instruct ourselves, to inspire others to act in a way similar to that of the men we revere; perhaps, most of all, to impress the fact of the debt of the living to the past. The continuity of primitive savage instincts in the civilised is a plausible but misleading fallacy in psycho-analysis, and at the best a grave exaggeration. However, in Mr. Trotter's address these allusions only add a quaint flavour of romance. We sympathise with him in his hope that the truly great may be recognised in their lifetime, but we would not have this at the cost of diminishing the respect and remembrance of them after their death. The growth of the latter practice is one of the best features of the age, and offers hope that we may be able to combine our vertiginous progress with the continuity of order.

Third Pedler Lecture of the Chemical Society

PROF. L. RUZICKA, of Zürich, delivered the third Pedler Lecture to the Chemical Society on March 10, his subject being "The Life and Work of Otto Wallach". Prof. Wallach, whose outstanding contribution to organic chemistry was his pioneer work on the terpene series, was born in Königsberg on March 27, 1847, the son of a Prussian official. His early education was on classical lines, and in addition he had a lifelong interest in the contemplation of art. In 1867 he began his chemical studies in Göttingen under the direction of Wöhler and his assistants, Fittig and Hübner. In the atmosphere of industry which was there cultivated, Wallach obtained his doctor's degree after five semesters of study, his dissertation dealing with position isomerism in the toluene series. After a short period in Berlin as assistant to Wichelhaus, he accepted in 1870 an assistantship at Bonn, offered to him by Kekulé. The period at Bonn, which lasted for nineteen years, was interrupted for a short time when he went to Berlin as the sole chemist to a newly founded enterprise which later developed under the name "Aktiengesellschaft für Anilinfabrikation" (Agfa). In 1889 Wallach was called to Göttingen as successor to Victor Meyer, and retained the direction of the Chemical Institute until 1915. In 1908 he was elected an honorary member of the Chemical Society, and in 1909 received an honorary doctorate of the University of Manchester. The Nobel prize for chemistry was awarded to him in 1910. Wallach died on Feb. 26, 1931, having made such contribution to organic chemistry that any attempt to picture the science with Wallach's work removed would unmistakably disclose a severe gap.

Wallach's Chemical Investigations

PROF. RUZICKA gave a brief sketch of the principal investigations conducted by Wallach in the domain of terpene chemistry. The work originated in a study of several samples of essential oils which had been kept untouched for fifteen years in a cupboard in Kekulé's private laboratory. It soon became evident that "a great many terpenes formerly designated differently and of supposedly varying constitution are undoubtedly identical". In the first stages several simple reagents were caused to act on the separate fractions of natural terpene mixtures with the view of the separation of crystalline reaction products. In three years Wallach was able to list eight terpenes which obviously differed from one another, each being characterised without ambiguity: pinene, camphene, limonene, dipentene, sylvestrene, terpinolene, terpinene, and phellandrene. Later it appeared that dipentene is *dl*-limonene, and that pinene, terpinene, and phellandrene are mixtures of α- and β-compounds; moreover, it is now known that sylvestrene does not occur in Nature. Wallach also investigated oxygenated terpene derivatives and the sesquiterpenes, particularly cadinene and caryophyllene. After characterisation of the individual terpenes, he considered the elucidation of their innumerable mutual relations to be more important than the determination of their constitution. The real harvest from the persistent work of Wallach was reaped in 1895, when, with a single stroke, the structure of an entire series of terpene compounds was elucidated. With the end, about this time, of the heroic period in terpene chemistry, Wallach ceased to play the part of pioneer. Of his later work, Prof. Ruzicka referred to that on bicyclic representatives of the terpene series, and that concerned with simple alicyclic compounds.

Early History of Magnetism

AT a meeting of the Newcomen Society held at the British Industries Fair, Birmingham, on March 2, Dr. J. B. Kramer read a paper on "The Early History of Magnetism", in which he discussed the various accounts of the first discovery of a magnet, and the development of the science of magnetism down to A.D. 1600. His remarks were divided into five sections, the first dealing with the discovery of magnetism up to and including the writings of Lucretius, about 95–52 B.C.; the second with the interpretations and first applications of magnetism up to the thirteenth century; the third with the experimental researches of Peter Peregrinus of Marincourt, A.D. 1269; the fourth with the magnetic compass, between the thirteenth and sixteenth centuries; and the last with the discovery of terrestrial magnetism by Gilbert, and with Gilbert's book, "De Magnete".

Discovery of Magnetic Properties

FOR the claim that is sometimes made that the magnet was first known to the Chinese, Dr. Kramer finds no support, but after examining the works of Aristotle and others, he comes to the conclusion that the magnet was discovered accidentally by one of the Grecian tribes who originally inhabited Thessaly and were called Magnetes. The discovery was made in one of the settlements in Asia Minor, in the Province of Lydia, about 600 B.C. That magnets attract through a distance, that they induce magnetism in iron, and that they repel as well as attract, are mentioned by Lucretius. Who made the great discovery that if allowed to move freely a magnet pointed north and south is not known, but Peter Peregrinus describes the dual polarity of magnets. The work of Gilbert was based on 199 'magnetical