

University of Bath

ACADEMIC ASSEMBLY

"ASPECTS OF THE LONG-TERM DEVELOPMENT OF THE UNIVERSITY."

A paper produced by Academic Assembly at the request of the Chairman of the Long-term Planning Committee, March 1988.

SUMMARY

Within the very broad scope laid down by the Chairman of the LTPC, this paper considers aspects which members of Academic Assembly feel to be important and which, within the time available, they were able to address.

First the essential idea of a university is considered, and then the extent to which some of our current methods of operation may need to be altered to maintain the essential purposes in rapidly changing times.

The object of the University is "to advance learning by teaching and research". Thus as an intellectual purpose the university seeks to achieve intellectual excellence in its students by educating them within a community with a balanced academic atmosphere where research and scholarship both of a disinterested and a vocational nature co-exist. The University has a moral duty in society of upholding standards of truth, freedom and democracy. These objects can only be achieved if, as an institution, the University has autonomy and a large degree of economic independence, and if the teachers within the institution are reasonably protected from fear of capricious dismissal. This protection is best achieved by academic security of tenure.

At present many of the traditional means by which universities operate are being challenged.

The importance of "industrial" funding for both teaching and research activities is recognised: dangers of erosion of standards and of creating an atmosphere inimical to fundamental work are pointed out.

With a possible change to "contract" funding of teaching by the UFC, it will be essential to seek ways of keeping "flexibility of academic response" by maintaining a viable range of basic academic disciplines.

While it is obviously advantageous to seek to increase overhead income from outside contracts, it is important that a fair proportion of those overheads in future are returned to the School in which they were earned.

Cost savings should also be sought within the University and the scope and working procedures of the administration should be examined by the LTPC with this in mind.

With the declining size of the 18+ age group and changes in school examinations, the University must consider the implications for its existing courses. The various categories of "new" applicant are discussed and four ways are considered in detail in which such applicants could be admitted without an ultimate lowering of academic standards.

Research is seen as an essential activity in a university: the concept of a "teaching-only" university is rejected.

To provide a healthy educational atmosphere the University has to maintain a proper balance of academic disciplines. At Bath this means not only maintaining activity in mathematics and the central sciences and technologies in which we are strong, but also fostering, if not strengthening, areas in the arts in which we are numerically weak.

Everything must be done in difficult times to maintain the University's autonomy and to resist, where appropriate, a creeping loss of independence at the hands of the UGC/UFC or CVCP. Internally, democratic procedures via Boards of Studies and Senate must be fostered, not eroded.

Academic Assembly believes that the University is a community based on integrity and respect for truth. These ideals should inform all we do.

RECOMMENDATIONS

(These briefly précis the implications of the body of the paper: reference should be made to the sections of the main text cited for a fuller discussion of the context involved.)

Academic Balance: Intellectual Breadth

1. The importance of the balance between various academic disciplines should be recognised both by maintaining activities in mathematics and central sciences and technologies, and by fostering activities in important intellectual disciplines in which we are numerically weak, especially those which complement science and technology.

(Sec. 2.1(b) & 2.3(b))

2. The academic freedom to select appropriate topics of research should be defended.

(Sect. 2.3(a))

3. Senate and Boards of Studies should keep a watching brief on overall balance of research activities and similar revenue earning activities, to avoid the essential nature of the University being compromised.

(Sec. 2.1(a))

Admission and Courses

4. We should seek to accommodate a wider range of applicants without sacrificing academic standards in the University, so that our qualifications are still acceptable abroad, particularly in the EEC, and to the professions.

(Sec. 2.2)

5. As a widening of intake will require revision of courses, we should carefully watch national developments to judge the best direction for the University to go, in the light of the detailed schemes discussed. In particular, we should carefully monitor the Access courses and the progress of students with AS levels and other non-A level qualifications. We should encourage where possible the development of further four-year first degree courses.

(Sec. 2.2)

6. Senate should subject degree courses with major external involvement to particularly careful scrutiny to ensure that there is both an appropriate depth and breadth of vision.

(Sec. 2.1(a))

Implications for Staff

7. Appointment committees should make some attempt to convey the idea and values of a university to applicants for posts ranging from that of humblest porter to the vice-chancellorship.

(Sec. 1 & 2.5)

8. Firm support should be given to members who in the course of their professional duties are subject to improper pressure.

(Sect. 1.3(c), 2.1(c) & 2.5)

9. Because of the increasing importance to the University of a high standard of teaching and pastoral care, Area Promotion Boards, the Academic Staff Committee and those concerned with academic staff progression at any stage, should pay special attention to these aspects of an academic's duties. As they are difficult to assess, more effort to do so should be made, rather than less.

(Sect. 2.1(a), 2.2 & 2.3(a))

10. Terms of reference of those concerned with academic staff progression at any stage should state that the criteria for advancement include quality of research, not, as such, the sums involved.

(Sect. 2.1(a) & 2.3(a))

Structure and Internal Procedures

11. When advice from external bodies is considered unwise, requests for information unreasonable or deadlines unrealistic, we must have the courage to assert our independence and reject them.

(Sect. 2.4)

12. Should security of tenure for academic staff be abolished, other ways should be sought of giving an attractive and secure career structure to academic staff. Among other points, consideration should be given to (i) retraining schemes and redeployment, (ii) giving priority to internal applicants threatened with redundancy for all posts within the University, whether academic or not.
(Sect. 2.1(b))
13. An academic enquiry should be instituted into the effectiveness and efficiency of the University Administration, and, inter alia, should consider whether the Area system is appropriate.
(Sect. 2.1(d))
14. 20% to 30% of the value of research council grants and other research contracts should be returned as overheads to School of origin.
(Sect. 2.1(c))
15. Clear information on all aspects of the University finances and resources should be available, especially to Boards of Studies and Heads of Schools.
(Sect. 2.1(c) & 2.1(d))
16. LTPC should examine whether (i) non-professorial candidates should be considered as Heads of School; (ii) Heads of School should be elected by members of academic staff in the School concerned.
(Sect. 2.4)

SYNOPSIS OF SECTIONS

1. The Idea of a University
 - 1.1 The intellectual purpose of a university
 - 1.2 The social purpose of a university
 - (a) In society
 - (b) In the University
 - 1.3 The Structure of a university
 - (a) Autonomy
 - (b) Economic independence
 - (c) Security of tenure

2. The Present Crisis: Opportunities and Dangers
 - 2.1 Funding and Finance
 - (a) Industrial funding
 - (b) Government funding
 - (c) Overheads received
 - (d) Administrative overheads carried
 - 2.2 Entry to University: Implications for course structure
 - (a) Changing Background of Applicants
 - (b) Possible course changes
 - (i) A move towards the American System
 - (ii) Introductory courses
 - (iii) The Scottish system
 - (iv) Polyvalent courses
 - (v) Conclusions
 - 2.3 The Academic Scope of the University
 - (a) Research
 - (b) Academic balance
 - 2.4 Autonomy and Internal Government of the University
 - 2.5 Values and the University Community
3. Conclusions
4. References

1. THE IDEA OF A UNIVERSITY

The idea of a university in Western industrial society can be considered most usefully by looking at the purposes of a university. Before considering these in detail, it is interesting to see how the Charter of this University defines them:

"The objects of the University shall be to advance learning and knowledge by teaching and research, particularly in science and technology, and in close association with industry and commerce".

These statutory "objects" imply both an intellectual and a social purpose of a university. We examine these in turn, and then point out those constitutional features which provide the structure necessary to achieving these purposes.

1.1 The intellectual purpose of a university.

The aim of a university is the cultivation of the intellect, and as Newman put it, "its object is nothing more or less than intellectual excellence" (1). Traditionally this has been interpreted as the disinterested pursuit of knowledge - knowledge for its own sake and not for any extrinsic purpose. For as Trevelyan said, "Disinterested intellectual curiosity is the life blood of real civilisation" (2).

The cultivated intellect, which is analogous to the healthy body, cannot be achieved in an environment which only allows the influence of a narrow disciplinary specialisation on the student's mind, and which only seeks to develop certain types of intellectual faculty, allowing the rest to atrophy. Universities, as traditionally understood, have always provided students with a thorough grounding in disciplines of their choice. Moreover, universities have made a unique contribution to society by providing a wide choice of disciplines. Although students "cannot pursue every subject they will be the gainers by living among those who represent the whole circle" (3).

While the development of "intellectual excellence" cannot be attained by restricting study simply to what is perceived to be of immediate utility, there is no reason why "useful" subjects should not be included in the curriculum, assuming that they are treated in a way which will stimulate, not inhibit, the development of the intellect. Thus engineering students (say) in a university should come to recognise the roots and ramifications of their subject and the relation between it and others and gain illumination from them; outside a university they are in danger of being absorbed and narrowed by his study.

Universities have always had a "vocational" role - law, medicine, the Church. One equivalent in a modern university is the "close association with commerce and industry" of the Charter. The possessor of a well-trained intellect is undoubtedly of value to industry and commerce, whatever the area of study. Industry, of course, will also need those with a more vocational education - engineers, chemists, linguists. Within the limits sketched above, it is appropriate for a university to provide them.

All this is implicit in the Charter. It acknowledges the need for the University to encompass disciplines of different types. In laying emphasis on science and technology, it does so using words chosen to include within our scope study in other areas. The phrase used is "particularly", not "exclusively" - "in science and technology". As, for various reasons, mostly historical, areas outside science and technology in this University are small, it is particularly incumbent on us to foster them for the intellectual health of the rest of the University.

1.2 The social purpose of a university.

(a) In society

A University has a moral purpose in society in the sense of upholding certain standards of truth, freedom and democracy. These may best be arrived at through rational debate and the practice of intellectual rigour in addressing questions which are of major significance to society. The University has the responsibility of extending these values to society at large and not confining them to an ivory tower. This duty of the University is even more pressing today in late 20th century Britain where there is widespread moral confusion, little cultural consensus and a decline in traditional cultural values. This state of affairs is in marked contrast to early 18th Century Scotland when, Alistair MacIntyre of London University argues, the idea of a University became intimately linked with the idea of an educated public. We still have the ideal of an educated public and we need to question the part the University plays in achieving it.

(b) In the University

Etymologically the word "university" implies a "community", and traditionally its members share in the sense of community on the basis of shared values and beliefs. For a sense of community to flourish then each individual must have dignity within the community. Thus each person's contribution needs to be valued. Not all members of a community will do the same work - we all have different strengths and weaknesses. Some members of the community will have contributed largely in the past, less so now. Others may not yet have reached their potential, indeed, research requires its fallow periods. Denial of these individual differences of contribution leads to a loss of dignity, an erosion of the sense of community and the substitution of fear and anxiety for openness and creative energy.

1.3 The Structure of a University.

(a) Autonomy

This community, as our Charter makes clear, is largely an autonomous, self-governing institution. The academic staff are "members of the university", not employees. They control their affairs through various bodies of a representative character. These privileges, autonomy, democratic procedures, are not there by accident nor to make life easy for the staff, but because these have been found necessary to foster the atmosphere whereby the creative activities of "advancement of learning and knowledge by teaching and research" are most effectively pursued.

(b) Economic Independence

Traditionally, universities have only been able to aspire to the disinterested pursuit of knowledge, where they have had a degree of economic independence, so that some, at least, of their activities have been insulated from the demands of short-term utilitarian ends. Sometimes this independence has come from their own endowments, but in recent years it has derived from a grant system deliberately designed to insulate the universities from direct dictation by the government paymaster.

This degree of autonomy and economic independence enables a university to reach conclusions in fields where it is competent which are independent of a government or industrial paymaster, and to have the confidence to publish them, even if they are unpopular. Such a source of independent competence is essential in an open society, although anathema in a closed one.

(c) Security of Tenure

From its very nature an academic career will often involve many years of research and scholarship developing skills and experience which are not "marketable" in the outside world of industry and commerce. This is accepted as entirely proper, and applies not only to much of the arts but also to many pure scientists and engineers. So what goes for the university as an institution, applies, a fortiori, to the individual academic. Without freedom from fear of dismissal, there will be a near-irresistible tendency to concentrate on the safe and the mundane, to follow fashion, and to avoid those subjects or aspects of subjects which would not enable the individual to earn a living outside. Only the heroic or the foolish will have the courage to publish research or to express reasoned opinions unpalatable to, or unpopular, with a sponsor having powers over academic life or death.

2. THE PRESENT CRISIS: OPPORTUNITIES AND DANGERS

With the present Education Bill before Parliament, pressures on universities which have been increasing throughout the decade have been brought to a head. Both established methods of operating and values held by universities are being challenged. This presents opportunities as well as dangers.

Some of the major issues are discussed below in sections on Funding (covering industrial and government sources and problems associated with overheads), Entry and Course Structure, Academic Scope of the University (discussion of the role of research and the balance between different disciplines), Autonomy and the Internal Government and, finally, Values and the University Community.

2.1 Funding and Finance

(a) Industrial Funding

For a long time universities have received funds from outside bodies in return for the provision of various kinds of service. This might loosely be termed "industrial funding". There are many pressures at present to shift the balance of income towards industrial funding.

A wide range of activities might be paid for by industry. The university's teaching skills might be exploited for ad hoc short courses on a particular topic. There are examples of companies being involved in the whole of both first and higher degree courses.

The scope of research-like activities can be very broad, ranging from direct consultancy, through research contracts involving staff only, to research studentships.

The advantages of all these types of activity in providing funds are obvious. They provide resources that should benefit the whole of the academic life of the institution, and give a measure of insulation from the uncertainties of government funding. In a situation where an institution is very short of money, there is a serious danger that the disadvantages will not be considered, nor safeguards to minimise them incorporated in agreements.

When industry is involved in advising on the content of a degree course, especially a first degree course, it is vital to the long term reputation of the university that an appropriate breadth and depth be maintained. A degree must never move in the direction of a training course for the needs of a particular industry. There is a danger, which has been realised in some universities, of a sponsor withdrawing from a degree course at short notice.

The question of standards is also relevant here. To put it bluntly, the university must be prepared, if ever academic criteria required it, to fail large numbers of students of a powerful sponsor. The sponsor must accept this from the beginning.

On the "research" side there are parallel problems. There is always a danger when consultancy and contract work is of a routine nature, involving little more than standard testing or preparation of training manuals, that the intellectual activity of the university will become diluted. This danger was pointed out by the Jarratt Report (4). It is especially serious if this type of activity starts to encroach upon medium-term contract and higher degree work. It is essential that the University is happy that there is sufficient intellectual scope in the projects proposed for any higher degree.

Several more subtle dangers need to be mentioned. There has to be an appropriate balance between the more mundane profit-earning teaching and contract-type activities, and the teaching and research of a kind proper to a university. It may be difficult to decide where the balance lies, but unless the essential purpose of the University is kept in mind, it

is in danger of being corrupted. The earning of profits, rather than the quality of work, will become the criterion for efficiency of members of staff. Indeed we have already moved too far along this path. The profits from "low level" work are principally justified by their application to support the proper activities - curiosity-driven research and so forth - of the academic community as a whole. This must not be lost sight of if eventually "cost-centre accounting" is given academic approval.

We acknowledge the importance of the industrial dimension. There is however, a danger that the intellectual activity of the University will become bound by the dictates of industry since it is industry which will decide whether or not the terms of the contract have been fulfilled. Currently the amount of money earned from industry is increasing rapidly and academics are congratulated by lay members of Council at every meeting for their success in this field. It is no secret that the Chairman of Council would like to see 50% of the University's income derived from industry.

Thus these important questions for the University as a whole must be constantly kept in mind.

What should the proportion of industrially earned money to public money be? Is there any limit to the former?

What is the effect on intellectual life within the University of carrying out these money earning activities which traditionally have been seen as extrinsic to the pursuit of knowledge?

(b) Government Funding

It is difficult to comment in detail as the future ground rules for receipt of Government funds are far from clear. Despite the often-demonstrated unreliability of Government estimates of manpower needs, there is still talk of teaching, as well as research, being funded on a contract basis. The result of this would be to make the employment conditions for future academic staff like those at present borne by fixed-term contract research staff. Analogous, but aggravated, problems of recruitment and retention of staff will follow, and will cause universities grave problems. To minimise this damage the University will have to devise methods of improving security of tenure. To be in a position to "tender" for future contracts of unknown terms, we will have to keep as many academic options open as practicable. This will no doubt mean that a subject temporarily in favour will have to some extent to suffer a poorer staff/student ratio, in order to maintain a temporarily over-staffed discipline which is essential to the intellectual balance of the University, and may be in demand in the next round of contracts.

The need to give job security to academic staff and to keep academic options open, both argue for greater flexibility in staff activities. Retraining and redeployment must, where possible, be available before dismissal on grounds of redundancy. There must, then be a prejudice in favour of redeployment internally, so that there can be some transfer from temporarily declining to temporarily expanding activities.

Such versatility should also exist between academic and administrative appointments. A generation or so ago, when universities were less well funded than they have been in the recent past, it was the rule for academics to do part-time many of the tasks for which we now employ full-time administrators. A move back in this direction would have a number of advantages, among them giving the University increased scope for responding to the changing academic demand.

(c) Overheads received

It has long been clear that the University must endeavour to obtain as much profit as it reasonably can from its various sources of income. This profit, whether on research contracts or from external conferences or catering activities, is earned, of course, solely for furthering the purpose of the University - "to advance learning and knowledge by teaching and research".

Profits from overheads can be increased by seeing that a fair proportion return to the School in which they were earned. At present only 10% of the overheads on research contracts and of the implied overhead from research council grants come back to the School concerned. Staff have no clear idea what happens to the rest. The effect of this is to demoralise those who can be effective in earning more money, and, at any rate to make it more difficult by starving the group concerned of funds.

The profits can, in principle, be augmented by increasing the overheads charged. This is superficially simple, but in practice is often severely limited by the level the client will entertain, and by the need to be competitive. Of course, profits can also be augmented by reducing the overheads carried by the University, by reducing the costs of those parts which perform a necessary auxiliary role, which can be justified only to the extent that they facilitate the essential functions of teaching and research.

(d) Administrative Overheads Carried

During much of the history of the University administrative expenditure ("Administration and Central Services" in the accounts) has risen faster than academic. When the Area system was being established in the 1971-75 period, for instance, administrative costs rose more than one and a half times as fast as academic. Again, from 1982 to the present, administrative expenditure has risen by 55%, academic by 36%. Ways of economising in this sector must be considered, and the allocation of the administrative budget brought under the same strict control as the academic, as the Jarratt report recommended (4).

The LTPC should initiate a review of the scope and working procedures of the different parts of the Administration to see to which of its functions are essential, which desirable, which unnecessary. It is essential that an academic body like the LTPC should do this. These are some of the questions which should be put: "Is money better spent here than directly on academic activities?"; "Does this function provide academic staff with the service they want in the most effective way?";

in the words of the Jarratt Report, "Is the administrator 'the servant, not the master?'" One outcome of such a review would be the establishment of performance criteria, by which the effectiveness of the different functions in serving the University could be assessed. There is a view in various parts of the University that there is scope for rationalisation of structures, simplification of procedures, delegation of control to Schools. For example, many argue that the Area structure could be cut out to financial and administrative advantage.

2.2 Entry to University: Implications for course structure

(a) Changing background of applicants

What, then, should a university look for in potential students? Not just a desire for a training as a route to a well-paid job, but some intellectual interests, and the ability to benefit from what the university has to offer. These criteria do not necessarily confine the university intake to what it is at present.

For several decades English and Welsh universities have recruited the bulk of their students from sixth formers with three or four 'A' levels. Being able to assume substantial specialised understanding and knowledge, the students have been brought in three years to the level of an honours degree. In many subjects, especially science, engineering, social work and sometimes languages, such degrees are acceptable to professional bodies ("industry and commerce") and recognised by the European Community as equivalent to much longer ones abroad. In many humanities subjects, the university course is not so dependent on mastery of specific areas of knowledge on the part of the freshers, nor do professions exert the same influence.

There are several reasons why universities now have to consider admitting students with different qualifications. On the one hand, there is the educational trend toward less specialisation even for those students who follow the once standard route from school to university - a wider spread of subjects at 'AS' level will occur increasingly. On the other hand, there is pressure to take entrants from a wider variety of educational backgrounds - falling numbers in the age cohort, government policy, the trend toward continuing education all combine to work in this direction. Many would welcome for their own sakes both decreasing specialisation in schools, and wider access to universities. The British education system is specialised from the age of 16 or below. Scientists and engineers may not have the broad skills to do well at management and all those other aspects of the job that require flexible and imaginative responses to uncertainty. 'Arts' specialists can be frighteningly ignorant of the technological society which they inhabit and, perhaps, will eventually try to manage.

Thus, in addition to 'A' level applicants, universities could well have to consider some five other categories of applicant.

A 18+-year olds from traditional feeder schools with 'AS' levels in their university subjects;

B School leavers, with or without 'AS' levels, from other backgrounds;

- C Mature students seeking a degree qualification whose experience and achievement is judged by Admissions Tutors to afford a reasonable chance of success on a standard course;
- D Mature students seeking a qualification who do not qualify under C;
- E Mature students not specifically seeking a degree qualification who, for the sake of interest or personal development, would like to attend courses.

Such a change in the nature of university intake, while having advantages, would also produce problems. So the widening of subjects taken at 'A' level would mean that applicants for some courses (especially in science and engineering) would not have enough basic science or mathematics to cope with presently constituted courses. Advantages which might accrue include the following:

- (i) Aspiring students will be less set in an irrevocable pattern from a relatively early age, and will have a better idea of what they would be interested in studying in greater depth. Course choice at university would be less arbitrary.
- (ii) Pupils specialising in science and maths would be more accustomed to writing essays. Report writing is important in science and technology courses and in employment following degrees in these fields. Placement students, for example, often report that this has been necessary during their sandwich periods.
- (iii) Arts and social sciences are increasingly requiring skills in statistics, computing and maths. Students who have dropped maths at 'O' level usually have a large "block" in this area and find it difficult to cope with the new demands of their disciplines.
- (iv) Early specialisation encourages prejudice by each set against the interests of the other. A more rounded intellectual curiosity and understanding would be desirable in all university students.

The acceptance of students without a GCE 'A'/'AS' background and of "mature" students is attractive to many on social grounds. They add a valuable ingredient to the ethos of a traditional student group and members of the latter group often are particularly well motivated. Their admission, however, is bound to have disadvantages, and to produce problems which have to be faced.

- (i) In some subjects - but not all - there is a strong correlation between 'A' level results and degree performance. Students from disadvantaged backgrounds and mature students may have to be accepted with lower entrance qualifications.

- (ii) Drop-out rates tend to be higher and can only be avoided by much greater pastoral and tutorial care. When resources are being cut, this is difficult to provide (as it is when promotions, etc. depend more heavily on research than on teaching).
- (iii) Recruitment is costly in staff resources. Some universities have long-term relations with specific schools in which members of staff act in loco parentis by helping with subject choice and various forms of development over a period of years. Again universities sometimes set up special entrance procedures such as tests in maths, essay writing and so on, followed by special types of interview.

There can be problems of social adjustment and, especially with the older student, problems of having out-dated knowledge and perhaps being unaccustomed to essay writing.

This anticipated shift in the background of applicants has far-reaching ramifications for existing degree courses. Significant numbers of the "new" type of applicant would be unable to cope with many of our degree courses as at present constituted. The simple choice is between reacting by lowering the standard of our degrees or by modifying them so as to retain what is perceived as the present standard of a British degree. Adoption of this latter choice will necessarily involve the injection of more resources.

There are those who sometimes speak as if they would like to see the standard of degrees dropped, so long as some sophisticated formula could be devised which disguised the fact from the public at large. We do not agree with this. We must bear in mind both professional requirements and the need for international recognition of our degrees. In the 1990's the level of knowledge and understanding expected of the best graduates will certainly be no lower than it was in previous decades, and our obligation remains to bring our able students to the "frontiers of knowledge" in their areas of special interest. We believe that this University must continue to produce young men and women who have the intellectual development traditionally expected of graduates. We have therefore considered various ways in which this could be achieved with the wider intake, and four of these are discussed below.

(b) Possible course changes

(I) A move towards the American system

The nature of our degree could be adapted bringing it more into line with idea of a degree in America. There, narrow specialisation is held over until graduate level, undergraduates continuing to take a broad range of courses right up to degree level. If we grasp this idea enthusiastically, it will reduce the pressure on schools to specialise, while allowing us to tailor our courses at undergraduate level for more varied, and less intensively trained entrants. The best students will still find opportunity to go into some depth in the subjects of their choice - though less than at present - while the majority will leave university with the sort of broad qualification that is wanted by many employers and with a better education than they can get through performing poorly in a narrow

area. The potential specialists will gain a broader and better education at undergraduate level, but will still be able to complete their specialist education by MA's/MSc's in "graduate school" after the American pattern. The consequence would be a need for expanded opportunities for graduate education - particularly for taught graduate courses - and a corresponding increase in resources for graduate level education. However, the increase required would be much smaller than needed for four year courses.

It would have to be at graduate level - MA/MSc - that the student was brought up to the level of knowledge and understanding required in the modern world of the professional in technically complex subjects like science and engineering.

(II) Introductory courses

Senate is in the process of considering a proposal from HSS to experiment with the development of ACCESS courses. In these, both university and technical colleges are involved in recruitment, course content, structure and examinations. The university would have the final "say" as to whether students can proceed to university at the end of the ACCESS course. This solution ensures, as far as possible, that students are already accustomed to essay and exam techniques and have some experience in relevant subjects before coming to the University. Staff resources would have to be put into setting up the scheme and in assessment. But these resources would be less than those involved in some other methods of recruitment noted above. Also much of the aggravated burden of pastoral and tutorial "special" treatment would be avoided, once the students have arrived.

It is conceivable that courses of this type, in conjunction with sixth forms and colleges, could be devised in several subjects to bridge the gap between the new secondary education and university. A snag is that they would tend to be narrowly tailored to the needs of the particular degree course, and, ipso facto, contradict the stated aim of broadening. Whether they could be comprehensive enough to cover all of the "new" applicants is doubtful.

Without "Access"-type courses, and probably with them, it would be necessary to put on "remedial" first year courses designed to meet the individual weaknesses of particular students. The idea of bringing students up to an acceptable level in this way is superficially attractive. The difficulty is that first year courses are already demanding, and there is little slack for students to make up a lot of lost ground. If, as would sometimes be the case, the students concerned are at any rate weak, the problem is compounded. Clearly, there is modest scope for catching up in the first year, but it does not provide a general answer to the problem of getting less well-prepared students to the competence of good "A" level entrants.

(III) The Scottish system

The logical conclusion of the considerations above is that we should move to a four year structure resembling that established in Scotland. The introductory work then would be done in the first year, which would be followed by a further three to honours degree level. Such a scheme

would be versatile and logistically attractive. The well-qualified applicant, with two or three "A" levels, who obtained "broadening" by studying one or two contrasting "AS" levels in addition, would enter in the second year and still get an honours degree in three years as at present. The able student in the mature or non-GCE category would achieve the same qualification in four years. The problem of those among the "new" type of applicant who, while being able to benefit from a university education, were not sufficiently able to be plausible candidates for an honours degree, would be solved by their graduating after three years with a pass degree. Such students who developed while at university could, without disruption, continue to honours level.

It is commonly said, no doubt correctly, that a four year degree course would be politically unacceptable. However, if the university does think that this is a desirable solution, the putative views of politicians should not stop us from putting forward a strongly argued case. It is difficult to believe that what has been accepted in Scotland (where taxes are no higher) could never, under any circumstances, be agreed for England. At any rate, we know that there are already four year courses in England. The classic, long-standing example is literae humaniores, but there are many others including MEng in electrical engineering at Bath. The scheme above would be attractive because it would not entail four year degrees for all, but only for some, perhaps even for a minority.

(IV) Polyvalent courses

We have discussed a more complex development of the four-year scheme described above (section III). It comprises series of courses (to include large parts of existing schemes at various levels) leading to a **series of differentiated qualifications** (certificate, diploma, pass, general and honours degree). There would be the facility to transfer between these courses, and certificates and diplomas could be awarded on successful completion of elements of a course or even elements of different courses.

An outline of a proposed scheme appears below. Precise course content and scope has naturally to be decided by individual Schools, who would also probably wish to introduce modifications of detail. It will be seen that **existing** courses remain at the heart of this system, and the traditional three/four year road to an Honours Degree remains intact. **Post A-level students would be exempted from Year I**

Entry levels for 'new category' students would be decided by Schools, and, in particular, by their Admissions Tutors. Category A would enter either at Year I or Year II level, probably depending on the spread of their subjects and the grades obtained. Category B and D would enter Year I, category C Year II, while E candidates could either enrol as 'free listeners' for the courses which they wished to follow, and would not be formally assessed or examined, or, if they preferred, on payment of an increased fee, could be admitted as 'full students' to whole or part courses at an appropriate level. These students would, on completion, receive a document stating precisely those areas of the course(s) which they had attended/passed. Their studies would not necessarily be confined to a single School.

Students would be required to pass the Certificate examination before being allowed to begin the Diploma course, and to complete satisfactorily the latter before being eligible to proceed to a Degree. It would be possible for the student or the School to decide to terminate the studies on the course at either of the earlier stages. This system provides for the possibility of one, two, three, four or five years of study, and for the provision of a **qualification** for all but the extremely rare exception. Transfer between courses at predetermined intervals (end of the Autumn term each year?) would be possible.

The new elements consist of the First Year, which would have to be devised from scratch, possible adaptations in Year II, and, in some cases, the provision of a parallel 'General' course in Year(s) IV (and V). The two latter would probably be quite easily achieved, but would make certain demands on staff time. There is also the question of additional tutorial/counselling time (including at the admissions and pre-admissions stage). A statement should be made to the DES that if a staff/student ratio of roughly 1:10 is acceptable for 'standard' students, a ratio of 1:6 is appropriate for 'new category' entrants. The practical result of this would be, for instance, that a school now admitting 100 students on a 4-year course, and having an 'entitlement' to 40 staff approximately, would be entitled, were its pattern to change to a 70/30 split, to 48 staff, on a 50/50 split to 53 and so on. This entitlement would increase further if overall student numbers rose. A statement of this sort will not, of course, be palatable, but it must be forcefully made, or we shall find ourselves either having to compromise our standards and our principles on the teaching front, or to be plunged even more disastrously and destructively into the conflicting currents of the teaching/research/fund-raising maelstrom.

SUGGESTED POLYVALENT COURSE STRUCTURE FOR
'TRADITIONAL' AND 'NEW-CATEGORY' ENTRANTS

YEAR I	New course, ('introductory', 'access' etc.Certificate
YEAR II	} Largely existing courses, 'broadened' in Year II where necessary. PossibilityDiploma (equivalent to present Part I)
YEAR III		
YEAR IV	} (Applies for courses currently requiring 4 years for Honours)Degree (Honours, General Pass)
YEAR V		

General/Honours patterns;

- (a) in current 3-yr courses: 2 parallel streams, with some common elements
- (b) in current 4-yr courses: **either** 2 parallel streams for Years IV & V or Year IV for General, Years IV & V for Honours

The Honours stream would consist of existing Part II courses.

The generalisation of a **Pass degree** category (General or Honours) would allow rather more borderline students to graduate. The nominal mark for this category could be 35-45, raising slightly the quality of our Third.

(V) Conclusions:

All the suggestions made have particular strengths and weaknesses. All will require more resources. there is a reasonable case for this: we are asked to do additional things which cost money. The case must be put firmly and loudly. The alternative is to carry on with the present level of resources, either lowering our standards without admitting it, or to maintain existing standards by failing large numbers of the "new applicants". Both are contrary to the essential integrity of a university as a community devoted to intellectual excellence.

2.3 The Academic Scope of the University

Two aspects which feature in the current debate on the scope of academic activities are addressed here: whether research activity is essential, and what range of disciplines is necessary for the proper function of a university.

(a) Research

Universities have always been involved in teaching up to the highest level. University teachers, then, have had to be involved in study at "the frontiers of knowledge" and have contributed to the pushing back of these frontiers. The highest level of teaching involves bringing (appropriate) students to the stage where they can make their independent contribution to the advancement of their disciplines - i.e. it involves training them in the techniques of research.

This contact with current research benefits teaching at a lower level. Undergraduates absorb something of its ethos, and may be part of a research group for their final year practical work. They are broadened in outlook by exposure to current areas of controversy and in experience by contact with research equipment. Thus, we argue that the complementary activities of teaching and research defined in the Charter are both essential to the idea of a university in contemporary society. The idea of a "teaching only" university is unacceptable.

While research is an essential activity of every university, it never has been the case that every member of academic staff has been involved in research throughout an entire career. Because of the multitude of different academic tasks, it is doubtful whether a university could actually function in such circumstances.

Thus we are against any move towards a teaching only "university". We argue that the right derived from academic freedom of a member of staff to select within wide limits an area of research should be supported. Of course, if that area requires more than the modest funds devolved from the UGC for that purpose, the research can only be carried out if other funding can be obtained. Similarly, in many areas it is unrealistic to expect every university to be provided with particularly expensive equipment in every specialisation. Sensible sharing arrangements must continue.

(b) Academic Balance

As was shown above, the intellectual health of both staff and students in a university requires that the institution shall include within its scope disciplines representing the major areas of intellectual endeavour. At the moment the need for a broad education at school continuing into the sixth form is widely argued. The broadening of the mind resulting from exposure to ideas and methods outside one's specialisation, does not stop at 18. Indeed it is more important that undergraduates should be educated in an atmosphere where they can be stimulated by a broad range of intellectual activity.

While science and technology are strongly represented in this University, for historical reasons, the arts are much weaker. As the Chairman of Council recently pointed out, it is particularly important in our kind of University that the contribution of ethics and philosophy to science and technology should be fostered. It is therefore especially important to us that we maintain activity in important intellectual disciplines which are vital as a complement to science and technology. Ideally these should be strengthened, and should opportunities to do so occur, they must be seriously considered. At least, further contraction should be opposed.

Although at Bath mathematics and the central sciences and technologies are strongly represented, it is important to emphasise that their presence - according to the principles just enunciated - is vital to the nature of the University. Even a few years ago, this would have been universally accepted, and it would have been superfluous even to mention it. However, times have changed. One of our technological universities is now without a mathematics department, and when one of the fundamental sciences was threatened here, there were those who seemed to be prepared to see it go.

The implication of this argument is that we must take a university-wide view of our situation and of our allocation of resources. A generosity on the part of the numerically strong or expanding towards those vital areas which may come under threat is needed. It is probably necessary to change the direct proportionality between equivalent student numbers and resources which is so damaging for small groups. The arguments above for modest curtailment of the expansion of a large, temporarily expanding school to benefit one temporarily out of favour were presented in terms of keeping the potential for a flexible academic response to an uncertain future. The same arguments apply to maintaining an intellectual activity vital to the balance of the University.

2.4 Autonomy and Internal Government of the University

Without autonomy, a university cannot properly discharge its duties. Despite the wide acceptance of this statement, there have recently been attempts, even without legislative change, to erode our independence. A mentality in government and the civil service has grown up "He who pays the piper shall call the tune". To some extent this has always been the case, and is both inevitable and innocuous. It is relatively innocuous where the "tune" simply indicates general directions in which the government wants its money spent. Recently the "advice" has been very detailed: the tempo, dynamics, orchestration and instrumental balance are all being specified by a paymaster whose grasp of the principles of harmony is open to question.

The 1987 Educational Reform Bill, as published, removes much of the autonomy of universities, placing them at the disposition of the Secretary of State. The Government has said that this is not its intention, and has agreed to modify the Bill accordingly. Whether this will be satisfactory remains to be seen.

Whatever the legal frame work we have to work within the wellbeing of the institution as a university demands that its independence is eroded as little as possible. When advice from the UGC or CVCP is considered unwise, or requests for information unreasonable or deadlines unrealistic, they must be rejected. This creeping loss of autonomy must be recognised for what it is. Refusal to assert our independence now, is bound to lead to its de facto loss in the future.

As autonomy vis-à-vis the outside world is needed to preserve the nature of a university, so are the statutory representative procedures vital within the institution. These should be fostered as assets, not treated as obstacles to be circumvented in the supposed interests of smooth running.

While the basic statutory structure is sound, two aspects in particular warrant consideration. There is a feeling that the Area system represents a superfluous layer. There certainly are times when the Area Committees usurp the proper functions of Boards of Studies.

The post of Head of School is a vital one, involving skill, tact and determination, but not necessarily an internationally recognised research reputation. Thus the case for consideration of non-professorial candidates for the post should be debated. It would also be worthwhile to examine whether election of Heads of School by the academic staff of the School, rather than selected as at present by an ad hoc university committee, would not ensure a more consistently satisfactory result.

2.5 Values and the University Community

The question underlying the topics discussed in this paper is a fundamental one: what values do we stand for at Bath, what contribution can we make in helping to forge a framework of values appropriate to society in the late 20th century and the early 21st?

Newman, in his Discourses on University Education (5) reminded his readers that "A university is, according to the usual designation, an alma mater knowing her children one by one, not a foundry, or a mint or a treadmill." In many ways this crystallises the attitude and outlook for which we are arguing. An attitude of mutual respect for the different roles of different members of a community, between members of staff, between staff and students, between students. High sounding phrases like "values of freedom, truth and democracy", "rational debate", "integrity" have been used. It is easy to be cynical about these and to dismiss them as hopelessly idealistic, but without ideals and a certain agreement about shared values a community cannot be sustained, and will degenerate. These are the phrases in which members of Academic Assembly have chosen to convey their concept of this community.

We often hear talk of "entrepreneurial and market force values". Some of the utterances of our political masters seem to be urging us to adopt them. No doubt the conscientious entrepreneur would subscribe to the liberal aspirations alluded to above. In this case, there need be no conflict between the values of the university and those of the market place. Sometimes, however, the market place is associated with a Machiavellian expediency, with the ruthless pursuit of objectives, with the exploitation of weakness in others. If this is what is meant by "entrepreneurial and market force values", they have no place in this University.

3. CONCLUSIONS

From the principles discussed above a number of Recommendations follow. Some are concerned with Academic Balance and Intellectual Breadth, some with Admissions and Courses, others with Implications for Staff and Structure and Internal Procedures. Logically these should be read at this point. However, for convenience of reference the Recommendations are given in full at the front of the paper following the Summary.

REFERENCES

1. J.H. Newman, The Idea of a University, I, v, 9 (1853); Image Books, New York 1959.
2. G.M. Trevelyan, English Social History, 1942 (preface).
3. Loc. cit 1, I, v, 1.
4. Report of the Steering Committee for efficiency studies in universities (The Jarratt Report). CVCP 1985.
5. Loc. cit 1, I, vi, 8.