

Problems of Changing Growth Rates in Higher Education: Internal University Responses*

Des questions sur les taux changeants de croissance dans l'enseignement supérieur: réponses venant de l'université même

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During the 1960's, the keynote of university planning was growth. Uncertainty concerning rate of growth was tolerable since capital and operating funds increased almost as rapidly as they could be absorbed by the institutions responding to the burgeoning demand for places.

The 1970's have been characterised by a significant slowing in the rate of growth of enrolment and by a relative drop in the priority accorded to university education by provincial governments and to university research by the federal government. Indeed the attitude of governments towards expenditures on university education is one of the major differences between the 1960's and the 1970's. Governments which previously encouraged the growth of universities and accepted the consequences in terms of capital and operating expenditures are now preoccupied with the control of costs in this and other service sectors.

Turning to the future, demographic projections suggest that the number of students in the 18-to-24 year age group who will enter university will begin to fall off about 1983 but the timing and extent of these demographic changes may be expected to vary greatly in the different regions and provinces. As a result universities in different parts of Canada will face strikingly different circumstances for the balance of the century depending on their stage of growth, enrolment prospects, mix of programmes, age profile of staff, basis of government support and freedom to improve their situation in other ways such as by raising tuition fees or by obtaining substantial support from the private sector.

The timing and extent of decline in enrolment today is one of the most important variables with which individual universities will have to contend. Since the 18-to-24 age group is the source of more than 80 percent of full-time university students, it is revealing to compare the extraordinary differences in this age group in different regions of the

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country in terms of percentage change from the base year 1976 (Table 1). In 1981 all provinces except Saskatchewan show an increase but the growth rate of Manitoba, Quebec and the Atlantic Provinces will be 5 per cent or less, which is equivalent to no more than 1 per cent per annum. British Columbia, Alberta, and Ontario will have growth in excess of 10 per cent. Looking to 1986, the overall situation of virtually no change from 1976 in the age group for Canada as a whole masks a large drop in Saskatchewan and smaller declines in Manitoba, Quebec and the Maritimes offset by increases close to 10 per cent in British Columbia, Alberta, and Ontario, and a small increase in Newfoundland. By 1991 the 18-to-24 age group in all Canada will be 15 per cent less than in 1976; British Columbia will be nearly 10 per cent above the 1976 level but all other provinces will have fallen below this level, with Alberta and Ontario down 3 per cent, Manitoba and the Maritimes about 25 per cent, Quebec 33 per cent and Saskatchewan down nearly 50 per cent. The divergent trend continues through 1996 in intensified form except that Alberta and Ontario will return to a level slightly in excess of present numbers. By 2001 when the age group in the country as a whole returns to 1976 levels, British Columbia will be up 42 per cent, Alberta and Ontario about 20 per cent and Newfoundland over 10 per cent, while Manitoba, New Brunswick and Nova Scotia remain more than 10 per cent, Quebec 20 per cent and Saskatchewan 45 per cent below the current levels of enrolment. In brief, unless there is a striking change in participation rates, a prolonged depression in full-time university enrolment may be expected from 1986 to 2001 in Saskatchewan, Quebec, Manitoba and the Maritime Provinces in contrast to more modest changes in Alberta, Ontario and Newfoundland and a more buoyant outlook in British Columbia.

Just as the overall Canadian figures mask major differences between provinces, so the provincial figures mask major differences at the local level which may affect profoundly the enrolment expectations of individual universities in that region. A case in point is the contrast between the early and protracted decline in the 18-to-24 age group in north-western and eastern Ontario compared with the south-central counties of Peel, Halton and York where the corresponding population group is expected to continue to increase. Furthermore, variations in participation rates from these regions expected from the demographic projections may be exaggerated by the significantly lower proportion of parents with university or secondary school education in northwestern and eastern counties of Ontario in contrast with south-central Ontario and the Ottawa-Carleton region.

The shifts in population are likely to lead to underusage of existing facilities in some regions and shortages of capacity in others. This calls for co-operation among institutions to match more effectively demand with resources and to minimize perturbations at the local level. To match the over-usage in British Columbia with the underusage in Quebec, the Prairies, and the Atlantic Provinces calls for supra-provincial, that is, interprovincial or national, policies. These policies might encourage increased interprovincial mobility of students, or perhaps temporary or permanent relocation of staff. Supra-provincial policies could serve provincial needs through more effective use of the existing resources and at the same time have a significant impact on national goals such as the promotion of bilingualism and inter-regional understanding among the youth of Canada.

During the period of declining university enrolment the national objectives of Canadian universities must be protected. Specifically, the maintenance of research capacity, intellectual and cultural vitality, and graduate training capability require the regular addi-

tion of new young faculty members which could not be justified on the basis of student numbers during the period of decline in enrolment. The natural turn-over of university staff will be very low during the 1980's owing to the preponderance of faculty members who are now under 50 years of age. In many disciplines, therefore, there will be little opportunity to take on the best of the current generation of young scholars during the next ten to fifteen years and the impact this will have on intellectual vitality and research creativity in our universities and in the country is a matter of great concern. To meet these longer term national objectives funding policies for higher education and research will need to be modified and be much less sensitive to fluctuations in enrolment.

If university grants remain tightly coupled to student numbers, the projected decline in enrolment in the 1980's will expose many universities to bankruptcy and/or government intervention. Governments will need to separate two of their objectives in the postsecondary field which have previously run together: the objective of providing accessibility to higher education and the objective of maintaining higher education of high quality, in other words a capacity to provide first class education. During the period of declining demand in the 1980's these two objectives will diverge. This is a particularly acute problem in graduate education and if it is not recognized and resolved we shall be critically short of staff again in the 1990's when the enrolment surge returns and we will be forced to look outside the country for our staff as we did in the 1960's.

At the present time, some universities are faced with adaptation to the "steady state" of enrolment while others continue to increase their enrolment to meet the continuing demand, and also to gain the financial flexibility which comes with growth income. For almost all institutions, however, the end of the growth period is in sight and the spectre of declining enrolment – and revenue – looms ahead. Even without any decline in enrolment, the budgets of many institutions have not kept pace with inflation. For these reasons, the emphasis in planning has shifted from the accommodation of growth to the management of stable or declining resources.

The impact of the problem of changing growth rates depends a good deal on whether the changes can be accurately predicted, whether operating income is loosely or tightly coupled to enrolment, and whether the overall changes in enrolment mask fluctuations of much greater magnitude in the different programs and disciplines as student interests shift. On the other side of the coin, the institution's capacity to respond to these changes is strongly influenced by the stability and predictability of its operating budget, by the effectiveness of its resource allocation process and by the proportion of its operating resources, including human resources, which can be redirected to meet changing needs. In most universities human resources are not easily redirected owing to the rigid compartmentalization in academic departments and divisions, the tendency of faculty interests to be confined to a single academic area or field, and the long career life, low turnover rate and skewed age distribution of faculty members. Nevertheless, the "steady state" must not be allowed to become a stagnant state. Resources must be obtained from external sources or mobilized from within if universities are to maintain their vitality and respond to changing needs in education and research.

Responses to the Problem

From the universities' standpoint, the most desirable response by government would be the upward adjustment of the universities' operating revenue to offset completely the

Table I

Quinquennial changes in the population of the 18-24 age group, by province, from 1981-2001, compared with the base year 1976. (Source: Projections Section, Education Division, Statistics Canada)

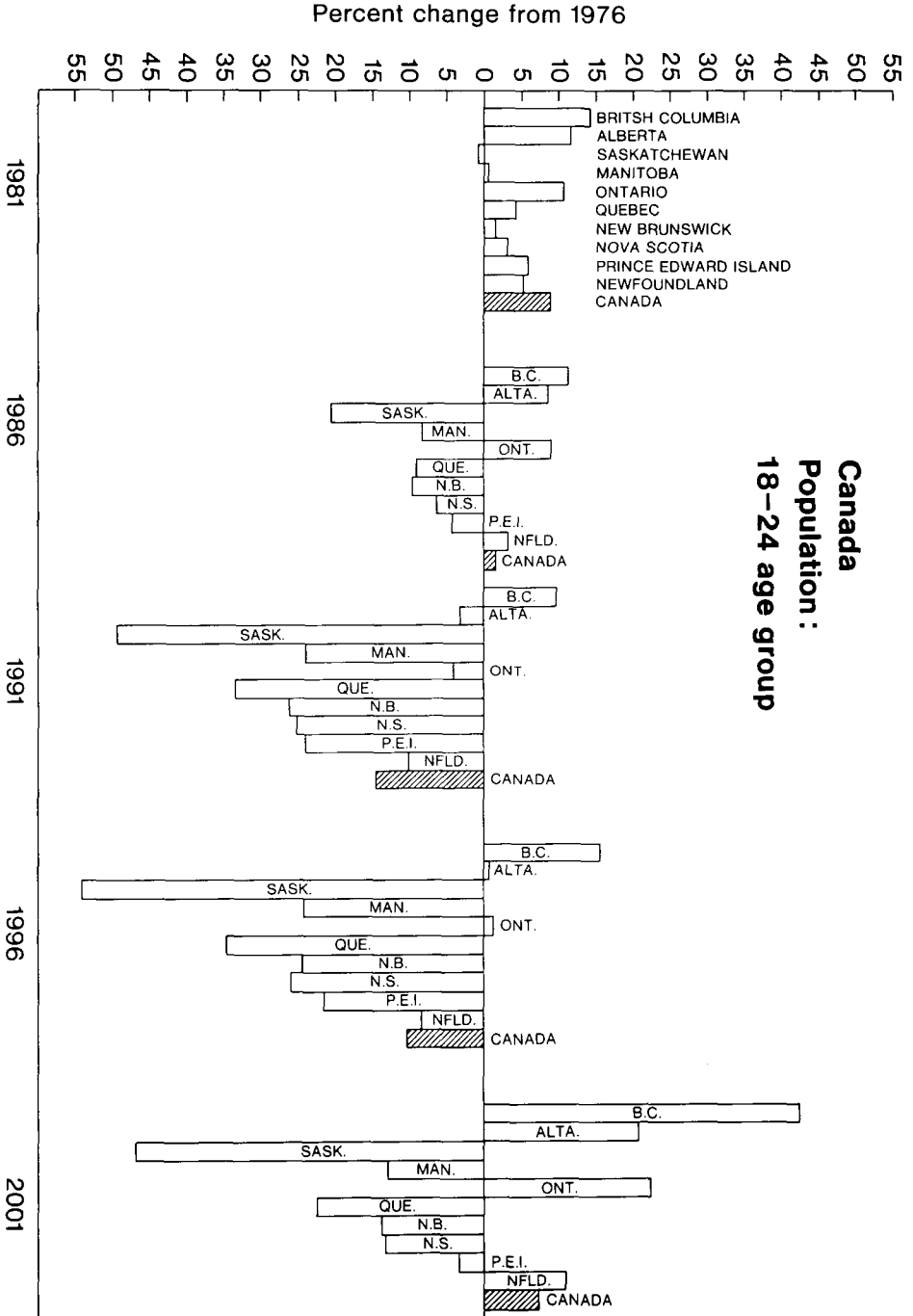
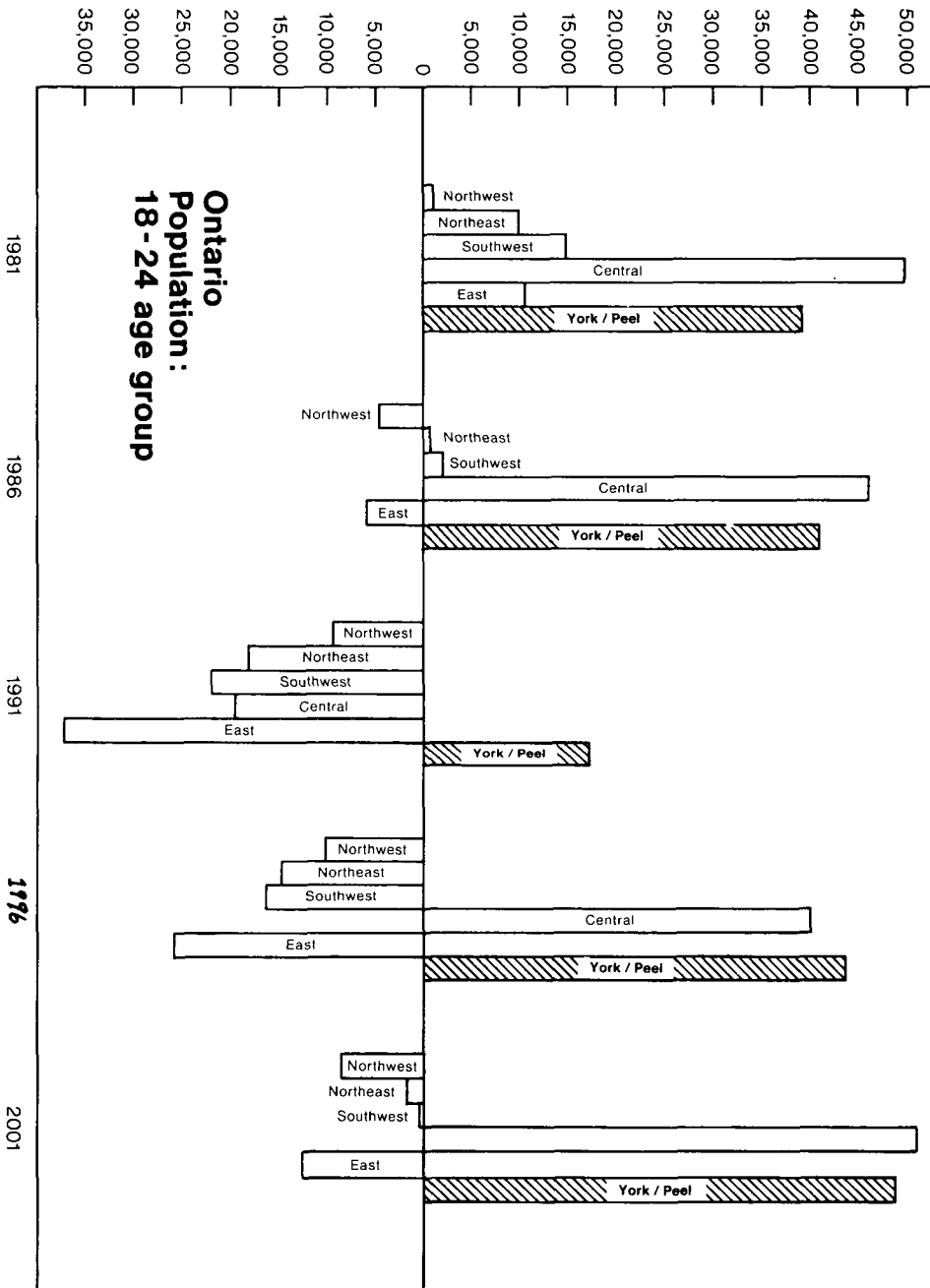


Table II

Quinquennial changes in the population of the 18-24 age group, within Ontario, from 1981-2001, compared with the base year 1976. (Source: Ministry of Treasury, Economics and Intergovernmental Affairs, Province of Ontario)

Change in number of 18-24 age group from 1976



effect of inflation and to provide in addition a margin of financial flexibility. Operating grants should also be rendered relatively insensitive to fluctuations in enrolment, for example, by relating government grants in significant measure to changes in the Gross National or Provincial Product and only to a lesser extent to student numbers. If faced by a significant short-fall in the government grant the institution may have to increase fees for tuition and ancillary services to carry itself through the period of adjustment. Universities may also seek additional revenue from the private sector for non-recurring expenditures, but this source has proved to be quite restricted in Canada for long-term financial commitments.

One of the most serious handicaps for universities in responding to changing financial circumstances is the lack of advance notice in relation to the principal source of revenue, the government grant. Institutions are fortunate if they are informed several months before the beginning of the fiscal year, and in some regions the information may not be available until after the fiscal year has commenced. It is customary to exhort governments to establish a budget cycle with two to three years' advance notice or a quinquennial grant. In enrolment-sensitive funding systems some relief may be obtained by slip-year financing which delays the financial response to change in enrolment for one or two years.

More realistic than asking government for advance notice on operating budgets may be for the institution to adopt a slip-year mechanism internally in order to have a full year in which to plan the institutional response to changes in the level of government grant. This is not a financial solution, indeed it may involve carrying a short-term deficit. The advantages are that the institution plans in relation to a definite rather than a speculative revenue figure, that there is more time in which to consider the most appropriate changes in expenditure patterns, and that measures such as raising tuition fees are less likely to be invoked unless absolutely necessary, and more likely to be accepted in such circumstances.

Universities like most public sector institutions have limited control over revenue and must balance their budgets almost exclusively by management of expenditures. During an era of declining revenue this requires a searching reassessment of instructional methods, research support, administrative services and the use of space. Since staff salaries constitute over three-quarters of all expenditures, appointments and salary policies are particularly important.

One of the major strains on a university with relatively stable total enrolment is the unpredictable fluctuation in enrolment in various programs and disciplines as student interests change. In institutions with a large surplus of qualified applicants for initial and advanced placement it should be possible to minimize year to year fluctuations by a selective admissions process which matches the number of students admitted to the instructional capacity in the major disciplines. Even in these circumstances it is difficult and probably not desirable to reduce the options for students enrolled by limiting strictly the capacity of courses. There is a point, however, where overcrowding may seriously jeopardize the quality of the education offered and limitation of enrolment becomes justifiable until student demand and the supply of teaching resources can be adjusted to come more nearly into balance. For example, enrolments in political science, economics and commerce continue to increase, yet it is in these departments rather than the departments with diminishing student demand that the high turnover of faculty exists.

In Ontario since 1972 the increase in basic operating income to the universities has not

been sufficient to cope with both growth in enrolment and inflation. Growth in enrolment has taken priority over increase in the value of the basic income unit. During that period, the University of Toronto has deliberately, for academic reasons, limited its enrolment increases to a level significantly below the average for the Ontario system. As a consequence, the University of Toronto has faced each year progressive reductions in the effective level of operating expenditures. The result has been budget compression across-the-board of increasing severity each year with loss of academic and non-academic staff positions as they fell vacant and with cutbacks in the level of academic and non-academic services. During this period the overall student/faculty ratio has increased by more than 20 per cent and higher increases in ratio have occurred in popular subjects. Class sizes have increased, support for library acquisitions, for replacement of equipment and for research activities has dwindled, and there is little doubt that the quality of teaching and research has been compromised and the academic environment has become much less agreeable. This deterioration has been accentuated by the concurrent reduction in the availability of research support from national agencies such as the NRC, MRC and Canada Council.

Each year, the process of budget compression has been extended with the hope that there would be a significant improvement the following year. After four years it is quite clear that further budget compression across-the-board cannot be continued without irretrievable damage to the areas of strength and quality in the university. Although some further improvement in the management of expenditures may come through consolidation of resources from separate divisions of the university, for the most part these opportunities have already been seized and there remain only two alternatives to the process of general budget compression. The first is to search for alternative academic roles for our staff, in order that the distribution of faculty will relate more closely to the pattern of academic needs than could occur with the natural pattern of staff attrition. The second is to eliminate programs of low academic priority and redistribute these resources to areas of higher priority.

Any change in the role of academic staff is obviously—and understandably—a sensitive issue. Herein lies the essence of the universities' dilemma. We have taken the view that dismissal of tenured faculty in disciplines where demand has fallen off is not an acceptable personnel policy, since it can only lead to undermining of confidence and morale among the entire staff. Similarly, withholding salary increases for academic or non-academic staff cannot be entertained as anything more than an emergency short-term measure which will subsequently have to be corrected. Schemes to increase the turnover of staff have been proposed and these include early retirement options, conversion of full-time to part-time positions, retraining of faculty and special arrangements for leave and international service opportunities. Other approaches with a lower level of acceptability are limiting the proportion of academic staff with tenure, creating a special category of appointee concerned only with teaching, or increasing the number of faculty with part-time, contractually limited, or visiting appointments. Faculty point out, rightly, that limited term or part-time appointments offer a less desirable career opportunity to the individual than the traditional "tenure-stream" appointments; with few new appointments justifiable over the next few years, a discipline is also deprived of the infusion of fresh intellectual strength. This, in turn, of course, has its impact on the quality of educational

and research programs. Some flexibility can be obtained by increased enrolment in part-time and continuing education programs if such programs bring additional revenue, by cross-appointment to teach in other faculties or in other institutions, and by involvement in research contracts or secondment arrangements which reimburse the university for the salaries of the faculty members involved.

The second alternative to overall budgetary compression is the selective elimination of academic programs of low priority. This approach is a sound one in theory but has two serious limitations. First, the identification of "low priority" programs is fraught with difficulty, and the elimination of these programs may involve a greater loss of income than saving of expenditures particularly in a financial system where revenue is intimately linked to enrolment. Secondly, the process is slow and may involve additional costs in the short run. It is slow because students enrolled must normally be carried through to the completion of the program and costly because alternative opportunities for the staff may be difficult to find. Some of the benefits of this approach may be more readily achieved by the consolidation of resources through merger of departments with overlapping functions and cross-appointment of staff to areas of greater need. It is of critical importance to ensure that the decision to terminate a program is made first and foremost on academic grounds. The financial considerations are important but secondary.

In the absence of clear-cut objectives for a university, the response to continuing budget pressure may be repeated across-the-board cuts. This is seen to be method of distributing the pain most equitably. But the result is a compression of all programs; the fat is squeezed from some, meat from others and a few are down to the bone. For one or two years this may be an acceptable approach on the understanding that one may restore the worthy programs with increased support the following year and thereby avoid lasting damage. When, however, the process continues for three or four years in succession without relief in sight, as some universities have experienced, then the compression seriously weakens the whole fabric of the university and in particular its areas of strength. The end result of compression across-the-board would be abandonment of the implicit aims that universities hold in common: to preserve high quality and respond to changing needs. Universities must not, however, jettison these objectives and accept lesser ones in the face of financial pressure as this will just further reduce the public confidence, lessen the chances of support from the private sector and from research granting agencies, and intensify the vicious cycle. Yet, this is what will happen in most universities if the institution does not have clearly understood objectives and if it fails to establish a scale of priorities among its programs for the use of its increasingly limited resources.

Planning

Establishing objectives and setting priorities among various programs brings the university into the process of planning. In spite of all the advantages of planning of which planners remind us, this process runs into extreme resistance, even hostility, within the university community. First, the university is composed of a large number of relatively autonomous units which have a high sense of territoriality and resistance to externally imposed change. A change in the priority for allocation of resources may be interpreted symbolically as a down-grading of a discipline or profession. There is also a tendency when resources are

limited to equate the long-established with high quality, whereas the recently-introduced is perceived as faddish, superficial, and expendable.

The most important element of resistance to planning, however, lies in the strong tradition that scholarship is a highly individual process and therefore the very idea of priorities for programs of teaching and research is a contradiction. This viewpoint is well presented by President Kingman Brewster of Yale in his annual report for 1971-72:

“Faculty members, once they have proved their potential during the period of junior probation, should not feel beholden to *anyone*, especially department chairmen, deans, provosts or presidents, for favour, let alone for survival. In David Riesman’s phrase: teachers and scholars should, in so far as possible, be truly “inner directed” —guided by their own intellectual curiosity, insight and conscience. In the development of their ideas they should not be looking over their shoulders either in hope of favour or in fear of disfavour from anyone other than the judgment of an informed and critical posterity”*

Those committed to academic planning recognize the legitimacy of this description of the academic career but believe that the setting of academic objectives and priorities need not be incompatible with the ideal.

The success of the planning process in the university is strongly influenced by the way it is carried out. It must combine grass roots and central elements. The grass roots element represents the analysis of the feasibility and priority of various program possibilities by the individual academic division or unit. The central element is the framework of objectives of the institution as a whole and the operating context moulded by externally imposed constraints and the relationships between divisions. The planning process is one of continuing development, integration and reconciliation of differences through iteration.

In projecting future directions of development for the university, one finds that the factors which are predictable and measureable are few in contrast with the large number of variables that defy quantitation and cannot be anticipated far enough in advance to provide a solid base for planning. There is a tendency to be preoccupied with financial considerations and to neglect human and political costs. Information systems, models and simulation may be useful in assessing the advantages of alternative courses of action but much of planning is a subjective, qualitative process dependent on assumptions and judgments which cannot be reduced to quantitative terms.

The implementation of plans depends on the level of understanding and commitment among those who will be affected by the changes. Unless the process is open, there is the danger that it will be misconstrued to be manipulative and conspiratorial. Broad participation increases not only the range of information and judgment but also the commitment to implementation.

Finally, if planning is to be taken seriously it cannot be treated as something apart from the regular process of making decisions in the University. The results of planning must be seen to influence the important decisions about the continuation or termination of programs, the allocation of resources in the budget process, and the priorities for capital projects.

There is a tendency for the divisions of the University to regard planning as a form of

*K. Brewster, *Annual Report of the President*, (Yale University, New Haven, 1972)

restraint on freedom of action. In fact, the end result of effective institutional and divisional planning should be greater flexibility in the management of resources at divisional level. The heads of divisions will have little incentive to participate in planning if savings generated or resources mobilized are removed to meet budget cuts without regard to the objectives and priorities which have been established.

Without institutional and divisional plans there is a tendency to make inconsistent and incompatible decisions in capital and operating programs, an unwillingness to put up with short-term hardships in order to gain benefits which are more significant in terms of the university's objectives three to four years down the road, and an unwillingness to take decisions which will arouse political opposition. Without plans, the response to budgetary pressure will be general compression which threatens the quality of the entire operation, and failure to appraise competing claims for the university's limited resources in relation to the objectives of quality and vitality. Most important, without plans the institution may lose its sense of purpose and morale and risk being deflected from its basic objectives by each wave of criticism from within and without. In a period of budgetary stringency it is in the institution's interest and in the public interest that precious institutional resources be used as carefully as possible in order to ensure that these objectives are realized to the greatest possible extent. Quality, innovativeness and uniqueness in academic programs will not come by chance.

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