THE Conversazione held on 14 November 1945 was the first since 23 June 1939. It was attended by several guests, including the Ambassadors of Belgium, Brazil, Czechoslovakia, Norway, Poland, Portugal, the Soviet Union, and the United States, the Swedish Minister, the Lord Privy Seal, the Secretaries of State for the Home Department, Dominion Affairs, India and Burma, and the Colonies, and the Minister of Education.

A striking feature of the conversazione was the exhibits and demonstrations given by the Royal Navy, the Army and the Royal Air Force illustrating methods and equipment used for personnel research in the different services. The main purpose of the demonstrations was to draw attention to the physiological hazards which modern armaments may impose upon their users. Research has been directed towards the detection and elimination of factors producing such stress, and, where elimination is possible, towards reducing the effect upon man. The items shown were chosen primarily with a view to demonstrating the physiological problems encountered and the direct application of the results of research towards the protection of the fighting man and an increase in his efficiency.

The demonstrations were generally classified under the three services. The Royal Navy illustrated the physiological problems encountered by the user of self-contained diving gear, the application of anatomical, physiological and psychological principles in the design of gunnery equipment, experimental work on the effects of hot climates and the problems peculiar to flying from aircraft-carriers.

The Army exhibits included a Comet Tank showing some of the features in the design of an armoured fighting vehicle which require physiological studies; apparatus used to examine the physiological functions involved in laying a gun accurately on small stationary and moving targets; apparatus used to determine the best relationship between the foot and head controls and the driving seat of tanks;
problems of tropical warfare, including an experimental hot room for
determining the capacity of men to withstand tropical environments
and for testing measures to increase their efficiency, exhibits of mosquito-
proof fabrics, clothing and equipment designed for tropical use, and
demonstrations of the losses of water and salt when men are exposed to
different severities of tropical environments, methods used in studying
the physiological changes in motion-sickness and measures for
alleviating sea-sickness; and a film showing the use of time and motion
studies in improving efficiency and reducing fatigue.

The Royal Air Force illustrated many of the physiological problems
raised in connexion with the protection of flying personnel from the
stresses imposed on them by air warfare. Demonstrations included a
mobile low pressure chamber for teaching aircrews the proper use of
oxygen and effects of its neglect, pressure-suits to counteract the effects
of acceleration, deceleration, and rapid turning, flotation and exposure
garments, anthropological data for the development of cockpits and
clothing, apparatus for demonstrating the disorganization of skill under
conditions of fatigue or emotion, and for the synthetic training of
Pathfinder Air Bombers in visual centring on target indicators.

The British Thomson-Houston Company exhibited the develop­
ment of fluorescent lighting. The rooms and corridors of the Society’s
buildings were illuminated by means of fluorescent lamps in an
experiment which adapted the most modern form of illuminant to a
building with period architecture, and illustrated the use of architectural
lighting design in such a way that the lighting becomes virtually part
of the fabric of the building and lighting fixtures as such almost
disappear.

Sir Lawrence Bragg arranged a demonstration showing the use of
X-rays in science, art and industry. The exhibits included apparatus
of historic interest such as early types of discharge tubes, Sir William
Bragg’s X-ray spectrometer, and Mosley’s apparatus for the determina­
tion of the high-frequency spectra of the elements, the application of
X-rays to the fine arts, and to the non-destructive inspection technique
now widely used in the inspection of aircraft-castings, welds for high-
pressure vessels, and wireless valves, the X-ray analysis of complex
organic compounds, crystalline proteins, plastics and fibre structure.

April 1946
Professor E. N. da C. Andrade arranged a demonstration illustrating the traditional connexion of the Royal Society with men of science of some of the Allied countries, and Professor F. J. Cole provided an exhibit from his own collection illustrating the work of three early Dutch biologists who were closely associated with the Royal Society.

An interesting departure from previous practice was made in that the exhibits were not dismounted immediately after the conversazione. Instead, the Society’s buildings were thrown open to a large number of senior schoolboys and schoolgirls on the morning after the conversazione. The Chief Education Officer of the London County Council was invited by the Society to arrange for 400 boys and girls to visit the exhibits, and other invitations were extended to Westminster, St Paul’s, Highgate, Mill Hill and University College Schools. This opportunity to see the exhibits was greatly appreciated by the keen young visitors.