

a very few countries is the existence of a vast tract of arctic country. Therefore, it would seem that if Canada is to attain her prophesied position of importance in the world, it will be through putting the north to a real use. The first step

in this direction is certainly the acquisition of more information about the north. And the time has now been reached when it is no longer creditable for the bulk of Canadians to regard the north country as *terra incognita*.

Functions of a University

By JOHN MACMURRAY

There can be no serious doubt that there is a great need to rethink and replan our university system, if indeed it can be called a system. Yet any attempt to force a systematic reorganization upon our university institutions from outside would prove impossible. It would meet with a resistance so powerful that it could hardly be successful; and if the resistance could be overcome, the result would be disastrous. Freedom is not merely desirable in the life of a university, it is a first essential. Without freedom it ceases to be a university, and the instinctive resistance to regulation imposed from without which a university exhibits if it is worth its salt has a perfectly sound and healthy basis. Indeed it might be maintained, not without reasonable ground, that under modern conditions this resistance is being dangerously undermined, and requires to be stimulated and strengthened. At any rate it may be taken as a first principle that any organization and correlation of the universities should be determined by the universities themselves, however much it is stimulated by the pressure of outside opinion.

Before any useful attempt can be made to plan a university system which will meet the needs of contemporary society, it is necessary to be clear about the functions which the universities have to fulfil. This is specially important now because for a long time our universities have been

changing their character, without adequate consideration of the consequences, in piece-meal response to pressures of a changing society. In particular the development of science and its applications has disturbed the balance of traditional university life profoundly. The proper equipment of scientific departments for teaching and research is extremely expensive when compared with the older departments, and necessarily absorbs a large part of the too limited resources which are available for expansion. At the same time this highly desirable development of science imparts an increasingly technical character to university education. So far no satisfactory method has been found for bringing scientific studies within the cultural synthesis which the older curriculum provided. This is merely one of the ways in which the organization and life of our universities has been altered by the pressure of social needs. There are many others. Together they have worked a transformation in the character of our universities, and the process will continue and even increase. In this way new functions have been and are being thrust upon the university, without regard to their effect upon its older and more important functions. What we need are the principles of a new synthesis of university life, and it is only by rethinking the functions of a university in relation to contemporary needs that these can be brought to light.

It is necessary to be clear about the radical difference between a university and a school. The whole function of a school is educational, but the education of its

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students is only one of the functions of a university, and not, perhaps, the most important. It is a mistake to think of the universities, and to plan for their development as if they were merely the top story of a national educational system. If a university allows itself to respond to the increase in its numbers by adopting the methods suitable to a school, it fails even in its educational function. It is especially important to stress this point for two reasons. The first is that the pressure of society upon the universities is made effective principally by the continuous increase in the number of university students. The second is that the provision of public funds for the extension and development of university work is likely to be made largely, if not solely, for its educational work; to provide for the teaching of a greater number of students, in a greater number of subjects. The proper balance of university life has already been gravely upset by the over-concentration of the staff upon their teaching duties. Any satisfactory reorganization must correct this fault.

A university is primarily a centre of cultural life and cultural progress. Its business, in the community which it serves and on its behalf, is to maintain and to advance knowledge and learning. The education of undergraduate students is derived from this primary function and is an essential part of it. One important character of university work follows from the nature of this primary function. A university cannot properly be partisan. It cannot serve a limited purpose or special policy—even if it be a national one. It must seek the truth and maintain the truth. Knowledge and learning are inherently and universally human and international in their scope. A university can only serve its own community by serving humanity. Its outlook is necessarily international; if it were to adopt an exclusively national outlook or to become the servant of a merely national policy it would betray the nation it thought to serve.

This task of cultural leadership which is the full and proper business of a university can only be fulfilled if the university combines and integrates three main functions. It must provide for the maintenance and diffusion of culture in the community. It must arrange for carrying on research in all branches of learning. It must undertake the education of undergraduate students. These three functions are not, of course, completely separable. They inter-penetrate and overlap at many points. But they are sufficiently distinct to require separate provision to be made for them, and to demand separate consideration.

Cultural Function

The cultural function deserves special thought both because it is the key to the other two and because under present conditions it is apt to be overlooked and neglected. A university cannot function in a vacuum. It is rooted in the life and history of the community to which it belongs. It needs to be sustained and nourished by the society around it. It must have its roots well spread in the contemporary circumstances of the world that surrounds it. It must be known and respected by those who live and work around it and responsive to their interests and their needs. This is important precisely because its own immediate preoccupations are to such a large extent remote from those of ordinary life. Unless the life of the university is effectively bound up with that of society around it, its learning must become pedantic and its educational activities largely sterile. It is the lack of a sensitive and organic relation between the university and the world outside its walls which makes the word "academic" so often a term of reproach.

If the university is to fulfil this decisive function two things are necessary. It must be a place where knowledge is *unified*, and not merely a common house for disjointed specialisms. Culture is synthetic and total. The pure specialist is the opposite of the man of culture. An association of specialists in different

and limited fields of learning is not and cannot be a centre of culture. The university must be designed to encourage and facilitate the interchange of knowledge through which it can become a spiritual whole. The second need is that this inner unification should be in constant and vital relation to the cultural life in the community around it. If it is not, such culture as it can achieve within its walls will be archaeological and dead, not alive and contemporary. For this interchange with the living culture around it the university must also be designed. Nor are these two aspects of its cultural function so unrelated as they might seem at first sight. To a great extent the second is the condition of the first; for the departments of knowledge can only be unified in the active life of a human community.

It is in this cultural function that our universities are most conspicuously failing. But the failure is not to any great extent their own responsibility. It reflects the disintegration of traditional culture which has been going on throughout the modern period and which has been greatly accelerated during the last century. This process, as we know, has been closely bound up with the development of modern science. The conflict between science and religion has been the expression of the conflict between science and traditional European culture in which religion was the bond of unity. Our older culture has failed to absorb the new scientific knowledge into itself. This cultural situation is reflected in the modern university in the dissociation of the faculties of Arts and of Science, the former supplying the elements of a liberal, humanistic education, while the latter devotes itself to specialized training in the techniques and processes of the various sciences. In consequence the crux of the cultural problem for the universities lies in the unification of Arts and Science. They must discover how to include science within a unified culture, and so make it part of a common, liberal education.

Research

The second general function of a university is that of research. It must provide not merely for maintaining common culture which includes and combines all branches of learning and cultural activity, but for the advance and development of each of these. To this aspect of their work the universities are perhaps more keenly alive than they have been for a considerable period. The growing influence and importance of scientific studies is mainly responsible. University appointments and promotion now depend much more on evidence of the will and capacity for independent research than on any other single factor, considerably more than upon proved ability as a teacher. But while there is no doubt of the willingness of the universities to carry out this function they are seriously hampered in their efforts to do so effectively. For this there are two main reasons. The first is at bottom financial. Except in special cases and for particular purposes the funds available for research work are quite inadequate. Teaching and administration necessarily have first claim upon the general funds. Special grants for research purposes, even if they are available, do not touch the main issue. The advancement of learning in his own department of study is a primary duty of every member, of an academic staff. It is no solution to provide facilities for special research workers. What is needed is to relieve the ordinary members of the academic staff sufficiently of the pressure of teaching and administrative duties under conditions which will stimulate and facilitate their work as pioneers of knowledge. The second reason is the inadequacy with which the modern university fulfils the cultural function to which we have already referred. Except in those departments—mainly scientific and technical—which have an active relation with social activities outside, university research loses its living stimulus and tends to become scholastic and trivial, a matter of personal idiosyncrasy which avoids contact with questions of contemporary importance.

Educational Function

The educational function of a university necessarily bulks largest both in public estimation and in the time, effort, and expenditure in which it involves the university staff. The great majority of the members of a university are undergraduate students. For them and for their parents the university is first and foremost an institution for higher education; and it is in this capacity that the university makes its most immediate and palpable contact with the general public. This general fact has been exaggerated in our time by the rapid rise in the number of students seeking admission, with the resulting concentration of attention on providing accommodation and teaching facilities and on the large-scale organization which this entails. Even more important is the change in the character of the student population. A dwindling proportion of students can afford to look upon their university career as an opportunity for quiet study and reflection. Circumstances require them to treat it as a chance to acquire professional qualifications for earning a living. This makes the degree examination, often very much against their inclination, the goal of their efforts, and dictates the "subjects" they must study on utilitarian rather than educational principles. Against the perversion of education which this entails the universities—both staff and students—wage a continuous but unsuccessful warfare. They win tactical successes, but suffer strategic defeat. The controlling forces are entrenched in the economic structure of contemporary society, beyond their reach. This is why such a large proportion of university teachers will agree that the effect of the examination system is deplorable, while admitting that it cannot be avoided.

For these reasons it is especially important to insist now that the educational function of a university is not its only or even its primary function, and also that it is not a continuation of schooling nor a professional training-ground. Its educational function is derivative from, and

should be integrated with, its other functions. When a student is admitted to a university, he becomes a member of a community which exists to serve the development of culture and the advancement of knowledge. He has his own part to play in its life and work. His education comes from being immersed in this atmosphere of intellectual activity, and associated in it for a period with older and more experienced students for whom the cultivation of the things of the mind is a permanent and professional task. He is no longer a passive recipient of instruction but an active participant in the search for knowledge. The more he gives to the life of the community the more he receives. He is in some ways more like an apprentice than a pupil; and his first and hardest lesson is to learn to be a student; to create in himself the interests, capacities, and aptitudes for self-training and self-cultivation; to acquire standards of criticism and habits of accuracy; to master the tools and the techniques of reflection and investigation. He learns these things not by himself but in association with other students, in co-operation and in competition with his fellows, in discussion and collaboration. In the process of university education class lectures have their use, and a valuable use it is if the lecturer knows how to manage it; but even here it is what the student does with the lectures that really matters.

It is clear from this that the ability of a university to perform its educational function well depends on the extent to which it performs its other functions adequately. If it fails to be a focus of cultural synthesis, it will at best provide a specialized professional training which varies from department to department, but which is poorly related to the natural balance of human life and human personality. If it fails also to be a home of research and advance in knowledge, it will degenerate into a glorified high-school, a sort of super-polytechnic. If this is not to happen, the permanent members of the university must, of course, be men and women of high culture as well

as of intellectual distinction; but it is at least equally important that its students should be seeking knowledge and culture and not something else. It is the demands of society upon it, made effective in the demands and desires of its students, that in the long run determine the temper and the quality of the education which any university provides.

In a proper university education two things must be combined which correspond to its two functions as a focus of culture and as a place of research. It must combine a balanced general education with specialized training in some particular department of study. The important and difficult matter is the combination of the two; for it is not enough to provide a general education for some students while offering specialized training for others. It must provide both for all its students. Some subjects lend themselves more easily to the cultural needs of students than others; some are in their nature more technical and specialized. But this is a matter of degree. The most cultural of studies can easily be turned into a narrow and arid specialism; the most specialized can be used as an instrument of general culture, if it is taught and studied with imagination, and with a conscious reference to its place in the economy of knowledge. On the other hand, it is only by becoming something of an expert in one branch of knowledge that any student can focus a wide range of interest and information and bring it to life. Without this he can contribute nothing of value of his own in any field, and his general education can only result in a superficial diletantism, if indeed it has any noticeable permanence at all. Specialized knowledge without a background of general culture, again, is meaningless, and can be dangerous to the individual who possesses it and to society. It is unbalanced.

Arts and Science

Here again we are brought up against the antithesis of Arts and Science. Speaking generally, this antithesis corresponds to the distinction between a general,

cultural education and a specialized technical training. This is less true than it used to be, because, owing to the prestige of scientific progress and the pressure of professionalism, the spirit of specialism has made inroads into the territory of the Faculty of Arts. But it is more important to observe that a general education which excludes science cannot provide a cultural development which is adequate to the needs of contemporary society; while the growing numbers and the growing importance of our scientists in the economy of social life makes it essential that they should be men of broad and balanced sympathies. The key to a new conception of a liberal education, corresponding to the new cultural synthesis that is required by the conditions of modern life, would seem to lie in bridging the gulf which separates the university faculties of Arts and Science.

I have deliberately omitted any suggestions as to how these functions can be effectively carried out in modern universities under modern conditions. Such suggestions would be premature. We must first agree upon our goal before we can fruitfully discuss how to reach it. Unless we can agree on this our debates upon methods and upon organization will be as interminable as they will be fruitless. I have also made no distinction between the older and the newer universities. It is true that the traditions of the older universities, established as they were before the economic and social pressures of modern society upon educational facilities became acute, enable them to perform their essential cultural function better than those institutions which have been called into existence to meet newer needs. But this is a dwindling asset; for the tradition of culture which survives is rooted in social conditions which are rapidly passing away. The asset of the newer institutions is that they are more directly related to the contemporary world which has called them into being, even if the cultural chaos of the time is reflected in their life and organization. It may even prove easier to achieve a new cultural synthesis

in places where an old one has not to be displaced or overcome.

It may perhaps be thought that my analysis of the functions of a university is too remote from present actuality and too much influenced by ancient academic traditions to be of much immediate value. This at least is not my intention. I have tried to ground it in the perennial needs of human nature and human society. At the same time I have looked rather to the future than to the past. There are clear signs that great changes in social structure and social outlook are taking place which will alter the demands that are made upon all our educational and cultural institutions. The period of individualism, of analysis, of cultural disintegration is passing. It was a necessary correlate of the growth of science, within a culture which was antithetical to it and resisted its progress. Now science has triumphed; and we look to science as the instrument of social reorganization. The use of science for social

ends demands a unity of purpose in society which must express itself in and depend upon the achievement of a cultural synthesis. In the new societies which have resulted from the revolutionary upheavals of our time the sense of need for cultural unity and the attempt to supply, or even to impose it are characteristic. Elsewhere the idea of social planning makes steady headway. These are strong evidences that the tide is turning, and that a period of social and therefore of cultural unification lies before us. To stress the cultural function of the university now is not to hanker after the past, but to look to the future. For the new synthesis must be very different from the old. The social use of science makes specialized and technical knowledge the instrument of common social purposes. The inner unity of spirit from which such common purposes can grow and by which they can be sustained must be familiar with its instruments and adequate to their employment.

Education of Workers for the Post War Period

By SPENCER MILLER, JR.

GLOBAL War has compelled the development of a global strategy to cope with military problems. It has necessitated as well global thinking about political, economic and social problems such as natural resources, transport, communications, manpower, social security, health—even race relations. So revolutionary are the consequences of this global struggle upon men's thinking that it is no longer possible to view any basic problem as if it were exclusively local or provincial. Isolationism has become as dead economically as it is bankrupt politically. Today isolationism is a predicament rather than a policy. In

our interdependent world all basic problems have become inter-related, inter-connected and indivisible. The world is one!

But this global struggle has not only wrought a revolution in both global strategy and thinking, it is itself a manifestation of profound social and political revolution that is world-wide in scope. War is being fought on the horizontal plane for the conquest of land and possessions, but rather on the perpendicular plane for the dominance of ideas and ideologies. An understanding of the true inwardness of this global struggle gives an added significance to everything we do and plan for the future among the freedom loving nations. As Sir William Beveridge wrote in the foreward to his celebrated report on Social Security in Britain, "A revolutionary movement in the world

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