-too-restrictive view of the future and of the demands to be placed on the university of the 1990s. Ireland's young population and strong educational system at all levels represents an opportunity for Ireland as knowledge-intensive industries develop. We are in danger of failing to create new opportunities for our people if we take a too conservative view of this buoyant demand for higher education; we are in danger of undermining our future. Let me address myself to some specifics in this regard. A view is held by some to the effect that since Irish birth rates have been dropping since the early 1980s, the primary school population is dropping - correct - that the post-primary school population will fall - also correct - and that the demand for higher education will also fall shortly - incorrect!

Many developed nations who made the same assumptions for their own educational systems some years ago have found themselves surprised, and their planners embarrassed, at the continuing increased demand for higher education. These countries include the USA, Germany, Switzerland and the UK.

USA

"The American thirst for higher education is unabated and the reason is not hard to find: survey after survey shows that a college degree is not only the passport to higher earnings ... but it may soon be a pre-requisite for almost any job.

This year the number of Americans attending colleges and universities has set a new record Such figures fly in the face of a decline in the number of high school graduates ...".

FRG

"The universities ... anticipated a drop in student numbers in the second half of the 1980s on account of the falling birth rate. But, since 1978, student numbers in the Federal Republic have risen by 70 per cent. It is now generally accepted that relying on a falling birth rate was a fallacy".

Canada

"Canadian universities this year recorded their tenth consecutive record enrolment. In common with other industrialised countries, an anticipated decline in demand for higher education failed to arrive in the 1980s".

The *Times Higher Education Supplement* (3-11-89) commented as follows:

"All over the world demand for higher education is booming and universities are struggling to cater for rising numbers of qualified candidates while governments tighten their purse strings. The pace of technological change and rising educational expectations have overcome demographic decline in many industrialised nations ...".

A number of United Kingdom studies indicate "that the expected demographic downturn which Britain will experience in the 1990s will not hit higher education because numbers will not fall drastically among the social classes that normally enter higher education".

A topic which some of the audience or SSISI might like to study in relation to Ireland, perhaps!

I believe that Ireland will reflect these international experiences and that those who plan for or who hope for a fall-off in higher education student numbers in the mid-1990s are misleading themselves and doing a disservice, thereby, to this nation's future.

Happily, the Minister for Education and Government have recognised this need recently by announcing the co-operative venture to increase student numbers in our universities by 10%. But we must resist the idea that this student demand is a transient one which will have passed before the end of this decade.

7. CONCLUSION

I realise that I have touched rather slightly on a limited number of topics. However, I believe that these topics are amongst the most important which planners and leaders are facing and will face increasingly as the 1990s progress.

I hope that the discussion which follows will elaborate on some of these issues.