

A large part of the early work of the Institute was devoted to instrumentation and to fundamental fibre study, the importance of which was far from apparent to the large numbers in the industry whose backing had sooner or later to be secured. The temptation to strive for more spectacular achievements by diverting attention to problems of immediate practical interest must have been strong; yet it was resisted. At the time it seemed that the necessity for building a sure foundation upon which further work could be based was justification enough. In retrospect, it is seen how the adoption of any other course might have ended in failure. The nature of the problems had not yet been specified in scientific terms; and furthermore, the staff of the Institute was not yet sufficiently versed in technology to invade the practical field on anything like equal terms with the manufacturer himself. Neglect of even one small practical feature of a situation could only too easily have brought forth amused contempt, if nothing worse, for these scientific workers who had come along to teach experienced mill-men how to do their jobs. The hope of establishing mutual confidence between the Institute and its member firms could have been irreparably shattered.

To-day that confidence is beyond question. Both the Institute and the industry have matured: the Institute in its understanding of practical problems as well as in its genuine respect for the knowledge and skill of the mill-man gained over many years of experience; the industrialists in their appreciation of the necessity for long-range fundamental research and in their recognition that research workers are humans like themselves, who, though differently trained and possessing different abilities, have their limitations and know it, are as glad as any other men to take advantage of informed criticism and advice, and are no less dedicated than they themselves to the task of increasing the prosperity of the industry they serve.

All this has not been accomplished merely by the passage of time, but by numerous acts of deliberate policy of which space here permits only the mention of two. At first the publications of the Institute were nearly all of the type appropriate to the journal of a learned society and for the most part beyond the patience, if not the comprehension, of those for whom they were intended. To remedy this, the more formal research papers were supplemented by a second line of printed communication, the *Bulletin*, now published six times a year, in which the progress and significance of current work are described in terms that the mill-man can rapidly read and readily understand. Excellently though the *Bulletin* serves its purpose, however, it was recognized that it could be no substitute for personal contacts. A Liaison Department was therefore set up, staffed by technologists with experience of industry, the function of which is to confer with mill-men on their own ground and in their own language, interpreting the work of the Institute to the industry, and bringing the problems of the industry to the research worker. In addition, the liaison staff spends an increasing proportion of its time in efficiency surveys of members' mills, the results of which, when collated and analysed by the more recently formed Technical Economy Section, are proving of the utmost value in reference to current problems of re-equipment and re-deployment of labour. Incidentally, it is worthy of wider acknowledgment that the technique of these surveys, devised and developed at the Institute so long ago as 1928,

was extensively applied in various Service connexions during the War when all forms of 'operational research' received great attention.

This is not the place for reflexion on that part of the "Year Book" dealing with work in progress. Suffice it to say that by the quality and value of its work the Institute has established for itself a reputation among the research associations of Great Britain second to none, and that in the textile field there is no organisation elsewhere in the world that can even remotely be compared with it. In size as well as in influence it continues to grow. Though already several times larger in personnel and accommodation than it was at its foundation, it is still inadequate to carry out all it is called upon to do. An appeal has, therefore, recently been launched for funds to see it through the next large phase of its expansion. One could only wish that all those who set the Association upon its course were still alive to witness the raising of this monument to their vision and faith.

W. E. MORTON

THE HEBREW UNIVERSITY : TWENTY-FIVE YEARS OF ACHIEVEMENT

By PROF. S. BRODETSKY
President of the University

ON April 1, 1925, many thousands of people, including distinguished personalities, gathered on Mt. Scopus to witness a historic ceremony—the opening of the Hebrew University by Lord Balfour. At the time there was very little there; the hill was bare except for one or two old buildings, and the embryo university consisted in all of three small research institutes: chemistry, microbiology and Jewish studies. To-day, after twenty-five years, we are able to look back and assess what has been achieved in this dramatic quarter of a century, during which the fate and fortunes of the Jewish people have oscillated until the cycle has come round full circle.

It might be true that in comparison with the epoch-making discoveries and events which have taken place in other parts of the world, our achievements in Jerusalem have indeed been modest. Yet the value of the Hebrew University to the Middle East, where the light of higher education and culture had well-nigh been extinguished, cannot be over-estimated. The University has been a positive influence for good in the resurrection of Israel, by its wide contributions, among other things, to education, medicine, agriculture and industry. It has already proved itself a veritable blessing to the young State, which it has staffed with large numbers of trained professional men.

From the modest beginnings described above, the University swiftly developed. To-day it has Faculties of Humanities, Science, Medicine and Law, a School of Agriculture (which will shortly be expanded into a full faculty), a Department of Social Sciences and Economics, a Department of Education, a University Press and the Jewish National and University Library with more than 500,000 volumes. 876 students have graduated from the University (473 in humanities, 366 in science, 37 in agriculture) and 103 doctorates have been awarded. This year the student enrolment has reached 1,541, the highest in

the University's history. The academic staff now numbers 237. This is one way of describing what has been achieved in these twenty-five years. To put it briefly, a fully-fledged University has emerged.

A statistical survey, though conveying the breadth of expansion, does not indicate its depth. Therefore, it will be useful to say a few words about some achievements in different sections of our University. Naturally enough, the Institute of Jewish Studies has come to assume a unique position in Jerusalem. Here ancient Jewish learning has been restored to its citadel in Zion in the framework of a modern university: Bible, Talmud, Jewish history, law, philosophy and Palestinography are approached in a scientific manner. There have been many discoveries, particularly in archæology, which have had a radical effect on the teaching of these subjects. But the important factor has been that these subjects could be studied in Israel, where they had their origins, where geographical data could be reconstructed, and where the natural phenomena, imagery and associations could be recaptured. This same geographical factor also gives the School of Oriental Studies a unique position; so Jerusalem has something special to offer in Jewish and Oriental studies.

On the science side, it was readily recognized that there were many other great universities with which it would be difficult to compete. Yet right from the beginning, the importance of science to the development of the country was emphasized by the founders. Dr. Chaim Weizmann, president of Israel and founder of the University, himself an outstanding chemist, stressed again and again that the sciences could not be neglected. So two of the three institutes that existed at the beginning of the University were science institutes, and I had the privilege of assisting in laying the foundation stone of the Einstein Institute of Mathematics and Physics also in April 1925. These twenty-five years have swept away the grave doubts that were then expressed as to whether a centre of scientific research could be built up in Jerusalem. The Hebrew University has been able to attract many scientific workers of world-wide reputation, such as Prof. Bernard Zondek (gynæcology and obstetrics); the late Prof. Halberstaedter (cancer research); Prof. F. S. Bodenheimer (zoology); Prof. Leo Picard (geology); Prof. A. Fodor and the late Prof. L. Farkas (chemistry). The University's men of science have certainly played their part in the romantic renaissance of Israel and have done much to facilitate progress in agriculture through the studies of soil and climatic conditions, trees and plants, and methods of pest control. Industries have benefited considerably by their investigations in the field of applied research.

Perhaps one or two instances will enable the reader to grasp better the value of these scientific contributions to the country. The great key to "making the desert bloom" was the supply of water. Prof. L. Picard, head of the Geology Department, has been engaged during these twenty-five years in a determined effort to search out water in areas which have become arid and barren through the centuries. Thanks to him, ground-water was discovered at scores of points throughout the country where agricultural settlements have since been successfully established. In places like Matzuba, Kfar Kisch and Nahalal his name has become a legend. Each of these discoveries increased the absorptive capacity of Israel. In the ten years between 1937 and 1947, for example, this research made available an addi-

tional 6,750 cubic metres of water per hour, which enabled the production of tenfold the number of crops, and meant that the newly cultivated land could support approximately 50,000 people.

Medical research at the University has been mainly concerned with the endemic and epidemic diseases prevalent in the Middle East, such as malaria, typhoid, typhus and dysentery. The methods of immunization and control developed by the University scientific workers have reduced the incidence of the various diseases, particularly malaria, for which a research station was established at Rosh Pinah in the north many years ago.

The Government of Israel is planning to settle large numbers of immigrants in the Negev, which is a desert and semi-desert region in the south of Palestine. Last year the University's Botany Department set up a Desert Botanical Laboratory to study the flora of the region, to organise botanical collections of trees for afforestation, plants for decorative purposes, medicinal plants, plants for industrial uses, and pasture grasses, and to conduct research into the utilization of barren lands and sand-dunes. This research will have a definite bearing on the settlement of the area.

These three examples—from geology, medicine and botany—are typical of what could have just as easily been chosen from physics, chemistry, biology, or any other branch of science, where the same sort of record exists. This is the second way of describing what the University has so far achieved.

Only a university built on solid foundations would have been able to respond to the challenge which the sudden emergence of the State of Israel created. The Hebrew University came through this test successfully. First, it was able to place at the disposal of the Government a tried staff of first-class calibre. Prof. L. Picard was appointed head of the Government Geological Services; Prof. R. Bachi became Government statistician, Prof. S. Assaf a Chief Court Justice, Prof. S. Sambursky director of the Israel Scientific Research Council, and so on. Secondly, the University was able to open its Faculties of Medicine and Law so as to train medical men, judges, lawyers and Civil servants for the State. Thirdly, wherever any research has been required on current problems, the University has not been found wanting. At the present moment, its Department of Social Sciences, for example, is conducting research into the absorption of new immigrants. It has been able to broaden its adult education programme, which was already organised on a country-wide basis, to aid the cultural integration of new immigrants.

It is appropriate to add at this stage that much of the expansion has been accomplished in the past two years since the rise of the State of Israel, despite the fact that the University was compelled, by force of circumstances, temporarily to leave its home on Mt. Scopus and to set up in improvised quarters in the city of Jerusalem. This fact, perhaps more than any other, proves that the teaching and research work has been organised on such solid foundations that it could continue and expand even when the concrete edifice had become inaccessible.

These twenty-five years have shown us how to work as a University. They have convinced us that the possibility exists of doing great things in Jerusalem, not only for Jews but also for humanity, not only for Israel but also for science and scholarship and for the welfare of the world.