

Copy of report of the Right Honorable Sir Herbert Maxwell ... and P.H. Pye-Smith ... the delegates of Her Majesty's Government at the International Congress on Tuberculosis, held at Berlin on the 24th to the 27th May 1899.

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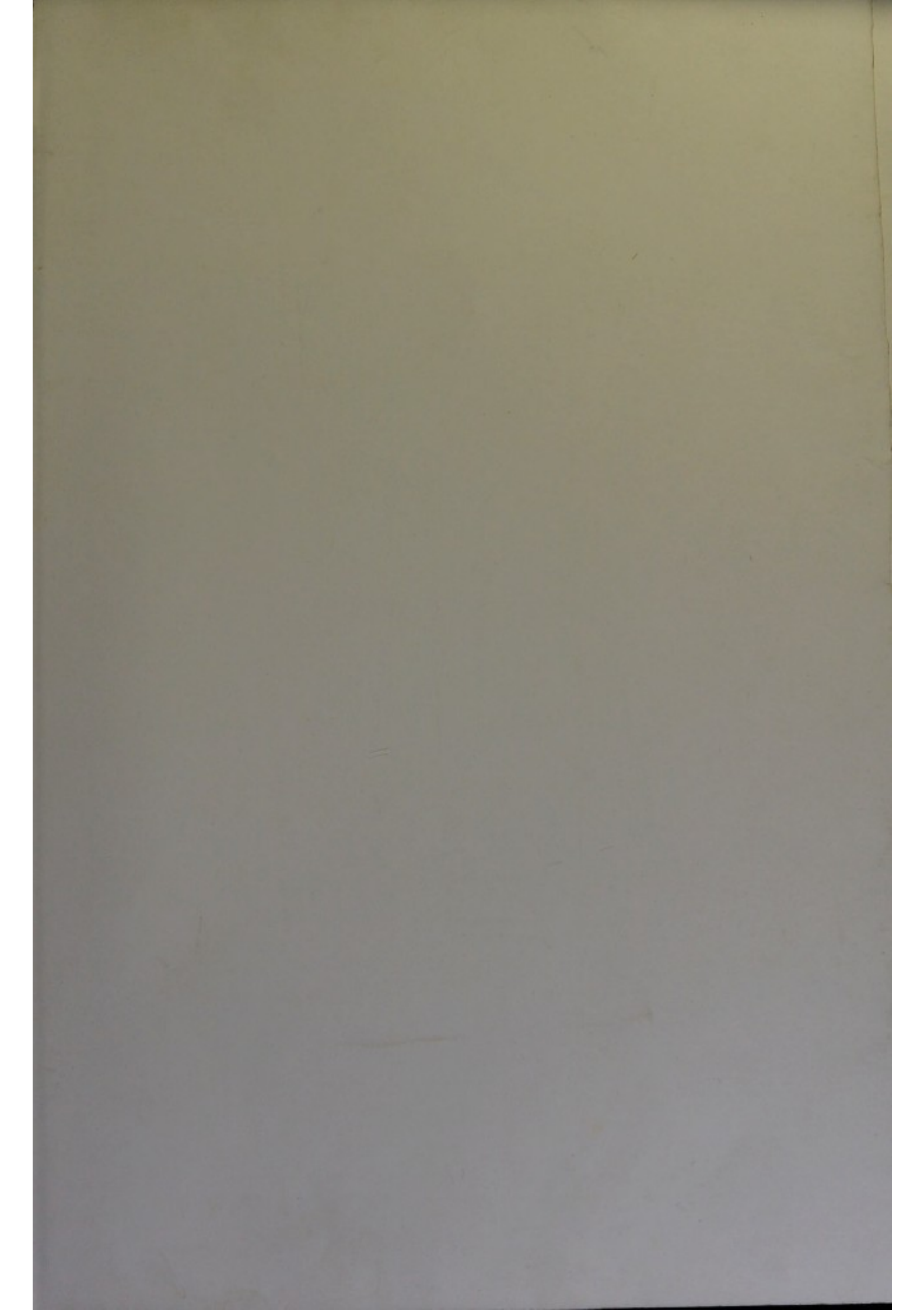
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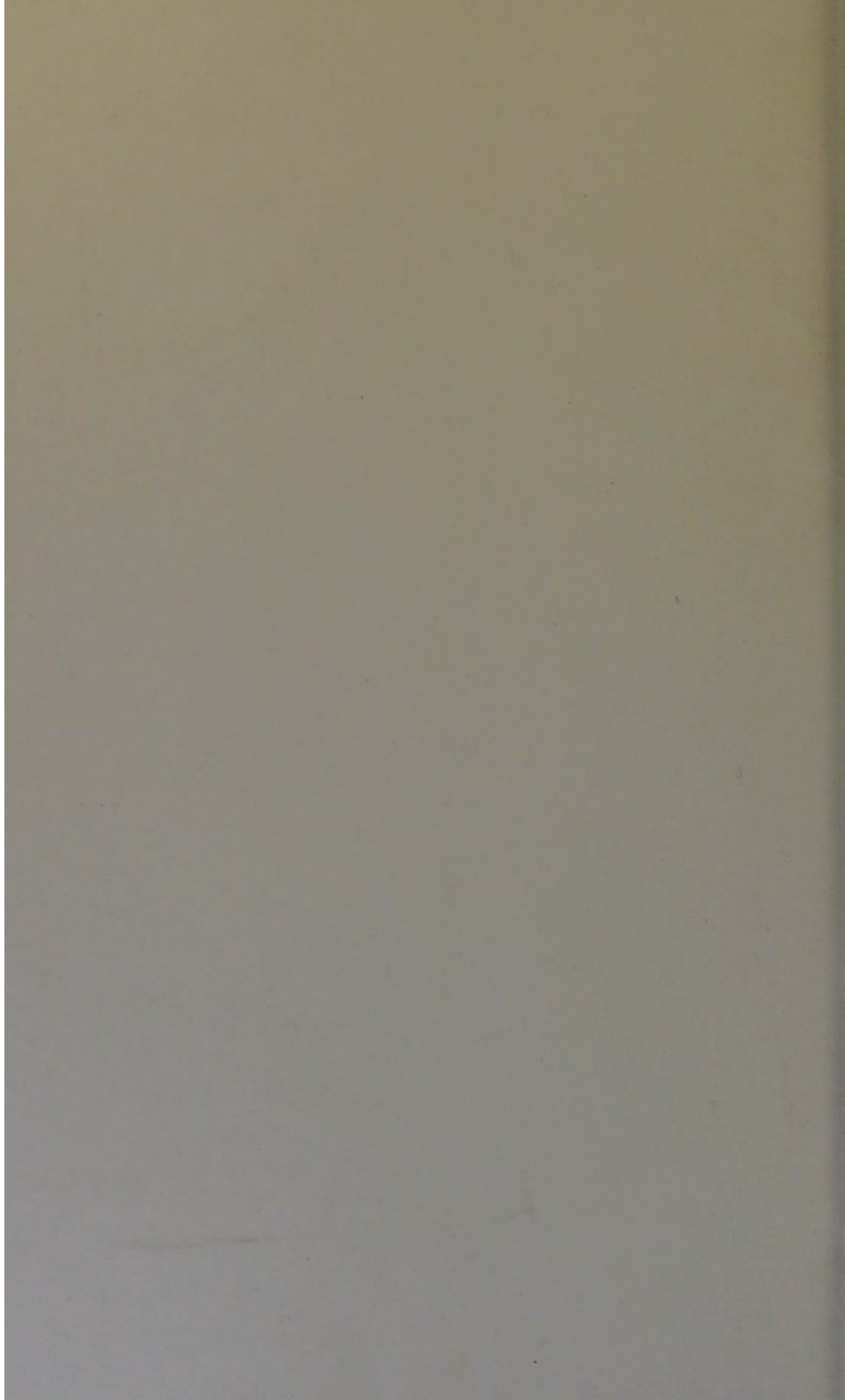
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TUBERCULOSIS (INTERNATIONAL CONGRESS).

COPY of REPORT of the Right Honourable Sir HERBERT
MAXWELL, Bart., M.P., F.R.S., and P. H. PYE-SMITH, Esq.,
M.D., F.R.S., the Delegates of Her Majesty's Government at
the International Congress on Tuberculosis, held at Berlin
on the 24th to the 27th May 1899.

Presented to both Houses of Parliament by Command of Her Majesty



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REPORT of the Delegates of Her Majesty's Government on the International Congress on Tuberculosis, held at Berlin from the 24th to the 27th May, 1899.

LONDON, *June*, 1899.

MY LORD DUKE.

We have the honour to report that, in accordance with Your Grace's instructions, we attended the International Congress on Tuberculosis assembled at Berlin on 24th to 27th ultimo.

The Congress which was opened by His Serene Highness the Herzog von Ratibor in presence of Her Majesty the German Empress, consisted of about one hundred and eighty delegates, appointed by and representing the Governments of different states and Universities, and other public bodies.

Beside these, it was attended by a very large number of individuals who were admitted as members on paying for their entrance.

The proceedings took place in the Chamber of the Reichstag, and consisted of the reading of papers by a number of persons of different nationalities, the majority being Germans, bearing on the nature of tuberculosis, in men and animals, its diagnosis, pathology, preventive and curative treatment. Nothing in the nature of a general discussion in public took place, but no doubt the proceedings when printed will form a valuable *corpus* of scientific opinion, marking the degree of knowledge attained in regard to tuberculosis and the most hopeful means of combating it. We believe, also, that much good will result from the Congress by the prominence given thereby to the subject, and by a general diffusion of information as to the nature of the disease and the precautions which should be taken against it.

Herewith we enclose the Tageblatt, or Journal of the Congress—five numbers—and submit, at the same time, a memorandum by Dr. Pye-Smith on the medical aspect of the results of the Congress.

On Friday, 26th May, we had the honour of being received by the Imperial Chancellor, Fürst zu Hohenlohe-Schillingsfürst, who showed much sympathy with the objects of the Congress.

His Majesty the German Emperor was pleased to command the presence of some of the delegates at Potsdam on Sunday, 28th May. Dr. Pye-Smith had left Berlin on Saturday afternoon, before his Imperial Majesty's commands arrived, but Sir Herbert Maxwell, with about fifty other delegates, had the honour of an audience. Both his Majesty the Emperor and her Majesty the Empress evinced a keen interest in the proceedings of the Congress, and all the delegates present were very sensible of the graciousness of their reception.

We cannot refrain from expressing our sense of the great kindness and consideration shown to us by His Excellency Sir Frank Lascelles and the members of the British Embassy, and also by

various members of the German Government. We desire especially to record our obligations to the President of the Congress, his Serene Highness the Herzog von Ratibor. It was a general feeling among the delegates that they owed to his constant attendance and personal exertions the satisfactory and agreeable result of the proceedings.

We remain,

MY LORD DUKE,

Your obedient humble servants,

(Signed) { HERBERT MAXWELL.
 { P. H. PYE-SMITH.

THE LORD PRESIDENT OF THE COUNCIL.

MEMORANDUM BY DR. PYE-SMITH.

It was clear from the great number of members (nearly 2,000), from the character of the lectures delivered, and from the necessary absence of discussion, that the object of the Congress was to interest and instruct—first, medical practitioners, secondly, the official and political classes, and, thirdly, the mass of the people of the German Empire, in the ascertained results of researches into the origin, nature, prevention, and general methods of treatment of tuberculosis.

The addresses were expository and hortative. Their aim was to call attention to well-established conclusions, and to enforce their practical bearing on the endeavour to prevent the spread of tuberculous diseases, and to treat them when present with success.

The most important conclusions were those already recognised by pathologists in this country and elsewhere, and may be thus briefly stated in untechnical language.

1. That consumption, and all other tuberculous diseases, are caused by the presence and multiplication of the specific bacillus discovered by Professor Koch, of Berlin; although other microscopical plants of allied though distinct character are often present in addition to the constant and essential *Bacillus tuberculosis*, and produce modifying and generally injurious effects. (Pfeiffer of Berlin, 2nd day of the Congress, on the Mixed Infections of Phthisis.)

2. That the most frequent and dangerous mode of infection by the specific bacillus in adults is by its admission to the lungs and throat (including both windpipe and tonsils).

3. That the vehicle by which the bacillus is transmitted from a sick to a healthy adult is, in the great majority of cases, the phlegm coughed up. This, in the form of "spray" may occasionally gain entrance to a bystander's throat, and when dried up and turned to dust, it may be inhaled with the air into the lungs. So long as the mucus spat up remains moist, it is, from physical causes, scarcely transmissible. (Flügge, Fränkel, 1st day.)

It is tenacious of life, and of its destructive powers; but is deprived of both, after a short but variable period, by free exposure to the air, by the heat of boiling water or of fire, and by sunlight.

4. That another important vehicle of infection is milk, either occasionally by accidental defilement with moist sputum from a consumptive patient, or frequently by young children drinking the milk of cows affected with tuberculous disease of the udder. (Obermüller on Infection by Butter, 2nd day of Congress.)

The bacillus of tubercle thus conveyed into the mouth may set up tuberculous inflammation, particularly in the tonsils, or it may survive the action of gastric digestion and produce grave disease of the intestines. (Fränkel of Halle, 2nd day of Congress.)

5. That a third, though far less frequent mode of tuberculous infection is by eating meat—*i.e.*, muscle and fat—which is contaminated from tuberculous disease of the lymph-glands and other parts, and has been imperfectly cooked. Other methods by which the skin, for instance, is infected are less frequent, and also less dangerous than those above mentioned. (Virchow, 3rd day of Congress.)

6. That, while it is now proved that the specific bacillus is present in every case of tuberculous disease—whether of the lungs (consumption, phthisis, decline), lymph glands (scrofula), brain (brain fever, tuberculous meningitis), abdomen (tabes mesenterica, consumption of the bowels, tuberculous peritonitis), joints (white swelling, tuberculous synovitis, and suppuration of hip and other joints), bones (caries of the spine, Pott's disease, &c.), and other organs (Addison's disease, &c.)—yet there is no doubt that of the two conditions which always make up a disease (the external disturbance and the internal result of that disturbance), the latter depends on the condition of the host as much as upon the activity of the infecting parasite.

Some specific diseases, like small-pox and syphilis, produce grave symptoms in all but those who are protected, *i.e.*, rendered more or less completely "immune" by a previous attack of the disease—syphilis in the one case, small-pox, or the mild and modified form known as cow-pox, in the other.

Other specific diseases, like pneumonia and diphtheria, appear to be only produced when a certain state of the body is favourable to their development. Indeed, the characteristic microbes of both these diseases are believed to be frequently present in the mouths of healthy persons. The soil, therefore, is as important as the seed. Susceptibility to tubercle as to other infectious diseases varies greatly in different animals: dogs, goats, and horses are "refractory" to tuberculous infection, cattle and swine are more easily affected, while rabbits and guinea-pigs offer exceedingly favourable opportunities for the invasion of the bacillus. So also will the probability of a successful establishment of tuberculous disease in a human host vary according to the age, the health, and the hereditary habit and build of the recipient. Some individuals and some families appear to be as susceptible as rodents, others as refractory as goats.

Tuberculosis, as a condition directly transmitted by inheritance, is extremely rare, though well attested cases of the bacillus and its characteristic effects being present at or before birth have been recorded both in man and in the lower animals. (Löffler, 2nd day.) But the vulnerability (to use Virchow's term) of the body, and particularly of the serum and white corpuscles of the blood—the proneness of the tissues to become the seat of tuberculous disease—varies as much as the vulnerability or proneness to gout.

A child is seldom, or never, born with either of these diseases, but he is often born with less than average power of resistance to the enemy which he is almost certain sooner or later to meet.

For these reasons we cannot throw away the experience which shows that (quite apart from household infection) consumption appears in certain families more frequently than chance can account for. Hence the importance of strengthening the body against the invasion of tuberculosis by wholesome and particularly by fattening food, by increase of the colour and corpuscular richness of the blood, by improved digestion, and by exposure to open air and light. Hence the importance of the general hygienic measures in which this country took the lead from the latter half of the present century.

The result has been the diminution of the number of deaths by consumption in England and Wales by one half, in proportion to the population, during the 45 years from 1851 to 1895. (See Dr. Tatham's Tables compiled for the Royal Commission for 1896 on Tuberculosis. Also Dr. Schjerning on Phthisis in the German Army (1st day), and Dr. Köhler on its Distribution in the General Population (1st day).)

7. That infective tuberculosis in general, and phthisis or pulmonary tuberculosis in particular, is not "catching," in the popular sense of the word. The disease is not conveyed by the breath, nor even by coughing, except as a rare exception, nor is it caught by contact with a consumptive patient, as scarlet fever or measles are caught. In all cases of infectious disease

there must be actual passage of the contagion of the disease from one person to another; but the difference between diseases such as typhus and mumps, which are spread by mere intercourse, and diseases such as enteric fever or pneumonia which are not, is from a practical point of view very great. In the case of phthisis, we may say that it is not the patient, but his expectoration, which is dangerous.

8. The following practical points in the prevention of tuberculosis as a widespread and destructive disease were inculcated by various speakers at the Congress.

A.—The primary importance of free ventilation and wholesome and abundant food. Improvement in the dwellings and the food of the poorer classes in this country, and their increasing cleanliness and sobriety, have not only diminished sickness generally, but directly reduced the number of deaths from consumption until the mortality from this cause is less in London than in any other large city. (It is, however, important to notice that the death-rate of young children from disease of the bowels has little, if at all, diminished. See Sir Richard Thorne's Harben Lectures.)

B.—The prevention of infection of the lungs by the bacillus of tubercle depends chiefly on rational treatment of the sputa of consumptive patients, or rather, for practical purposes, of the sputa of all those affected with cough and expectoration. The phlegm should never be deposited on the ground or on a handkerchief, where it can dry up; it should be kept moist until it can be destroyed by heat, and the vessel used to receive it should contain phenol or some other antiseptic solution.

C.—The prevention of infection by tuberculous milk may be accomplished either by boiling all milk given as food to children, or by inspection of dairies, so as to prevent tuberculous milch-cows being used.

D.—The prevention of infection by meat can be secured by careful and thorough inspection of carcasses, or by diagnostic testing of cattle with tuberculin. This, the only undoubtedly useful application of the so-called tuberculin, has the drawback that after the effect of the inoculation has passed off, a tuberculous animal becomes immune to it for a time, and so may be passed as healthy. (It is said that cattle suspected of tubercle are thus rendered immune to the tubercular test before being sent over the French frontier.)

9. The question of the treatment of phthisis was only a supplementary part of the work of the Congress, and is too large to be dealt with in a report of this nature.

The following facts may however, be stated as important for the people as well as their governors to be aware of:—

a. That tuberculous disease of the bones and joints of the glands and skin and abdomen, though dangerous, is not incurable, and by the modern methods of operative medicine, is in most cases successfully cured.

b. That tuberculosis of the lungs (phthisis or consumption) is frequently cured, and probably more often now than formerly. (Curschmann of Leipzig, 4th day of Congress.)

c. That there is no specific drug which has direct influence upon consumption, but that many, both old and new, have valuable effects upon its complications. (On the Action of the New Tuberculin, see Briger's paper, on the 2nd day of Congress, and Dr. C. T. Williams in the R. Med. Ch. Trans. for the present year.)

d. That abundant food, particularly of a fatty nature, and a life in the open air, are no less valuable in the treatment than in the prevention of phthisis, and that the hospitals and asylums for providing these essentials, which are now numerous in Germany, and far from rare in England, Austria and Hungary, France, and the United States, are of essential value. That the "open air treatment" has been long known and practised in the United Kingdom was handsomely acknowledged by Professor Von Leyden (1st day of Congress). Compare papers by Kaurin (Norway), Westhoven (Ludwigshaven), J. R. Walters (London), Desider Kuthy (Buda-Pesth), Schmid (Switzerland), Dómene (Spain), 4th day.

e. That the influence of climate, altitude, temperature, and dryness of the air and soil, of travelling, and of sea voyages, has been very differently estimated at different periods, and that while each is in various degrees important, popular opinion probably exaggerates their power. (Hermann Weber of London, 4th day of Congress.)

f. That the prospect of improved success in the treatment of tuberculosis in general, and of consumption in particular, by the advance of pathology and the progress of surgery and medicine, is a hopeful one, almost as hopeful as that of limiting the spread of the disease by preventive measures.



