

## THE LEONARDO DA VINCI EXHIBITION AT MILAN

THE Exhibition of Leonardo da Vinci (1452-1519) which has been staged in the Palazzo dell'Arte in Milan is a truly comprehensive and magnificent testimony to the many-sided activities of the great master. Endeavour has been made not only to collect exhaustive examples of his multifarious interests, but also to illustrate his personal environment and record, and thus ensure a finer appreciation of the man himself. There are galleries devoted to documents connected with his life-history, to his library, and to portraiture of him both in painting and sculpture. To provide background, other rooms show the work of his masters, his contemporaries at Florence and at Milan, and the pupils of his school.

In the Hall of Honour there are numerous drawings and designs of da Vinci, and in other galleries examples of his sculpture and some copies of his paintings. This splendid symposium, generously subscribed from public and private collections in many countries, manifest his superb mastery in drawing and design.

None the less staggering are his manifold achievements in the field of science. Anatomy and botany each occupy a gallery; these two subjects of natural science are known to have stirred Leonardo deeply, and the far-seeing results of his investigations are well portrayed.

In the realm of physics and mathematics he was ahead of his age. In several rooms there can be seen models and charts and diagrams of his work on astronomy, optics, mathematics, or again on geology and geophysics. His service under various masters necessitated his turning his mind to architecture and town-planning: a series of fine models and drawings bear testimony to his power of blending a balanced and artistic outline with the practical needs of utility.

It is perhaps natural that much space in the exhibition has been devoted to a record of his engineering qualities. Two hundred models, some

full size and some on a reduced scale, have been faithfully reconstructed from da Vinci's own elaborate notes, drawings and dimensions in the "Codice Atlantico" and other documents, and bear ample witness to his amazing versatility.

The flight of birds aroused his keenest interest and study, and he was convinced that man could achieve flight with mechanical aid: the models and records of his designs in this direction are indications of his insight into the future. Similarly his realization of natural forces prompted his investigations of the action of the waves and the winds: his designs for ships, with single or double hulls, and for paddle steamers, were the outcome of this research and betray a mind more fertile and far-seeing than any of his contemporaries.

Innumerable models and drawings give evidence of da Vinci's ingenuity and power of invention in mechanical devices of almost every kind. Pumps and all manner of hydraulics are notable examples, and one is tempted to run the gamut of all his varied achievements in mechanical engineering: it must suffice, however, to mention only a few examples, such as a printing-press, differential gear, cranes, water wheels, fire-escape ladder, belt-driven machines, in order to disclose his grasp of mechanical forces and the multifarious uses to which they could be put.

The wars of the period inevitably drew a man of his ability into their net, and his genius as a military engineer made his services invaluable to his chiefs. His study of ballistics stood him in great stead, and models of his multiple gun, bridges and fortifications are records of the adaptability of his great knowledge. It only remains to say that space has not been stinted at the Exhibition: the lay-out is good and modern. Skilful use has been made of murals and drawings and appropriate wall or ceiling decoration: the result is not only attractive but intensely interesting. The Exhibition remains open until October 1.

## UNIVERSITY STATISTICS IN GREAT BRITAIN, 1937-38\*

THE returns recently published by the University Grants Committee show that the total number of full-time university students in Great Britain continues to diminish. A gradual decline has been continuous since 1934 and would have been more noticeable after 1935 but for a simultaneous increase in the number of students from overseas. The actual figures are as follows:

	From overseas	Other full-time students
1933-34	4,670	46,067
1934-35	4,653	45,985
1935-36	4,718	45,811
1936-37	4,989	44,700
1937-38	5,096	44,093

The decline has been most marked in Wales, where the number fell by 15 per cent between 1935 and

1938, after a rise of 18 per cent in the preceding four years. The falling off in the Scottish universities, to which attention was directed in the Grants Committee's last quinquennial report (for 1929-35), has continued but was very slight last year when, moreover, admissions showed a sharp rise of 248. Admissions in Great Britain as a whole showed a rise of 295 following decreases of 423, 296, 374 and 189 in the four preceding years.

Distribution of the whole body of full-time students over the different subject groups during recent years is shown in the accompanying diagram. It exhibits a remarkable upward trend under the head of medicine (including dentistry). During the years in question the proportion of women students of medicine and dentistry increased from 12 to 14. Research and other advanced studies continue to occupy an increasing number of full-time students. The years 1929-35 showed an increase of no less than 35 per cent in

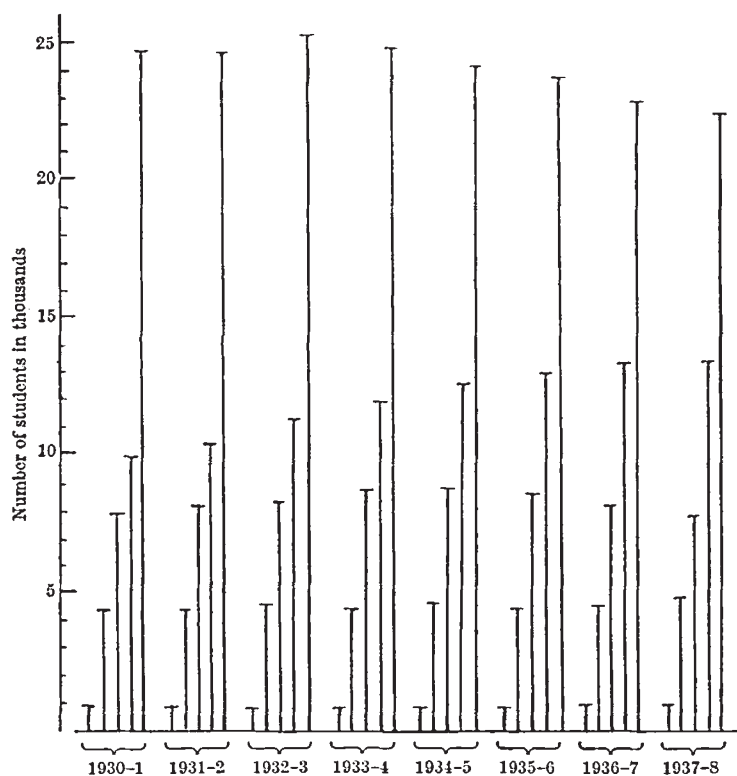
\* Returns from Universities and University Colleges in receipt of Treasury Grant, Academic Year 1937-38. Pp. 28. (London: H.M. Stationery Office, 1939.) 1s. net.

their number, although in the preceding quinquennium there had been practically no increase. Since 1935 there has been a further rise of 5 per cent and they now constitute more than 6 per cent of the total of all full-time students.

Conditions of residence of full-time students are indicated by the following figures: residing in colleges and hostels, men 8,124, women 4,314; in lodgings, men 14,190, women 2,163; at home, men 15,576, women 4,822. The subject was discussed at considerable length in the quinquennial report 1929-35 and the Commissioners extolled the value of properly equipped and managed halls of residence. Recently their opinions have been echoed in the National Union of Teachers' report on the training of teachers, which points out that for prospective teachers who live at home while taking the four

there has been any marked advance in this respect since 1935:

Students in colleges and hostels.			
	Increase or decrease since 1935	Percentage ratio to all full-time students	
		1935	1933
England (excluding Oxford and Cambridge)	+112	18.9	19.8
Wales	-26	15.3	17.2
Scotland	+61	8.2	9.1
<b>Total</b>	<b>+147</b>	<b>15.8</b>	<b>16.9</b>
Reading	+21	63.3	76.4
Bristol	-17	37.2	35.9
Durham	-18	31.0	32.2
Leeds	-12	23.4	21.1
Manchester	-56	29.7	29.9
Sheffield	+82	9.5	20.2
Birmingham	+1	12.5	13.7
London	+54	12.0	12.4
Liverpool	-3	10.1	10.4
St. Andrews	+64	24.0	31.2
Edinburgh	-31	13.9	13.7
Glasgow	+21	3.5	4.3
Aberdeen	—	—	—



Groups of five vertical lines represent number of students in one academic year in agriculture, technology, pure science, medicine and arts respectively, reading from left to right.

NUMBER OF STUDENTS ARRANGED BY SUBJECTS.

years approved course, university life becomes little more than a prolongation of school-days, while lacking such elements of community life as school provided, and where the journey between home and university is a matter of hours, as is often the case, these precious years tend to be squandered in an incessant rush of trains, lectures and preparation of work. The report goes so far as to recommend that *all* students attending this course should live either in a residential college or a college hostel, and that residence fees should be brought within the means of the poorest student. The following table shows that Sheffield and St. Andrews are the only universities in which

The most interesting feature of the returns is their inclusion for the first time of information as to the educational origins of newly admitted students. This significant innovation takes the form of a tabular statement of full-time graduating and diploma students entering for the first time in 1937-38, (i) whose homes were in the United Kingdom, and (ii) how many of these began their education in a public elementary school. From Oxford and Cambridge and the Institute of Education, London, this information was not forthcoming but will be given in future returns. The following table summarizes the figures for all the other institutions:

	(i)	Percentage ratio	
		(ii)	(ii) to (i)
University of London	2,905	822	28.3
England	6,071	2,761	45.5
Wales	674	600	89.0
Scotland	2,221	1,371	61.7
Great Britain (Total)	8,966	4,732	52.8

Women included in the figures under (ii) were: 252, 697, 166, 406 and 1,269 respectively.

Although the figures are far indeed from indicating approximation to equality of educational opportunity, they show that there has been much progress since the Cross Enquiry Commission of fifty years ago was told by a witness under examination as to the prospects of a public elementary school pupil over reaching a university: that it would be next to expecting him to take wings.

By way of supplement to this information, the Grants Committee publishes a table showing the proportion of 'assisted' to other full-time students, this expression implying assistance from outside sources (that is, other than personal and private), namely, scholarships, exhibitions and other awards and allowances providing wholly or in part for the payment of fees. The percentages are: Oxford and Cambridge, 44.7; London, 26.4; England, 38.5; Wales, 58.8; Scotland, 45.7; total, 41.9. The percentage of assisted women students was 46; of men 40.