different political administrations. He was now on the advisory committee of the State Commission of Mental Diseases. He had followed the discussion of this subject in the medical journals of this country, and he was hoping that England would go far beyond what it had been possible to accomplish in the States. He thought that the experience in the States might offer some suggestions towards the solution of the problem here. In the States the medical societies set themselves to educate the public, and had invited the magistrates to give addresses which were followed by discussion in which the medical men represented their side of the question. This had been of great value to the magistrates and indirectly to the public. Another point in the education of the public had been to endeavour to set in its proper and less alarming perspective the hereditary factor in insanity, with the consequence that the people were not so much alarmed or depressed by the notion of hereditary taint as was the case ten years ago. An investigation had been made of 28,000 certified cases in mental hospitals extending over forty-two years, and the hospital records of these cases showed that in only 54 per cent. was there an hereditary factor. In other words, a man who had mental disorder was as likely not to have had a tainted ancestry as to have had it. These were facts beyond dispute, and the education of the public along these lines helped to bring about a better state of feeling. With regard to certification, the plan was for two physicians to certify cases which were considered dangerous to the public or to themselves or to need medical treatment. There was such a thing as voluntary commitment, whereby the patient could go into hospital for any length of time, so long as he did not become irresponsible. A system of six months' parole, which could be renewed for a further period, was in force for patients who had recovered up to a certain point, and such patients could be, if necessary, returned to the hospital without any further legal procedures. The patients had not to be brought before a magistrate; it was true that the magistrates had a right to send for the patient, or to go and see the patient, but they hardly ever exercised it. Probably 95 per cent. of the patients committed were never seen by any magistrate. He could recall only one legal action by a patient against a physician—it was in New York—and though the jury awarded a certain amount of damages, the verdict was afterwards set aside on the ground that certain of the evidence was inadmissible in law. The opposed testimonies of medical men relating to the same case in criminal actions had caused some perplexity, and an effort had been made to eliminate such occurrences by discussions. One result had been that in the case of criminals who had been to gaol before and criminals arraigned on a capital charge there was, before trial, an examination by the State Commission of Mental Disease. A law to this effect had now been in force for five years in the State of Massachusetts. The clerk of the criminal court was bound to report the case to the Commissioners of Mental Disease, and the Commission appointed two alienists of standing to examine the alleged criminal. Their report was filed by the clerk of the court, and was open to both sides—the prosecution and the defence. In the five years during which this plan had been in operation there had been no case for trial before the courts in which medical men had appeared against each other in the witness-box; previously it was a constant occurrence. The result had been to raise the position of the profession. He hoped to learn something from this country as to the treatment of the early case. In his own State a sum of £20,000 a year was now being appropriated for clinics to which early cases could be sent. The Legislature felt that the money was well spent, because cases might so be prevented from becoming a burden for many years upon the State.

The CHAIRMAN (Dr. Marr) said that owing to the lateness of the hour he was now compelled to close the discussion although there were several others who had intimated their desire to speak. Dr. MORTLOCK-BROWN protested against the closing of the discussion, to which, she thought, a whole day might well have been allocated; the voice of the general practitioner had scarcely been heard; and the woman's point of view had not been put

forward. The CHAIRMAN said that he regretted very much having to close the discussion, but he pointed to the lateness of the hour and to the fact that the audience was rapidly thinning. He had selected the names of speakers in the order in which they had intimated their desire to speak, except that he had called upon two or three others who, because of their position or work, he thought everyone would wish to hear.

SECTION OF THE HISTORY OF MEDICINE.

JOHN D. COMRIE, B.Sc., M.D., F.R.C.P.Ed., President.

A VINDICATION OF THE SECTION.

THE PRESIDENT remarked that this was the first occasion on which a Section of the History of Medicine had been held at an Annual Meeting of the British Medical Association. He had had many letters from persons in this country, on the Continent, and in America, expressing their approval. At the present time no medical school in Great Britain required its students to learn the history of the subject, and there were only a few at which it was possible for the student who desired it to obtain such instruction. This was remarkable in view of the fact that a knowledge of ancient law was necessary for the training of a lawyer, while Church history was considered essential to the theologian. Even in practical sciences like chemistry, physics, and engineering, a knowledge of when and by whom the various laws and facts of their sciences had been discovered was regarded as a necessary part of the study of the chemist, the physicist, and the engineer. He would go so far as to say that in connexion with even so common a disease as pneumonia the doctor would be likely to treat his patients more successfully if he knew something about the history of this disease, and if he had some inkling as to why some measures of treatment had been abandoned while others had persisted. The office-bearers of the Section had decided at this first experimental meeting to regard the subject from a practical rather than from what might be called the antiquarian standpoint, and they had accordingly arranged for a discussion on "The historic evolution of disease."

CLINICAL VARIATIONS IN DISEASE FROM THE HISTORICAL POINT OF VIEW.

SIR HUMPHRY ROLLESTON, Bt., K.C.B., M.D. (Regius Professor of Physic in the University of Cambridge), opened a discussion on this subject by reading the following paper:

This is the first time that a section has been devoted to the History of Medicine, and the exertions of our President, who is Lecturer on the History of Medicine in the University, to bring this about in a city with such high traditions in medicine have most appropriately been crowned with success.

A discussion on "Clinical variations in disease from the historical point of view" is also singularly appropriate in the Northern Athens, where it was the subject of much high debate some seventy years ago. W. P. Alison and Robert Christian were convinced that a change in the clinical manifestations of disease had gradually taken place during the first thirty years of the nineteenth century, whereas John Hughes Bennett, who in 1848 succeeded to the Professorship of the Institute of Medicine, which Alison had held from 1822 to 1842, Allan Thomson intervening, was emphatic in the opposite direction. On January 21st, 1857, Hughes Bennett read a paper before the Medico-Chirurgical Society of Edinburgh on "Observations on the results of an advanced diagnosis and pathology applied to the management of internal inflammation, compared with the effects of a former antiphlogistic treatment, and especially of blood-letting," which aroused much adverse criticism from Alison, T. Watson, and W. T. Gairdner, to which Hughes Bennett promptly replied. He considered that the supposed change from a sthenic to an asthenia

type of disease was invented as an afterthought by way of justification for the undoubted change from the more vigorous antiphlogistic measures and venesection to a more supporting and stimulating treatment, and that the change had been in the treatment, not in the disease. Markham adopted the same doctrine, and Hughes Bennett followed this up by a treatise on *The Restorative Treatment of Pneumonia* (1865) which, according to our President, was most effective in banishing excessive venesection as a routine treatment. In 1865 William Stokes strongly supported the change of type in disease, but later Murchison wrote:

"A careful study of the history of epidemics shows that each of the continued fevers and of the other acute specific diseases has maintained its identity in all ages and countries. . . . The statements which have been made in reference to fevers having undergone a change of type or nature are mainly to be attributed to a non-recognition of different species, together with changes in the prevailing fashion of treatment."

He instanced as an example of this confusion typhus, a fatal disease, with relapsing fever which rarely has a lethal termination. When these two diseases occur together the distinction between them might easily go no further than the view that the type of the prevailing epidemic had altered; in certain circumstances, especially towards the close of an epidemic, when the mortality rate is falling, it may be difficult to decide, more particularly from the records, whether there was merely this change or whether a new disease had come on the scene. The comparatively frequent coincidence of two diseases—namely, typhus and bubonic plague—in epidemic form during the sixteenth, seventeenth, and eighteenth centuries, though the nature of typhus was not recognized, is pointed out by Crawford.

Sources of Information.

The surest, though much limited, means of getting reliable knowledge as to the nature of disease in the past is morbid anatomy, which, under the name of palaeopathology, defined by M. A. Ruffer (1913) as the "science of diseases which can be demonstrated in human and animal remains of ancient times," has been recently employed, especially in Egypt by Fouquet (1889), M. A. Ruffer, Elliot Smith, and Wood Jones, and in America by R. L. Moodie, who has done much work in the investigation of bone disease in fossil animals in the prehuman ages of 500,000 years ago. Though the diseases that can thus be recognized are mainly those of bone, examination of mummies has shown the existence of arterio-sclerosis, tuberculous disease of bone, mastoid disease, hydrocephalus, rheumatoid arthritis (2900 B.C.), gout, talipes, dental caries, pyorrhoea, pneumonia and anthracosis of the lungs, hepatic cirrhosis, biliary and urinary calculi, bilharzia, renal abscesses, periapendicular adhesions, and achondroplasia; but not of rickets or syphilis, the appearances ascribed to syphilitic osteitis being really due to the activities of beetles after death (Elliot Smith); this has a bearing on the much debated origin of syphilis in the old or in the new world.

The account in the *Times* of April 7th, 1927, of the tomb of Senab in the sixth dynasty (2900 B.C.) seems to show that he was an achondroplastic. Professor Elliot Smith, who considers this is much the earliest certain proof of this condition, has put me in touch with Mr. Warren R. Dawson, and I have thus had the advantage of seeing a paper that he is publishing on "Pygmies, dwarfs, and hunchbacks in ancient Egypt," from which the following information may be taken. Pygmies were members of a small-sized race from the interior of Africa, and not, as Pierre Marie suggested, achondroplastics; on the other hand, the dwarfs, whom the ancient Egyptians were accustomed to attach to their establishments, were usually people of stunted development, often achondroplastics, drawn from their own population, and of these many examples, mainly males, are extant in mural paintings and sculptures. In a Roman cemetery (A.D. 200) at Chester evidence of achondroplasia was found (Elliott). Of acute disease in ancient Egypt there was evidence of an eruption resembling small-pox in a mummy of the twentieth dynasty (1200-1100 B.C.) (Ruffer and Ferguson). Sculptures and models provide valuable evidence of diseases in the past, especially abnormalities of growth;

Egyptian and Greco-Roman sculptures and statuettes definitely show the existence of achondroplasia—for example, the gods Ptah and Bes—and at a much later date pictorial representations of Court attendants by Velasquez and others tell the same tale. Mr. Warren Dawson reproduces ancient Egyptian statuettes showing steatopygia, and Pott's disease of the spine is shown in a bronze statuette of ancient Egypt. Sir Berkeley Moynihan recognized the manifestations of cerebro-spinal fever in a bust done of Alexander the Great in his fatal illness. Votive offerings, although studied by Holländer, Sambon, Regnault, and others, are disappointing as accurate representations of the patients' lesions.

There is not so much information to be obtained from the available pictures of antiquity, but mural paintings in Egyptian tombs of various periods show achondroplastic dwarfs 5,000 years ago (Ruffer), and those from Pompeii and Herculaneum, now in the museum at Naples, represent some pathological conditions, such as achondroplasia and rickets (Meige). The portrait in the Uffizi Gallery, Florence, of Ferdinand I, Emperor of Germany, painted in 1521 by Lucas van Leyden and reproduced by Semon, shows the adenoid face, though it was not till 1868 that Wilhelm Meyer of Copenhagen made adenoids known to the profession. The famous epidemic dancing mania, variously called *le dance de Saint-Guy*, dance of St. John or of St. Anthony, and by Paracelsus *Chorea Sancti Viti* (as pilgrimages were made for cure to the Chapel of St. Vitus at Zabern), so prevalent in the Rhine provinces during the fourteenth and fifteenth centuries and lasting into the sixteenth, was drawn by Pierre Breughel (1567-1625) and engraved by Hondius in 1642, and thus identified with major hysteria and hystero-epilepsy by Charcot and Richer, who also recognized hystero-epilepsy in Raphael's pictures. In their *Les difformes et les malades* (1889) these authors reproduced a number of pictures showing plague victims with buboes, and among them Saint Roch (born A.D. 1295), the patron saint of that disease. Paintings may show that at the time they were painted certain diseases were more severe than they are now, and they may represent morbid conditions, such as leprosy, which have now become rare, and of diseases which have now disappeared—such as hydrophobia, described by Aristotle and Galen, the subject of many papers in the medical records of the eighteenth century, and familiar to some of us now present, which has become extinct in this country as the result of the administrative action of the Muzzling Order (1897). As showing the importance of such precautions it may be mentioned that in Moscow six hundred people were recently reported to have been bitten by mad dogs, and to be therefore attending the Pasteur Institute.

The written records of acute diseases, though far more numerous than the pictures and the representations by the plastic artist, are more difficult to utilize in the recognition of disease. Alterations in methods of description and nomenclature interfere with the identification of the nature of bygone epidemics, and the probable existence of more than one disease raging at the same time, as in the Antonine plague in Rome, adds to the difficulty. An example of the difficulty of translating ancient into modern terms is the designation "lepra," which covered lupus, syphilis, pellagra, and many skin diseases, as well as leprosy. It is, however, extremely tempting to read into an ancient description of disease that of one more recently recognized.

Evolution of Disease.

As disease is not a fixed entity but a reaction of the complex organism to varying degrees of injurious influences, it is reasonable to anticipate that with altered conditions in the soil or the host, such as are rapidly and most obviously produced by famine and war, the reactions would vary accordingly, even if the morbid agent remained the same. In addition, changes, extremely slow though they may have been, from the cave to the club man, would suggest that their diseases, like their virtues, would present a somewhat different aspect. Changes in the lowly organisms responsible for infective disease occur with far greater rapidity and ease than in the higher animals, and hence it is obvious that corresponding modifications in the reactions they set up must be anticipated, even if the soil

remained unaltered. Chapin considers that changes in the virus are much more important than those in the host, and argues that alternations in the type of small-pox and scarlet fever are not due to changes in the immunity of the host. Changes in the type of disease, like epidemics, are readily determined by wars and famines, which lower the bodily resistance, and, by the accompanying overcrowding, increase the opportunities for the transmission and the virulence of infections. These clinical changes would be more likely to occur in acute epidemic diseases than in some chronic and constitutional conditions, but unfortunately it is in the acute epidemic diseases that it is most difficult to judge whether or not real changes have taken place.

Alteration of the clinical manifestations may depend on secondary infections. Influenza in 1918-19, when complicated by haemolytic streptococcal invasion of the respiratory tract, became widely fatal, and its aspect altered so much—as, indeed, has been so often seen in its history, as shown by its numerous names—that it was actually hinted in the lay press to be plague. The present mild small-pox, or alastrim, has been thought to be due to the specific virus alone, and the ordinary more severe small-pox to be caused by a secondary streptococcal invasion favoured by the insanitary conditions so prevalent in the past. The influenza virus, whether filter-passer or Pfeiffer's bacillus, favours invasion by, or sensitizes the tissues to the action of, other viruses. The influence of measles in leading to tuberculosis is familiar, and it is possible that carriers of the viruses of encephalitis lethargica and of acute poliomyelitis, and the meningococcus, may become infected as the result of influenza infection, or, to express the same result in other words, that the influenza virus may activate latent viruses of encephalitis lethargica, acute poliomyelitis, and cerebrospinal fever.

The problems frequently arise whether changes in the clinical characters of disease are real, such as that universally acknowledged to have occurred in scarlet fever, which was serious and often malignant forty or fifty years ago and now is mild; whether apparent alterations are due to modification in description rather than in fact—in other words, whether the change has been in opinion only; and whether more accurate observation has led to subdivision of what were previously regarded as "clinical entities" and so to the crystallization of new diseases, such as typhoid, paratyphoid, and typhus, out of "continued fever" and the various forms of anaemia. It is natural, but futile, to speculate how far the evolution of the streptococci can be correlated with the appearance of the numerous diseases now known to be associated with their presence. The tendency of pathologists, bacteriologists, and clinicians has been to separate out specific diseases, whereas that of some epidemiologists, notably Hamer and Crookshank in this country, has been in the opposite direction, and to regard as modifications of a basal disease what are by others regarded as etiologically distinct.

It is natural to assume that with alterations in the seed and the soil the resulting changes in the clinical picture may become so definite as to constitute new diseases, for of course disease must have undergone a gradual process of evolution and may be expected to appear, wax, and wane. The separation of the various exanthematous fevers is a more modern achievement than perhaps many realize, and it is not unlikely, as Chapin suggests, that some of them are of comparatively recent development. An eruption like small-pox was identified in an Egyptian mummy (1100 B.C.), though, in spite of Rhazes (A.D. 1000), it was not really distinguished from measles until 1675 by Sydenham; measles and scarlet fever, which were not differentiated until twenty years later, now seem distinct enough, but there were many acute observers before their differentiation; much more recently—in 1881—came German measles (rubella, r6theln), and now there are the much discussed, if not still doubtful, fourth and fifth (erythema infectiosum) diseases. Typhus was probably a famine fever in ancient Greece, but it is impossible to make any statement about the occurrence of typhoid fever in ancient Greece (W. H. S. Jones, 1909), and of course typhus and typhoid were not differentiated until the nineteenth century. Chicken-pox was not definitely recognized as a distinct disease until the middle of the eighteenth century, by William Heberden

the elder in 1767, and may reasonably be regarded, as vaccinia is known to be, as of the same stock as small-pox. At the present time the dualists believe that alastrim, or para-small-pox, is distinct from ordinary small-pox, and not merely a mild form of the disease, analogous to the present scarlet fever. It might be urged that in para-small-pox the evolution of a new form of disease is occurring, just as in the past German measles (r6theln) has been distinguished from measles and scarlet fever. But the evidence, both immunological and clinical, is in favour of the view that it is a mild form of small-pox, not a distinct disease, and that with vaccinia these two conditions are due to variants of the same virus. Further, history shows that in the past extremely mild epidemics of small-pox have occurred (vide Newman).

War and its attendant circumstances may so alter the conditions as to lead to the appearance of new forms of disease, such as trench fever and trench nephritis (also seen seventy years before in North America, but not in the interval), or of diseases rare in ordinary times, such as spirochaetosis icterohaemorrhagica, and, from the associated starvation of non-combatants and prisoners, famine oedema and deficiency diseases. In his recent paper on the "Influenzal constitution" Hamer includes typhus in this category, and ascribes its peculiar features and the rash to the influences of famine, remarking that epidemiologically typhus cannot be regarded as a clinical or pathological entity, and correlates the decline in typhus and relapsing fever with the apparent increase in the mortality from influenza and pneumonia. The epidemics and new or unusual types of diseases produced by war and famine tend to disappear or to become rare with the advent of peace and better conditions.

The Clinical Recognition of Diseases now Distinct.

Though difficult, there is much interest in attempting to determine when present-day diseases were first known, and, what is by no means the same proposition, when they first appeared, for the revelations of palaeopathology may go further back than written records. For if their morbid lesions can be certainly recognized the clinical aspects must have been on much the same lines as at the present time. Tuberculosis has been identified in the Egyptian mummies, and from written records there is evidence that the pulmonary form was very prevalent in ancient Greece, in spite of the open-air life and the supposed antagonism of malaria. Mumps appears to be one of the very few acute infectious diseases accurately isolated in ancient Greece, and with its orchitic complication was described by Hippocrates; bubonic plague is undoubtedly a disease of established antiquity. The pestilence which attacked the Philistines after their capture of the Ark of the Covenant has been conjecturally thought to have been plague, as those who did not die developed tumours and were advised to make offerings of five golden representations of their tumours and of five golden mice. Otherwise the earliest accounts of the plague, with the diagnostic references to the buboes, have enabled its appearance to be recognized in the third century B.C. in Egypt, Libya, and Syria; Aretaeus (A.D. 70) mentioned pestilential buboes. Its history can be most certainly traced from the great plague of Justinian, which came from Egypt in A.D. 542 and overran Europe. The nature of the plague of Athens (430 B.C.) described by Thucydides and Diodorus Siculus has been thought to be malignant scarlet fever, or small-pox, but typhus has also been confidently suggested by Murchison. The pestilence in Rome in A.D. 165, the Antonine or "long" plague which was noted by Galen, has been variously identified as dysentery, small-pox, and, like the plague of Athens, as typhus. There is, as Crawford points out, reason to believe that it was not one and the same disease throughout the fifteen years of its duration.

Malaria has been conclusively shown from contemporary literature of the time, which proves the clinical resemblance of the disease then to its present form, to have been prevalent in Greece from the fourth century B.C., and in Italy from about 200 B.C. W. H. S. Jones (1907), who has most thoroughly correlated the classical references to malaria, shows that there is good reason to believe that one factor in bringing about the decadence of these two

great powers was the deterioration of national health by malarial infection; his work shows the value of medical history as explaining that of the world.

Although a clinical distinction between *gout* and *rheumatoid arthritis* dates only from the sixteenth century, evidence of chronic arthritis is forthcoming in Neolithic skeletons and in ancient Egypt. Professor Elliot Smith had intended to be here and to have shown that it existed in 4000-3500 B.C. It is interesting to find that, from his special study of gout in Byzantium, Jeanselme has come to the conclusion that of the twenty-four Sultans in the period 1299-1695 six, or one in four, were victims of this disease.

The history of *diphtheria* exemplifies the difficulty of distinguishing between acute infections involving the throat as recorded and identifying them with those now recognized as quite distinct. So much so, indeed, that Adami argued that diphtheria arose as the result of the transformation in special circumstances of a harmless diphtheroid organism into a virulent pathogenic bacillus about the time that P. P. Bretonneau of Tours drew his sharp-cut classical picture of the clinical characters of the disease. Putrid or malignant sore throat had often been described—by Aretaeus the Cappadocian in the second century A.D., and Aetius of Amida in the sixth century—and it has been thought that the morbus suffocans or garrotillo in Spain in 1583-1618, 1630, 1645, and 1660 were epidemics of severe diphtheria. John Fothergill's *Account of the Putrid Sore Throat* (1748) probably dealt with diphtheria as well as scarlet fever, and, as Norman Moore pointed out, John Huxham, in his description of malignant ulcerous sore throat in 1767, mentioned paralysis of the soft palate, and so was dealing with diphtheria, although he did not distinguish it from scarlatina anginosa. Francis Home's description in 1763 of croup (a word employed by Patrick Blair in 1713) may have been of diphtheria, and certainly gave rise to much confusion, which even now is not unknown in connexion with death certification. Cullen's *cynanche maligna* may also have been diphtheria. In spite of P. P. Bretonneau's descriptions in 1821 and subsequent years diphtheria was not separated from scarlet fever in this country until the official returns of the Registrar-General for 1855 (published in 1857), when it became a world-wide disease.*

Influenzal Diseases.

The epidemic occurrences of *influenza* with its attendants or allies or modified phases is a subject of great interest, and has been attractively argued by Hamer, Crookshank, and J. T. C. Nash from the epidemiologist's unicist point of view as against the specializing bacteriological standpoint.

The sweating sickness, or *sudor anglicus* of the sixteenth century, is an example of a disease which has been thought to have had its day, though perhaps not to have entirely ceased to be; for it has been reported in a modified, certainly milder, form in the Picardy sweat, or *la suette miliare*, which occurred in 1886 in the Canton of Lussac-les-Châteaux and proved fatal in 130 out of 1,200 cases (Parmentier), and in 1906 in the Charentes when 6,000 persons were attacked, with a mortality of about 2 per cent. (Haury). The more modern epidemics differed from the early ones in the longer duration of the illness and the outbreak of a miliary rash on the third and fourth days. Many outbreaks of this curious disease have been recorded; Hirsch collected 194 epidemics in France alone between 1714 and 1874. Its history is of some interest; though called the *sudor anglicus* it appears highly probable that, whatever its nature, it was brought to England in 1485 from Normandy by Henry VII's mercenaries, who may have been carriers. Payne suggested that when introduced into this country it found a virgin soil and so ran like wildfire, just as measles did in the Faroe Islands (1781 and 1846) and Fiji (1875 and 1907). In this country five epidemics

are recorded—in 1485, 1508, 1517, 1528, and the last in 1551. The onset was described as dramatically sudden, sometimes fatal after a few hours or even instantaneously. Caius, who had the opportunity of seeing it in 1551, wrote two brochures on it, one for popular consumption, *A Boke or Councell against the Sweate or Sweating Sickness* (1552), the first monograph on a single disease in English, and a professional expansion in Latin *De Ephemera Britannica* (1556), and stated that it was "a fever of one natural day." Much able argument has been brought by Hamer to prove that the sweating sickness was really influenza, and Nash and Crookshank have followed his lead; on the other hand, Chantemesse, President of the Commission appointed to investigate the Charentes epidemic, was emphatic that there was not any resemblance between them (M. Foster), and the Commission suggested that it was transmitted by the fleas of field mice.

Cerebro-spinal fever, which Hamer regards as one of the influenzal or catarrhal diseases and "manifestations of one and the same influence," was first formally recognized in 1805.

Dengue, spread by mosquitos and now regarded as probably due to a filterable virus, has been recognized since 1779. It is a pandemic disease of the tropics, and in some epidemiological respects resembles influenza; in fact, Hamer has persuasively argued that it, like the sweating sickness, is influenza, and in all three claims to "discern the operation of a single disease entity."

Encephalitis lethargica when described in 1917 by von Economo of Vienna and seen in the following year in this country appeared to be a new disease. This view was vigorously contested by F. G. Crookshank, who argued that it was the same as acute polio-encephalo-mylitis and one of the influenzal manifestations which could be identified in medical history for at least 400 years, its occurrence being so irregular and at such intervals that it was frequently regarded as "a new disease." Arthur Hall, while inclined to admit that probably the Tübingen *Schlafsucht* of 1712-13, the "nona" in Italy in 1889-90, and some small groups of cases may well be so regarded, points out the danger of reading into the often vague records of past epidemics a description of a disease not named until much later. He, however, recognizes that Dubini's electric chorea in Italy during 1846 and the following years corresponds to what is now known as the myoclonic form of epidemic encephalitis. It may be noted that in 1413 an outbreak of epidemic hiccup, which also appears to be a manifestation of the myoclonic form, occurred in Tournai (Tricot-Royer).

Some other changes in the incidence of disease may be briefly mentioned. *Appendicitis* has undoubtedly become much commoner since 1889 when influenza broke upon us after an absence of forty-one years, and it might be excusable to connect it in some way with the gastrointestinal form of that epidemic disease; but there does not appear to be any historical evidence in favour of this association. That appendicitis existed before Reginald Fitz of Boston baptized it in 1886 is clear from the accounts of James Parkinson (1812), John Burne (1836), Addison (1839), and even earlier isolated cases, such as those described by Meslivier (1759) and Musgrave (1684). For its widespread and frequent incidence in recent times there have been many attempts at explanation, mainly dietetic in character; it does not appear probable that its greater frequency now is apparent rather than real and due to more accurate diagnosis in modern times; for this has taken place under the eyes of those who have watched the declension of chlorosis all over the civilized world, which has also been ascribed to changes in fashions of food or of clothing. Pernicious (Addisonian) anaemia, the other anaemias, and the leukaemias have almost certainly become more numerous, or at least more commonly recognized as a result of intensive microscopical examination of the blood and haemopoietic tissues; thus Niemann's or Pick's disease has been separated from Gaucher's splenomegaly.

Environmental factors necessarily have an important influence on the incidence of diseases—for example, in parasitic diseases conveyed by animal or insect carriers, such as hydatid (dogs) and malarial (mosquitos) infections.

* The history of the word "diphtheria" forms an interesting item in the Medical Research Council's monograph on *Diphtheria: its Bacteriology, Pathology, and Immunology* (1925). Bretonneau originally called it "diphthérie" (from *diphthéra* = a membrane), and in 1855, without any comment or explanation, changed it to "diphthérie." It appears that his pupil Trousseau suggested the word "diphthérie" in a letter to Bretonneau as early as 1825 (Triaire).

Occupational and industrial diseases have come into prominence with the evolution of dangerous trades, and diminished with the elimination of the morbid factors; during the war trinitrotoluene and tetrachlorethane were examples of the appearance and skilled control of such poisoning; it is said that mule-spinners' and sweeps' cancer are practically confined to this country.

It may not be uninteresting to refer briefly to the variations in the incidence of aneurysm and its relation to syphilis. This is not the occasion to enter on the vexed question of the birthplace and history of syphilis, whether it was brought from the new to the old world by Columbus's crews in 1493; whether, as has been rather fancifully suggested, it existed in a mild form in Europe and, being taken to Haiti and America and a virgin soil, came back as a virulent infection; or whether, as Sudhoff argues, its existence in Europe had been long known to, but concealed by a conspiracy of silence on the part of "courtisans, souteneurs, debauchees, and their faithful, confidential, sagacious counsellors, the masters of surgery (and barbers)." At any rate, the existence of syphilis became so widely recognized at the end of the fifteenth century that it is commonly spoken of as having attained epidemic proportions; it certainly received its present name in 1530 from Fracastorius. Aneurysm, which was described by Galen, Aetius, and Antyllus, appears to have been mainly of the extremities and due to trauma until the beginning of the sixteenth century, when aortic aneurysms became prominent in a way that had never been observed before (Klotz). The syphilitic origin of aneurysms is thoroughly established, but the great war has brought traumatic aneurysms again into view. A change that some of us have lived long enough to see is the present rarity of popliteal aneurysm, which Crisp in 1847 found to be second only to thoracic aneurysm in frequency; Morgagni correlated the incidence of popliteal aneurysm with repeated injury to the back of the knee in postillions and cavalrymen; Crisp accepted the influence of trauma, but, as among his 137 cases there were only three coachmen and one postillion, did not accept the occupational factor. Although popliteal aneurysm got rare before motors became universal, there may be some relation between the decline of horse riding and this form of aneurysm.

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DISCUSSION.

Professor VAN LEERSUM (Amsterdam) said that no better means could have been devised to show the general usefulness and the necessity of the study of the history of medicine than those adopted for the present Section, as illustrated particularly in the paper read by Sir Humphry Rolleston. Historical facts were not by any means dead. They did live still, and could be used in solving the problems such as Sir Humphry Rolleston had outlined. In Holland, and especially in some sections of it, the frequency of thyroid enlargement was causing uneasiness. Amongst other causes, the modern water supply had been suspected, which contained only traces of iodine. This was regarded as a serious matter, for the people of Holland depended a great deal on this modern water system. The student of the history of medicine, however, knew that enlargement of the thyroid had been very frequent in earlier times, because the painters' models of the fifteenth and sixteenth centuries must have suffered from it, as was proved by many pictures of Madonnas by old Dutch, Flemish, and German masters.

Dr. RATCLIFFE (Birmingham) said he would venture to assert that the Section would have an extremely important place in medicine if it would devote some of its time to what Sir Humphry Rolleston had shown was the constant changing and the evolution of disease itself. There were no records except in history of the symptoms of disease, and they were too apt to be looked on as fixtures. He had been in general practice long enough to see, in a certain number of diseases, great changes such as had been pointed out by Sir Humphry Rolleston, changes in severity and changes in symptoms, and an evolution of many diseases. If the Section were to take records of epidemics or records from time to time as to the symptoms of disease, it would, in process of time, make a very valuable contribution to the faculty of medicine. In his own lifetime several diseases had altered a great deal—for example, scarlatina from being a serious disease had now become quite mild; chlorosis had disappeared, at least from Birmingham, and anaemia and membranous croup were rapidly following in its train. What was the cause of this? Most of these diseases were bacterial, and there must have been an evolution going on among bacteria, just as much as there has been an evolution of the horse or monkey or human being; evolution was not a question of length of years—it was a question of numbers of generations. The alleged increase of appendicitis was an open question, but however this might be, he thought that it had been followed by a diminution in other diseases. He would like to urge on this Section to attempt to get correct accounts of these changes in disease, and, if possible, records of the various epidemics.

Lieut.-Colonel STEPHENSON (I.M.S.ret.) said that some interesting sidelights on the historical evolution of disease were to be found in fourteenth century Persian work. He had lately been investigating the work of a Persian who wrote in the first half of the fourteenth century and was a historian and poet and learned in all branches of

knowledge. The work to which he wished to refer was a scientific compendium or a popular educator, and its medical interest lay in the fact that after the description of each mineral, plant, or animal an account was given of its medical properties. The medical use of every well known animal was defined, and small animals were administered whole for reduction of stones in the bladder. As regards the historic evolution of disease, what comparisons could be made? Could any conclusions be framed as to which diseases were commonest? It was only possible to say which were most frequently mentioned, and quartan fever occurred most often; probably it was not so common now. Diphtheria, though not now common in tropical countries, was mentioned frequently in this work, and gout was distinguished from acute rheumatism. Hemiplegia was fairly frequently mentioned, as was to be expected; the other common diseases were cataract, stone in the bladder, leprosy, ringworm of the scalp, and tuberculous glands. Here there had probably not been any change.

Dr. A. A. WARDEN (Cannes, France), after referring to the question whether appendicitis was now more frequent or whether all appendices removed had really been the subject of acute inflammation, asked when appendicitis was first diagnosed and named. He thought the earliest report was that of the case of the French statesman Gambetta in Professor Lannelongue's detailed paper. Gambetta died in what were thought to be very suspicious circumstances. He had been either accidentally or intentionally shot, and in the course of the next few weeks he developed an illness which proved fatal. Professor Lannelongue stated that he diagnosed an appendicular abscess and desired to operate, and all the other consultants refused. The drawings made by Lannelongue at the time were published in the paper, and a photograph was also given of Gambetta's hand, showing that the wound caused by the bullet was completely healed and had not caused his death. This was probably the first definite record of the diagnosis of appendicitis confirmed by *post-mortem* examination, the year being 1881.

Sir STCLAIR THOMSON (London), after praising the inauguration of the Section, quoted Napoleon's remark, "The only guide to the future is the past," and that of Goethe, "The man who looks forward only sees one road of advance, but the man who also looks backwards sees two roads."

Dr. WRIGHT (London) said that an understanding of the evolution of disease was very much assisted by the study of the conception of disease through the ages. The present view of the causation of disease was that it was bacterial in its origin. Although the ancients and the mediaevalists had no knowledge of bacteria, they did attribute disease to *particuli* or *materies morbi*, and he thought no stronger evidence could be produced of the fact that disease was attributed to these causes than was to be found in the writings of Lucretius, who summed up the scientific philosophy of his period. In classical and mediaeval times disease was very closely associated with malodours, and there, of course, instinct was correct. All sensations were attributed to particulate matters which came from the various effluvia, and it was natural to seek the prevention of disease by counteracting the effect of these malodours through the introduction of more pleasing odours in the form of aromatics. Sweating sickness had given rise to a great deal of controversy in the past, and the classical and mediaeval writers largely attributed it to particulate matter. Referring to appendicitis, he said that of course perityphlitis, typhlitis, and appendicitis were all the same disease; it was a very old disease, and was referred to in the earliest medical literature. The English name for it was "iliac passion," and it was referred to by Sydenham, whose treatment was the application of the warm body of a living puppy to the right iliac fossa. Dr. Wright quoted from Heister a description of a dissection, which he thought was probably the first authenticated case of appendicitis as distinct from perityphlitis.

Sir HUMPHRY ROLLESTON, in replying, said that there had been descriptions of appendicitis in England in the seventeenth and eighteenth centuries, and still earlier ones

in Egyptian mummies. Parkinson described it in 1812, Hodgkin also described it, and so did Burne, and these probably inspired Addison's description in 1839 in the first and only volume ever published of Addison and Bright's *Treatise on Medicine*.

The Sections.

BRIEF SUMMARY OF PROCEEDINGS.

(Concluded from page 174.)

SECTION OF MEDICINE.

Thursday, July 21st.

TREATMENT OF ACUTE LOBAR PNEUMONIA.

PROFESSOR J. HILL ABRAM (Liverpool), Vice-President of the Section, presided over the discussion, which was opened by Professor John Hay (Liverpool), who commented on the lack of unanimity as to the actual nature of acute lobar pneumonia; the drift of opinion now seemed towards the view that it was essentially a local disease striving to become general. The outlook in a particular case depended on the virulence and type of the infection and the resistance of the patient. It was, however, a self-limiting disease tending to recover, 75 per cent. of cases surviving if allowed to do so. With regard to prophylaxis, much more care should be given to the prevention of contagion than was generally the case; there was no longer any uncertainty as to the value of prophylactic vaccination, as the beneficial results of inoculation had been proved conclusively. The common cause of death was circulation failure, the important factors being: (1) toxæmia, (2) anoxæmia, (3) stress on the right heart; and the essentials in treatment were fresh air and complete physical and mental rest. Professor Hay gave detailed suggestions as to how these were best ensured. Specific treatment consisted of treatment by vaccine or serums or both. Dealing with vaccine treatment, he quoted the opinions of rival schools of thought, and confessed that hitherto his own attitude had been frankly critical; the position was, however, altered if one regarded the disease as essentially a local one in the lungs, and he had been much impressed by the successful results reported by Captain Malone. All advocates agreed that vaccine, to be of any use, must be given within the first three days. With regard to serum treatment, Type 1 serum had made good. Turning to symptomatic treatment, Professor Hay discussed the methods of relieving pain and insomnia, which must be overcome if rest was to be assured, and the need for opiates was emphasized. In the prevention and treatment of cardiac failure the efficiency of the myocardium must be maintained, and oxygen must be administered in an efficient way at the first indication of cyanosis. As a heart stimulant alcohol was not only useless, but detrimental. The routine administration of digitaline he believed to be of definite value, and caffeine was a good cardiac stimulant; strychnine, however, was much overrated, and there was no evidence that it was a direct cardiac stimulant. Professor W. H. Wynn (Birmingham) spoke in favour of the vaccine treatment of acute lobar pneumonia. Many medical men were afraid of giving vaccine for fear of getting a reaction in the negative phase, but a reaction only occurred in sensitized individuals, and the sensitizing antibodies were only present in acute infection after an interval; in this interval vaccines could be given without reaction, and by giving an adequate dose it was possible to control the infection to a large extent. His vaccines were made from young primary cultures, 100 million being the smallest dose for an adult. Charts were shown demonstrating the immediate fall in the temperature if the vaccine was given during the first two or three days; if given later the result was more difficult to obtain and repeated injections might be necessary. Dr. H. Morley Fletcher (London) agreed that once the diagnosis was made the patient must be disturbed as little as possible; he was also in general agreement with regard to alcohol, but he thought the pendulum was swinging perhaps too far, and that there was danger in the absolute prohibition of alcohol in pneumonia, as in