The dual character of the problem set before the Commissioners is clear enough in these instructions, but the duality is no longer restricted to the academic field of teaching and examination. The conflicting views of the teacher and of the examiner are but a small part of that problem, the "dualities" of internal and external interests, or of incorporated and non-incorporated colleges, or of academic and technological ideals, are dominated by the still more cogent duality of Metropolitan and Imperial.

The accidental development of an Imperial University under the Metropolitan name can be remedied and utilised in one way alone. The University of London is *de facto* the rough sketch of an Imperial University that should be distinguished by the name "Imperial." The Incorporated Colleges are *de facto* the nucleus of a Metropolitan University that should be distinguished by the name "London."

THE FUR-SEALS OF BERING SEA.

WE learn from *The Times* of March 17 that Russia has accepted an invitation from the United States Government to take part in a new Seal Fishing Conference at Washington a few months hence, probably in the spring of 1912, and Sir Edward Grey has announced in the House of Commons that an official invitation addressed to this country is now upon its way. It is generally understood that this invitation will be accepted, and that the Home Government, together with Canada, will take part in a friendly discussion upon this once difficult and contentious subject.

It is now eighteen years ago since the Paris Tribune of Arbitration gave its ruling, the gist of which was that, while the United States had no rights of property in the seals outside the ordinary three-mile limit, yet that in the special circumstances of the case it was desirable that that legal limit should be set aside and a wider boundary fixed; and as a matter of fact a close time was appointed, and a zone of sixty miles around the Pribyloff Islands was preserved against the operations of the "pelagic sealer." Three years later the question was again raised by a celebrated letter addressed to our Ambassador by Mr. John Sherman; but after inspection of the seal-rookeries by British experts, and a re-discussion of the whole circumstances of the case at Washington, no sufficient reason was found for disturbing the decision of the Tribunal, and the case has since remained *in statu quo*.

During the thirteen or fourteen years that have elapsed since the Washington conference no inspection of the rookeries has taken place by British agents, and but little news concerning their condition has reached this country; but there can be no doubt at all that the herds have greatly deteriorated during these recent years. The American agents declare that the seals are now only one-fourth as many as at the time of the arbitration, when already the diminution had gone far. At the same time, the Canadian sealing fleet has dwindled almost to nothing, and accordingly the responsibility for the recent depletion of the herds must lie on other shoulders than our countrymen's.

It appears that it is now the Japanese who are mainly responsible. As Japan was no party to the Paris Arbitration, the sixty-mile limit has never applied to them, and the Japanese sealers accordingly ply this trade around both the Russian and American islands right up to the three-mile limit, and (if report says truly), even sometimes to the very shore. During the years of the Russo-Japanese war it is said that the Commander Islands were freely pillaged, and it is certain that nowadays the Japanese fleet—non-existent a dozen years ago—is both large and active. In 1908, it is said by the United States agents that the Japanese fleet consisted of no fewer than thirty schooners, some with as many as sixteen boats, and rumour has it that our own countrymen in British Columbia have attempted to put their vessels under the Japanese flag, so as to evade exclusion from the sixty-mile zone. It is believed that Japan has agreed to take part in the impending conference if Great Britain likewise agrees to participate, and there is thus every reason to hope that an arrangement may be come to by which the destruction shall be arrested, and the herds gradually restored.

PROF. JAKOB MAARTEN VAN BEMMELEN.

IN the death of Prof. van Bemmelen, which took place on March 13, there passes away the oldest member of that singularly distinguished band of chemists and physicists which has had its home at the University of Leyden.

Born on November 3rd, 1830, at Almelo, where his father was head of the Grammar School, Prof. van Bemmelen was in his eighty-first year at the time of his death. His father died in 1830, and the widow moved to Leyden, where her son attended the High School, until he entered the University in 1847. He studied chemistry under the then professor of chemistry and pharmacology, van der Boon Mesch. Van Bemmelen has himself left on record a description of the very primitive laboratory—a single room with wide old-fashioned hearth in the great St. Catherine Inn in Breedestraat, serving as lecture-room and laboratory. There, as he notes, chemical instruction could go no further than the simplest quantitative experiments!

In 1852 van Bemmelen became assistant to Prof. van Kerchoff at Groningen, and it is owing to the fact that the students were mostly interested in pharmacology that his earliest papers were purely pharmacological in character.

Van Bemmelen's life work, his investigation of the colloidal state, came to him when he left Kerchoff to become teacher in the School of Agriculture at Groningen. There he began his analysis of soils, and there also, in 1864, he began to experiment on the "absorption processes in mould," the results of which were not published until 1877, thirteen years later. This delay was due to pressure of other work, largely alien to the young chemist's tastes. In 1858 he had married the daughter of the Rev. Jan Boeke, Baptist minister at Amsterdam, a lady whom the writer remembers as a gracious and kindly hostess at Leyden ten years ago, and the necessity for providing for his home led him to accept with much misgiving the position of director of the High School at Groningen when it was offered in 1864. There he stayed for five years, with little time or opportunity for laboratory work, and, as he himself has recorded in the Gedenkboek of the school, much distressed at the slow progress he could make in his studies of absorption. In 1869 he was moved to the High School at Arnheim, where he remained until the final move to Leyden in 1873.

Though the chief work scarcely progressed at all during these years of school administration, they were not wholly barren of scientific work. More than twenty papers were published, all on problems of agricultural chemistry. To this period also belongs what van Bemmelen himself very characteristically called his greatest contribution to chemistry—the discovery of Bakhuis Roozeboom, who came to assist him in soil analysis.

In 1873, the chair of chemistry at Leyden becoming vacant owing to the retirement of van der Boon Mesch, Dr. van Bemmelen was elected into it, and Bakhuis Roozeboom became his assistant. The first ten years of the professorship were almost exclusively devoted to the chemistry of soils, and the results place van Bemmelen in the front rank of agricultural chemists. Thenceforward, from 1880 onwards, the rest of his long and active life was devoted to elucidation of absorption as a phenomenon of the colloidal state.

In this region van Bemmelen ranks as a pioneer, and his fame rests now, and must always rest, on his classical researches on the relations between the components in the hydrogels of various colloidal oxides.

The work is in the main experimental and descriptive. It embodies an enormous amount of exact observation which has not yet been fully assimilated into the general body of knowledge. In one marked respect van Bemmelen stands apart from the Dutch school of chemists. With the exception of an address on the application of thermodynamics to chemistry which he delivered when rector of the university of Leyden in 1889, van Bemmelen's work is non-mathematical. His colloidal work is the application of the old-fashioned descriptive and experimental methods to a new region. His first assistant, Roozeboom, and his second assistant, Schreinemakers, on the other hand, were purely of the thermodynamic school.

Van Bemmelen possessed great personal charm. No picture which the present writer has seen does justice to features which were singularly delicate and refined. As the descendant of an old Dutch family, he was somewhat of an aristocrat in altogether the best sense of the word. Although his devotion to science was intuitive and instinctive, it left space for many interests amid the "humanities." As his life-long friend and colleague in the professoriate, Prof. Tiele said of him:—"Although an assiduous investigator in special fields of learning, van Bemmelen always bore in mind those greater questions the answering of which is the aim of us all."

W. B. H.

DR. JOHN ATTFIELD, F.R.S.

ON Saturday, March 18, Dr. John Attfield passed to his rest, and scientific pharmacy lost one who had devoted much of his life and work to its advancement.

Born in 1835, Attfield, after the completion of his school education, became a student in the School of Pharmacy of the Pharmaceutical Society, and subsequently demonstrator of chemistry at St. Bartholomew's Hospital, a position which he occupied for eight years. In 1862 he graduated at the University of Tübingen. In the same year he was appointed director of the laboratory of the Pharmaceutical Society, and soon afterwards professor of practical chemistry, a chair which he filled for thirty-four years. During this long period Attfield devoted himself, with marked success, to the advancement of pharmacy and particularly of chemistry as applied to pharmacy. His industry and ability in this respect is attested by the long series, some seventy in number, of original articles that appeared under his name in the *Pharmaceutical Journal* and other journals, an industry and ability that was soon to be rewarded by the blue ribbon of science, the Fellowship of the Royal Society. Of his publications the most important, and that which undoubtedly had the most far-reaching influence, was his "Handbook of Practical Chemistry," a work which was quickly accepted, both in this country and abroad, as an ideal text-book for students of pharmacy.

But it was not by his scientific labours alone that Attfield accomplished so much for pharmacy. Himself an admirable organiser and possessing extraordinarily methodical habits, he took an active part in founding the British Pharmaceutical Conference, an association that has proved itself of inestimable value to pharmacy, and later the Institute of Chemistry. To the subject of pharmaceutical education he devoted much time and attention, and no more strenuous advocate could be found of the advantages that would accrue to pharmacy through the raising of the standard of education amongst its members. Further scope for Attfield's scientific ability and inclination presented itself in the editorship of the "British Pharmacopœia" and of two of its addenda. The pages of these works bear abundant testimony to the care and skill that was bestowed upon them.

To his students Attfield was a genial, kindly teacher, ready at all times to sympathise with them, to assist them in their difficulties, to encourage them by becoming a student himself, and to stimulate them by holding up to them an ideal towards which they should strive. Much as he accomplished directly, it was little compared with what he accomplished indirectly by organising others and directing their efforts. During the thirty-four years of his teaching career many hundreds of students passed through his hands; there is not one that does not owe a debt of gratitude to John Attfield.

HENRY G. GREENISH.

NOTES.

THE annual meeting of the British Science Guild will be held at the Mansion House on Friday, April 7, at 4 p.m. The Lord Mayor will preside, and the president (Mr. Haldane) and others will address the meeting.

MR. F. J. BRIDGMAN, demonstrator in zoology and curator of the zoological museum of the Imperial College of Science and Technology, South Kensington, has been appointed naturalist on the staff of the Plymouth Laboratory of the Marine Biological Association.

ALTHOUGH attacked by a destructive epidemic some two or three years ago, wood-pigeons have of late increased to such an extent that measures are being taken to diminish their numbers. Some letters have appeared in the public Press directing attention to pigeon diphtheria and its risk to man. Pigeon diphtheria, however, has nothing to do with human diphtheria; the micro-organism is quite different, and is probably very minute and a "filter passer."

AN influential deputation from the Royal Institute of Public Health waited on the Presidents of the Local Government Board and Board of Agriculture and Fisheries on March 16 to urge the necessity for appointing a Royal Commission for the purpose of inquiring into (1) the increase of vermin and the steps to be taken for their destruction; (2) the question of what creatures are or are not harmful to man and his industries; and (3) the safety and efficiency of the various viruses on the market and other means advocated for such destruction. Mr. Burns acknowledged the influential nature of the deputation and the importance of their representations, and promised consideration of the matters brought before him.

The Popular Science Monthly for March contains an interesting article, by Dr. Fielding Garrison, on Ehrlich's work on specific therapeutics and on "salvarsan" in