in the University to rank along with the other Faculties of Art, Science, and Medicine, and to live alongside them in the closest intimacy. To do this effectively required judgment, imagination, and particularly courage and the faculty of dealing wisely with men and affairs. Prof. Smithells had written and spoken on this subject but always impersonally. On this occasion it was only proper that prominence should be given to the personal aspect, and the dominating part played by Prof. Smithells in this work fully and freely acknowledged.

Further support came from Prof. B. M. Connal, speaking as an old Arts colleague, and from Mr. J. Ferguson Bell, the president of the Institution of Gas Engineers, who, speaking for the gas industry, acknowledged the great indebtedness which they felt to science in application to their industry and particularly to the work of Prof. Smithells and the University of Leeds.

The portrait was received by the vice-chancellor on behalf of the University.

Prof. Smithells then described how his scientific work on flames had brought him into contact with the gas industry and its problems, and acknowledged, in impressive terms, its generosity to the University and the honour now paid to him. Referring to his colleagues, past and present, he paid a tribute to the founders of the old Yorkshire College and the remarkable group of men of science—Green, Rucker, Thorpe, and Miall—who in the early years so successfully disseminated the right spirit in the young institution, which ensured its initial success and later progress. To the late Prof. L. C. Miall he expressed a special personal tribute and the belief that no man did more for the spirit of the College and University. Speaking of the scholarship to be founded with the funds subscribed, he had wondered for a moment whether unity of knowledge might not receive appropriate illustration by devoting it to some literary end, but the idea was no doubt somewhat fantastic in this connexion. After all, he believed in science and shared the conviction expressed by a great man of letters, Mr. Galsworthy, that the future of the race was in the hands of science. It was right and proper, therefore, that this scholarship should be devoted to its advancement. In complimenting Dr. Baillie on his appointment as vice-chancellor, he assured him of a generous welcome, and expressed a firm faith in the modern university.

It was announced that the Smithells Fund would allow, after payment of the portrait and incidental expenses, of the establishing of a scholarship bearing the name of Prof. Smithells, within the University, of approximately 100*l.* per annum.

The British Dirigible Programme.

THE decision to take up again the development of dirigibles in Great Britain has probably been influenced by the example of the United States.

The following table gives a basis of broad comparison with German craft:

Name.	Length.	Diam.	Volume.	Displacement.	Power.	Speed.	Length/Diam.
	m.	m.	cub. m.	tons.	k.w.	km./hr.	
R 101 .	220	39·9	143,000	165	7×430	115 est.	5·5
"Burney"	212	40·5	143,000	165	7×430	115 est.	5·25
ZR 3. .	203	28	70,000	81	5×300	140 max.	7·25
L 59 . .	226·5	23·9	68,500	79	5×180	131 max.	9·5
Bodensee	121	18·7	20,000	23	4×180	135 max.	6·45

German practice shows much greater ratios of length/diameter; in the case of the L 59, this was perhaps due to the greater ease with which existing airsheds can be increased in length than in height and width; but the *Bodensee*, a successful post-War commercial craft, and the ZR 3, the latest example of German design, were free from this restriction.

In passing from the ZR 3 to the R 101 and the "Burney" the volume and power are both doubled, so that with similar shapes there should be an increase in speed of about $2^{1/9} = 1{\cdot}08$, or from 140 km./hr. to 151 km./hr., as compared with 115 km./hr. which is a heavy margin in estimating. The shapes are, however, very different.

Tests at the National Physical Laboratory on relatively minute models in the wind-tunnel indicate a "best" ratio of length/diam. between 4·5 and 6. Presumably the British designers are not relying solely on a very doubtful aerodynamical similarity, and it would be interesting to know the full size data on which they are departing so boldly from German practice.

The United States naturally hold for themselves the only supplies of helium, and the best method open to other nations for reducing fire risks is by installing heavy oil engines as is specified for the new British craft. The specification of "stainless" steel for the metal framework indicates a surprising advance in the design of members to resist local buckling in the very thin webs and flanges as compared with lighter and bulkier duralumin.

In a previous note (NATURE, October 11, p. 548), the useful life of a dirigible was estimated from German records as less than two serious voyages per month for eighteen months, excluding fire and war risks. It remains for time to show how far the ZR 3 in American hands, and the new British craft in British hands, will compete with this standard of performance set up by the Germans after more than twenty years' experience.

No doubt it is difficult for the authorities to neglect completely a potential weapon, even though the aeroplane has proved an almost perfect antidote. From this point of view alone, their decision is entirely defensible. The long delay in coming to it may well be explained by the formidable nature of the problem taken as a whole.

University and Educational Intelligence.

CAMBRIDGE.—The time having lapsed during which the University can suspend the Jacksonian professorship of natural philosophy, and no new scheme for it having been adopted by the University, the Vice-Chancellor has declared that the professorship is vacant. An election will take place on January 5 next.

Mr. F. Balfour Browne, Gonville and Caius College, has been appointed University lecturer in zoology.

LONDON.—The title of professor of anatomy in the University has been conferred on Mrs. M. F. Lucas Keene, in respect of her post as head of the Department of Anatomy at the London School of Medicine for Women. Prof. Lucas Keene was appointed lecturer in anatomy and embryology, with charge of the department, at the London School of Medicine for Women in 1919, and the title of reader in anatomy in the University was conferred on her in respect of this post in 1921.

A course of free public lectures on "The Anatomy and Physiology of the Sympathetic Innervation of the Striated Muscle" will be given at University College, at five o'clock on December 8, 10, and 12, by Prof. J. I. Hunter, of the University of Sydney. No tickets will be required.

Applications are invited for the chair of pathology at the London (Royal Free Hospital) School of Medicine for Women. Twelve copies of each appli-