

# THE LANCET.

LONDON: SATURDAY, MAY 18, 1907.

## The Royal Commission on Vivisection.

THE Royal Commission on Vivisection has issued its second report consisting of the minutes of the evidence taken during the months of February and March, 1907. The following are the names of the witnesses whose evidence is contained in the minutes:—Mr. W. H. POWER, C.B., F.R.S., principal medical officer to the Local Government Board, representing the Local Government Board; Dr. A. R. CUSHNY, F.R.S., professor of pharmacology and materia medica in University College, London, representing the committee of medical and scientific societies; Lord RAYLEIGH, O.M., President of the Royal Society, and Sir R. DOUGLAS POWELL, Bart., K.C.V.O., President of the Royal College of Physicians of London, representing their respective bodies; Dr. FREDERICK TAYLOR, senior physician to Guy's Hospital; and Mr. J. W. GRAHAM, principal of Dalton Hall, Victoria University, Manchester, and Miss A. KENEALY, L.R.C.P. Irel., representing the Parliamentary Association for the Abolition of Vivisection.

The evidence contained in this report may be read with much satisfaction by fair-minded and humane persons. They will be well satisfied, we think, that the safeguards which in this country are erected against needless infliction of pain on lower animals are both sufficient and efficient. The evidence given, for example, by Mr. POWER, which demonstrates exactly the position of the Local Government Board in the matter of vivisection, shows indubitably the necessity for animal experiments in the public interest, while bringing out the fact that such experiment in the case of investigations required by the Local Government Board consisted of nothing more formidable than a prick in something like 98 per cent. of the cases. The principal medical officer of the Local Government Board quoted an explanatory minute from the pen of the late Sir JOHN SIMON and showed that in order to increase our power to prevent various diseases of men and of domestic animals a first aim is to obtain exact scientific knowledge of the causes and of the mode of attack of the diseases in question. In this sort of study more or less experiment may be necessary to determine the results which the administration of a particular reagent will produce upon an animal. Moreover, in aid of preventive medicine, and often in aid of therapeutics, experiments on animals are needed to test the value of alleged prophylactics and remedies as against known causes or processes of disease. Sometimes, as in the case of Asiatic cholera, such experiments are more immediately in the interest of man, sometimes, as in the cases of sheep-pox and cattle plague, they are more in the interest of domestic animals. Sir JOHN SIMON stated that while no

doubt pain or uneasiness will afterwards arise in cases where disease is the result of experiment, yet the experiment would often require that the animal should be killed as soon as disease became manifest and, "of course, no animal would needlessly be let live in a state of suffering." The memorandum of its first medical officer is still adhered to by the Board. The Local Government Board sends to each experimental worker on each occasion of his engagement by the Board to do a piece of work a note drawing his attention to the fact that no experiments on living animals are to be conducted at the cost of the State without the employment of anæsthetics in the case of painful operations nor without a report from time to time explaining the object of such experiments and showing their necessity for the purpose of discovery. The men who perform these experiments are, of course, certificated workers under the supervision of the Home Office and at any time their procedure may be inspected. The questions directed to Mr. POWER brought out in answer an account of work done in connexion with the prevention or cure of diphtheria, cholera, plague, and typhoid fever in particular. They showed, further, that through her international obligations with regard to the entry of disease by ships England is bound to employ experimental investigation to insure prompt and certain detection of infectious diseases. In the same way inoculation experiments often become essential for the local investigation by medical inspectors of the Board of conditions under which disease exceptionally prevails, as, for instance, at the present time in the case of cerebro-spinal meningitis. The substantial benefits with regard to curative treatment of disease that may be obtained from experimental work are shown better perhaps in the case of diphtheria than of any other disorder. The facts of the case before and after the introduction of antitoxin are clearly stated by Mr. POWER and became the more convincing the more they were scrutinised by his interrogators. In the hospitals of the Metropolitan Asylums Board the case mortality has been reduced from a rate of 40 to one of 12 per cent., and Mr. POWER was able to uphold the validity of these figures and to show that no extraneous circumstance interferes with the favourable light which they throw upon the value of diphtheria antitoxin. The evidence of Dr. CUSHNY was directed to an explanation of the influence which experimental methods in pharmacology have exercised upon therapeutics, and similarly is of great public interest. The case of digitalis was one of the most striking which he cited in support of his view of the value of experiment. This drug was formerly supposed to have a slowing and weakening action upon the heart and was in use for such conditions as aneurysm. It was the experimental work of TRAUBE and LAUDER BRUNTON which demonstrated the real action of digitalis and saved many scores of patients from the baleful results of its use under false premisses. The introduction into practice of chloral, purely the result of LIEBREICH'S experimental work, was another instance quoted by Dr. CUSHNY to show the value to therapeutics of such investigations, and he dealt also with other important members of the soprific class of drugs and with the modern antipyretics.

The opinion of the medical profession generally upon the question of vivisection was represented by Sir RICHARD

DOUGLAS POWELL and Dr. TAYLOR. In their memorandum the work of LISTER and of PASTEUR and its enormous beneficial influence was commented upon, and particular instances were related in which bacteriological investigation has led to the improved treatment of disease. The nature and treatment of cretinism and myxœdema were also cited as valuable discoveries directly resulting from experimentation upon animals. Apart from the hard logic of facts which these witnesses brought to bear upon the question of vivisection, the concluding words of Sir RICHARD DOUGLAS POWELL'S evidence might be read with great advantage by those people who, carried away by sympathy with the dumb animal, overlook the sufferings of their fellow creatures. It is hard for them to realise, the President of the Royal College of Physicians showed, the intense longing for greater power over disease which possesses the medical man whose hours, whose days, and whose weeks are spent in the observation of suffering with which he is often able but partially to cope; to see, perhaps, a beloved child dying day by day, and to witness the harrowing distress of mind of the parents, is to feel that for the prevention of such misery as that even a hundred dogs might be sacrificed without blame. It is but just that the influence of sentiment should be evoked on one side when it plays so large a part upon the other. The anti-vivisectionist relies, as any calm perusal of the evidence given by Miss KENEALY and Mr. GRAHAM will determine, to no small extent upon purely sentimental considerations. Such considerations we are far from belittling, and we would have it recognised that in this matter true sentiment has as much argument to proffer in favour of, as against, the practice of careful experiment upon living animals. It is the biased sentiment that we deprecate which misrepresents facts, which maligns honest observers because they are scientific, and which ignores advantages because they are reached by the hated means. We sympathise, as we believe every man of science sympathises, with the humane affections which underlie the words and the actions of the anti-vivisectionist, but we appeal to him not to let the promptings of a kind heart lead to the indications of a weak head. Let him show not merely that he can sympathise with animals, but also that he can understand and appreciate the arguments of men when they demonstrate the widely beneficial influences of properly controlled experimentation upon living creatures.

## The Registrar-General's Annual Summary.

THE Registrar-General's Annual Summary of Births, Deaths, and Causes of Death for 1906 has made its appearance this week, and we wish to congratulate the office upon its promptitude. We notice in the summary considerable improvements on the issues of previous years and to these we desire briefly to direct the attention of our readers. In submitting to the President of the Local Government Board the fifty-third issue of this summary the Registrar-General takes occasion to give an account of the scope and growth of the publication, and, incidentally, of the origin of vital statistics in London and other large towns. The earliest records which we possess

of London mortality appear, according to Captain GRAUNT, to have begun towards the end of the sixteenth century. We learn, on the authority of Dr. WILLIAM OGLE, that these records, originally styled "The London Bills of Mortality," were compiled through the agency of the Company of Parish Clerks, and, as the main object was to give information concerning the progress of the plague which at that time was prevalent in London, this publication was discontinued with the cessation of that disease. From the beginning of the seventeenth down to the middle of the nineteenth century the old bills of mortality were published regularly, but in 1849 the bills of the old parish clerks came to an end, having been superseded in 1840 by the new bills published under the authority of the Registrar-General, which had relation to a much more extended area.

The first of the long series of annual summaries issued from the General Register Office during the last 52 years consisted of a pamphlet of only eight pages, which was issued by Major GRAHAM, the first Registrar-General, in the year 1855. Ten years after the first issue—viz., in 1865—particulars of births and deaths were added for seven large English towns, as well as for Edinburgh, Glasgow, and Dublin. The vital statistics of Vienna were also included for the first time in the annual summary for that year. In 1872 the list was extended so as to include 67 provincial towns and 11 foreign cities; and ten years later it was further extended to 78 towns and 30 foreign cities; while the present issue relates to London and to no fewer than 217 provincial towns and 38 colonial or foreign cities. So much for the expansion of the summary from a pamphlet of eight pages in 1855 to one of 76 pages with an excellent chart and complementary tables in 1906. But Sir WILLIAM DUNBAR tells us in his preface that the recent development of the science of vital statistics has necessitated a revision of the methods of calculation that passed muster in earlier years. Thus, we learn that for the present summary not only have the simple ratios of births, deaths, and marriages been presented in terms of the living at all ages but special estimates of particular sections of the population have been made for the purpose of expressing marriage-rates in proportion to the number of marriageable persons in the community, birth-rates in proportion to the number of women of child-bearing ages, and death-rates based on a standard population of the same age and sex constitution as that of the country generally. Having regard to the great and increasing public interest now shown in the important question of infantile mortality, the subject has been considered in reference to climatic conditions and an endeavour has been made to differentiate the deaths due to antenatal influences. Lastly, and to this point we attach considerable importance, the Registrar-General tells us that in order to furnish the earliest available information concerning mortality the data, as returned by the registrars, are now published in the annual summary; and although the details may require revision and some modification before their final presentation in the annual report, nevertheless in their provisional form they are now available to the public nine months earlier than in former years.

Turning to the vital statistics of 1906 we find that the marriage-rate of England and Wales in that year, although