An oration on the classification and nomenclature of diseases, with remarks on diseases due to treatment / by H.D. Rolleston, M.D., F.R.C.P., senior physician to St. George's Hospital; physician, Victoria Hospital for Children.

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CLASSIFICATION AND NOMENCLATURE OF DISEASES, WITH REMARKS ON DISEASES DUE TO TREATMENT

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BY

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MR. PRESIDENT AND GENTLEMEN,—The annual oration, which dates from the foundation of the Society, the first being delivered in 1774, was started with the ambitious object of "dealing with the best means of promoting the intentions of the Society and the general improvement of medical knowledge." It was originally given on the anniversary of the Society—namely, on March 8th, at 2.30 P.M., before the 4 P.M. dinner of the Fellows of the Society and their guests. Subsequently with the advance of the dinner hour the Oration was delivered at 5 P.M.; but, partly from the hour and probably partly from the superior attractions of the subsequent function, the audience became select rather than numerous. In order to correct this, a change was made in 1870; the time and date of the Oration were altered to an evening at the end of the session, and the pill was gilded and disguised by a conversazione and reception by the President.

The choice of a suitable subject must always exercise the mind of the Orator, but the search may be a pleasant means of instructing him in the history of our Society if, as it probably does in most cases, it lead to a study and perusal of those past Orations that are available. In 1898 a list, to which Mr. Bethell has made some additions, was prepared of the subjects of previous Orations as far as they could be obtained. Of the 133 Orations delivered between 1774 and 1908 inclusive the subjects of 96 only are known, and of these there are 36 bound up in the Proceedings (starting in 1873) and Transactions and a rather small number of reprints of the remainder are in our library. It would, indeed, be well if the collection could be made more complete and bound up into volumes. While looking over those in our

collection I have dutifully cut the pages of an Oration delivered some 70 years ago, feeling strongly that "whatsoever ye would that men should do unto you, even so do unto them."

In attempting to discharge the honourable trust laid upon me I shall venture on some considerations on the classification and nomenclature of diseases, and on the diseases directly due to treatment. Definitions are a weariness unto the flesh and the framing of them an intellectual exercise which necessarily often results in a compromise. When a disease (absence of ease) is mentioned we mentally distinguish it from a symptom and from a group of symptoms by the reservation that a disease is a departure from health due to a definite cause, whereas the designations symptom and symptom-complex, or a recognised grouping of symptoms, admit that the underlying cause is not constant. As our knowledge of the causation of disease becomes more complete what was at first regarded as a disease becomes a symptom, and logically a number of recognised diseases are only entitled to be called symptom-groups. Of the two essentials that go to make up our conception of a disease, (i.) the clinical aspect and (ii.) the etiological factor, the first is still the more prominent in our minds. For example, infection with the *B. typhosus* may occur without producing the symptoms of typhoid fever; such a condition as typhoidal osteitis without evidence of previous illness obviously cannot be called typhoid fever. It, however, seems doubtful whether at the present day the word "disease" can be rigidly confined to a recognised group of symptoms due to precisely the same cause, for if this criterion be maintained peritonitis, inasmuch as it may be due to various microbes, is not a specific disease. For ordinary purposes it is at present convenient to retain as diseases what are really group-diseases; a group-disease is a characteristic collection of symptoms which may be due to any one of a group of allied organisms. Thus the following allied bacteria, *Bacillus fæcalis alcaligenes*, *B. typhosus*, *B. para-typhosus A*, *B. para-typhosus B*, *B. coli*, *B. paracoli*, have been considered to be capable of producing in man disease indistinguishable from typhoid fever (Stratham).[1] In the last edition of the official "Nomenclature of Diseases" the first title of this disease was given as enteric fever, and thus includes the forms due to *Bacillus typhosus* (typhoid fever) as well as those due to paratyphoid infection. It is true that paratyphoid fever is now becoming recognised, but the diagnosis can only be made on bacteriological evidence.

Similarly with regard to another common disease the use of the word influenza, of Italian origin, for a familiar train of symptoms, has often been criticised as the refuge of those

[1] Stratham: Journal of the Royal Army Medical Corps, 1908, vol. xi., p. 351.

destitute of, or not sufficiently patient or ingenious to arrive at, a different diagnosis. There is, no doubt, much truth in this, but there are practical difficulties in taking up the standpoint that only those cases shown to be infected with Pfeiffer's *Bacillus influenzæ* are entitled to this designation. For it has been proved that among cases clinically alike some show this organism, whilst others do not. In 1905 Bulloch [2] stated that the *B. influenzæ*, common in the early "nineties," had become rare and that recent epidemics were caused by various organisms, especially the *Micrococcus catarrhalis*, and that what is clinically called influenza is not one disease but a series of diseases. Lord [3] compared the bacteriology of an epidemic of influenza (1907–08) with a series of sporadic cases in an inter-epidemic period (1902–04) at Boston and found that *B. influenzæ* was present in a higher percentage (25 per cent.) of the sporadic cases than of the epidemic (15 per cent.). He suggested that the cases with *B. influenzæ* should be called "influenza vera," and those clinically alike but bacteriologically different "influenza nostras." This again is logical, but it cannot yet be put into universal practice. No doubt in time the conditions formerly recognised as compact diseases, such as peritonitis, enteric fever, and influenza, will be established in more elaborate nosology as *genera* and will be divided up into their several species. The time, however, for this has hardly arrived, and in practice we must still be content to retain the familiar terms.

The recent multiplication and differentiation of new diseases make it difficult to keep up with modern nomenclature and contrast in a striking manner with the leisurely progress of medicine in the early part of the last century. In 1822 the learned nosologist, Mason Good, secretary of this society and Orator in 1808, says in the preface to his four-volumed work, "On the Study of Medicine": "Whilst a few species of diseases are no longer to be found which are described by earlier writers, a few seem to have supplied their place, which are comparatively of modern origin."

On the Classification of Diseases.

The classification of diseases more nearly concerns readers or writers of textbooks than those solely engaged in the active practice of their profession; but it is important in connexion with the Registrar-General's returns and of some interest to us, for by the success or failure of our classifications it is possible to arrive at some conclusion as to the extent of our knowledge of medicine and so to estimate how

[2] Bulloch: Brit. Med. Jour., 1905, vol. i., p. 1044.
[3] Lord: Journal of Medical Research, Boston, 1908, vol. xix., p. 2.

far we are from finality in this subject as compared with sciences such as botany and zoology. There is also another, though perhaps somewhat remote, advantage that might result from the attempt to classify diseases on scientific lines resembling those in the more exact sciences. For just as astronomers and chemists have been able to indicate that a star or an element with certain properties should appear or exist, though at the time unknown, so by employing systematic methods we might anticipate, or, at least, be on the look out for, new forms of disease. Thus, by applying to the consideration of other ductless glands our knowledge that absence of thyroid secretion (myxœdema) and excessive (and ? altered) secretion of the thyroid gland (exophthalmic goitre) give rise to diseases, we should be on the watch for a disease due to excessive activity of the islands of Langerhans in the pancreas, which would have the same relation to pancreatic diabetes that exophthalmic goitre has to myxœdema.

The first attempt to classify diseases appears to have been made in 1680 by Felix Plater, who took symptoms as the basis for his classification. About this time Sydenham seems to have suggested that diseases should, like plants, be arranged according to their external features. But it was not until Linnæus showed the way that the hint of the English Hippocrates was taken, and then an enormous amount of labour was expended on elaborate attempts to classify diseases on the lines of the natural sciences. These nosologies—now almost entirely forgotten and buried in the dust of libraries—tabulated diseases by Greek or less often Latin names, the majority of which are quite unfamiliar to modern ears. It is almost pathetic to consider the amount of apparently fruitless work done by the once famous nosologists Sauvages (1768), Vogel (1772), MacBride (1772), Crichton (1804), and Parr (1810). The importance attached to nosological classification a hundred years ago is shown, not only by the number of rival systems, each bristling with criticisms of those already extant, but by the publication of distinct nosologies by such distinguished men of science as Linnæus, Erasmus Darwin, and Thomas Young (1813), the last of whom was described on the inscription on his monument in Westminster Abbey as "alike eminent in almost every department of human learning."

The best known nosological classification was that brought out in 1785 by William Cullen, professor of medicine at Edinburgh. This work, entitled "Synopsis Nosologiæ Methodicæ," was based on a wide acquaintance with previous attempts on the same lines and, evidently stimulated by the success obtained by Linnæus in the natural sciences, aimed at simplifying a difficult subject. Cullen divided diseases into systematic and local, his first three classes, (1) pyrexiæ, (2) neuroses, and (3) cachexiæ, being systematic or general, and the fourth class locales. Each

of these four classes was subdivided into orders and these again into sections, genera, and species. Thus in the class fevers under Order III., exanthemata, the genus variola has two species, discrete and confluent. Subsequent nosologists—Young and Mason Good—severely criticised Cullen's confusion of genera and species. Cullen fully recognised the limitations of methodical nosology, and admitted that he could not surmount some of the difficulties by appending, after the four classes, a catalogue of diseases which for various reasons had not been allotted a place in the foregoing nosology. He, however, not unnaturally argued that, just as the earlier attempts at methodical classification in the natural sciences, particularly in botany by Ray, were unsatisfactory, but by subsequent elaboration became successful, so in course of time a perfect nosological classification should be attained.

South of the Tweed the most important work on the subject was probably that by John Mason Good, M.D., F.R.S., a Fellow of this society, and one of the most encyclopædic and prolific medical writers of the past, who, as it seems to me, has been undeservedly somewhat forgotten. He has, indeed, sometimes been thought to be an American, because on the title-page of his works he describes himself as Mem. Am. Phil. Soc., and F.L.S. of Philadelphia. He was not on the staff of any hospital, but was in general practice in London, and is said to have translated Lucretius in the course of his walks to his patients. His "Physiological System of Nosology, with a Corrected and Simplified Nomenclature" (1817), which met with the approval of the Royal College of Physicians, was based on symptoms, as were the previous classifications of Sauvages, Linnæus, and Cullen. He considered this to be the only method worthy of attention, and remarks epigrammatically that "of the seat of diseases we often know but very little; of their causes far oftener still less." In this connexion it is interesting to note that after much discussion the committee of the first official nomenclature of the Royal College of Physicians (1869) decided that the proposed classification should be based upon anatomical considerations. Good also wrote a "Study of Medicine" in 1822 in four volumes which, in a posthumous fourth edition (1834), was expanded into five volumes under the supervision of Samuel Cooper, a well-known surgeon to University College Hospital. The classification given in this work differs much from that of Cullen. Good gives six classes:—(I.) Cœliaca; (II.) Pneumatica, Diseases of the Respiratory System; (III.) Hæmatica, Diseases of the Sanguineous Function, including the specific fevers, visceral inflammations, suppurations; (IV.) Neurotica, Diseases of the Nervous Function; (V.) Genetica, Diseases of the Sexual Function; and (VI.) Eccritica, or Diseases of the "Excernent" Function; included under this last head are corpulency, dropsy, tumours, and skin diseases. Each class has orders,

genera, and species, as shown by the first page of the table of classification.

Class I. Cœliaca.
Diseases of the Digestive Function.

Ord. I. Enterica.
Affecting the Alimentary Canal.

Gen. I. Odontia.
Misdentition.

Spec. 1. O. Dentitionis.
Teething.
2. Dolorosa.
Toothache.
3. Stuporis.
Tooth edge.
4. Deformis.
Deformity of the teeth.
5. Edentula.
Toothlessness.
6. Incrustans.
Tartar of the teeth.
7. Excrescens.
Excrescent gums.

This is sufficiently elaborate but his original nosology further gave subheadings of the species, for example:—

O. Dentitionis—

(*a*) Lactantium; cutting the teeth or shedding teeth.
(*b*) Puerilis; cutting the second set or permanent teeth.
(*c*) Adultorum; cutting the adult or wise teeth.
(*d*) Senilium; cutting teeth in advanced life or old age.

James Copland, *Orator* in 1822, published in the same year an essay on "The Physiology and Pathology of Certain Parts of the Animal Economy, usually denominated the Ganglionic Class of Nerves" (the sympathetic system), in the course of which he arranges diseases in four classes, each divided into orders, genera, and species. The four classes are: (I.) Diseases which consist in a diminution in the natural energy with which the ganglionic functions of an organ or part are performed. (II.) Diseases due to a morbid increase of the ganglionic functions of an organ or part. (III.) Diseases consisting, at one period of their course, of a degree of excitement or reaction of the influence of the ganglionic system, either in an individual organ or texture or more or less throughout the body. (IV.) Disorders which cannot be exclusively arranged under any one of the preceding classes, but most frequently are the consequences of one or more of the diseased actions by which these classes are characterised. Copland's article in the *London Repository, Monthly Journal, and Review* (1822, vol. xvii., p. 369), of which he was the

editor, was an abstract of a more detailed exposition which was promised for future publication, but apparently did not see the light. This scheme of nosology has attracted little or no attention, but it is of interest as an early example of the tendency to explain all diseases by the nervous system.

These elaborate classifications were an academic exercise rather than of practical utility. For Dr. William Farr, the acknowledged founder of the science of vital statistics, who compiled the statistics at the General Register Office, Somerset House, from 1838 to 1879, attempted to arrange the death-returns first under Cullen's and later under Mason Good's classifications, but found it impossible to return the diseases under the classes and orders of the nosologies.[4] Interest in nosological systems appears to have died a natural death after Mason Good's works; and systematic works such as Addison's and Bright's "Elements of Practical Medicine," of which the first and only volume, by Addison, was published in 1839, do not appear to deal with the subject. Since then nosological problems have not appealed to English-speaking nations, but in France in 1907 Lancereaux and Paulesco[5] presented to the Académie de Médecine a scheme for the classification and nomenclature of diseases which was referred to a commission[6] who reported favourably and proposed the following somewhat modified classification based purely on etiology:—

1. Diseases caused by physical agents or Physinoses (νόσος, Disease)—
   E.G. Thermonoses = diseases caused by heat.
   Photonoses = diseases caused by light.
   Electronoses = diseases caused by electricity.

2. Diseases caused by chemical agents or Cheminoses—
   E.G. Saturnism, Iodism.

3. Diseases caused by living agents or Bionoses.
   Divided into the animal and vegetable, the latter of course containing bacterial diseases.

4. Diseases caused by moral and intellectual agents or Psychonoses.

5. Diseases caused by nutritional factors or Trophonoses.
   This class, admittedly unsatisfactory, is made up of the two diatheses scrofula and arthritism; the latter of which, appearing under the new name of dystrophic diathesis, covers a very large field—viz., diabetes, gout, chronic rheumatism, and most tumours.

[4] *Vide* letter to the Registrar-General by Dr. John Tatham in the Sixty-fourth Annual Report of the Registrar-General of Births, Deaths, and Marriages in England and Wales, 1901, p. 30.

[5] Lancereaux et Paulesco: Bulletin de l'Académie de Médecine, Paris, 1907, vol. lvii., p. 150.

[6] Rapport de la Commission de la Révision de la Nomenclature des Maladies, composée de MM. Lancereaux, Blanchard, Jungfleisch, Reclus, et Fernet, ibid., 1907, vol. lvii., p. 258.

There is, it must be confessed, a certain fascination about the attempt to fit each disease into its appropriate niche in a formal classification; it recalls our struggles with the "dissected puzzles" of one's childhood. But at present our knowledge is not sufficiently complete to allow a permanent classification to be constructed. In fact, it is probably more difficult now to attempt such a classification than it was in Cullen's time, for though knowledge has advanced it has thereby made our ignorance more obvious, and we realise that any scheme of classification adopted for convenience and practical purposes may almost any day be disturbed by a new discovery.

As the result of research and analysis new diseases are constantly being described, some of which will take an established place in the list of diseases, whereas others are really only aberrant forms of recognised conditions. At the same time, as the outcome of broader knowledge, some conditions previously regarded as distinct are being shown to be local manifestations of a single underlying morbid process or as different types of essentially the same pathological condition. Thus cerebellar ataxia is not distinct from hereditary ataxia but only a form of it; just as tabes and general paralysis are two local divisions of a single morbid process (Mott). Or, to take a comparatively old example, granular kidney, failing heart, and cerebral hæmorrhage are the peripheral results of the general pathological process which begins as a metabolic disturbance and gives rise to an increased blood pressure and so to arterial sclerosis.

Again, the various manifestations of well recognised infections, such as tuberculosis and syphilis, in different parts of the body are grouped together in some systematic works on medicine, and the same process might be adopted with regard to pneumococcal, gonococcal, and other infections. This is a logical method of classification, but it can scarcely be adopted in its entirety, for it is often more convenient to classify diseases according to the part of the body affected than according to the underlying cause; thus acute peritonitis is at present more conveniently classified as an abdominal disease due to various causes than as a local manifestation of infection with pneumococci, streptococci, *B. coli*. Moreover, a strictly etiological classification might be difficult in cases of mixed infection.

In some instances it is difficult to classify a disease in any way except as of obscure or doubtful origin. It is at present, therefore, better to be content with a classification based on a compromise of the etiological and regional considerations than to attempt to force all diseases into a rigid scheme, based exclusively either on the etiological factors or on the organs mainly affected.

The present official nomenclature, wnatever may be said about its limitations, indeed shows a very open mind in the classification adopted; the divisions are: 1. Infective

diseases. 2. Intoxications. 3. General diseases not included in the two preceding groups (the anæmias, gout, diabetes, osteo-arthritis). 4. General morbid conditions incident to various parts (malformations, new growths, &c.). And the main part of the work: 5. Diseases of the various systems of the body (nervous system, circulatory, &c.). Some of these groups are, so to speak, repositories into which diseases of doubtful etiology can be left until we have an accurate and exhaustive knowledge of the real causes at work.

The bearing of the classification of diseases on the relations of physicians and surgeons.—Lastly, a few words may perhaps be devoted to a consideration of the change which new methods of treatment have gradually brought about in the broad classification of diseases into those which are medical and those which are surgical. In general practice this distinction is not of quite the same moment as it is in hospital practice and *personnel*. It worked well in the days when surgery could be accurately described as "external medicine," but at the present time it leads to a wholly unnatural division in the treatment of disease. In these days when specialism is inevitable one man should be able to treat at least one group of diseases from start to finish; this has been fully recognised by gynæcologists, who though mainly physicians in name are highly skilled surgeons in deed; and much the same is true as regards laryngologists. But the general physician who diagnoses a cerebral tumour, an abscess in the lung, or a renal calculus, is obliged, by his want of equipment, to call on his surgical colleague to complete the cure. The natural outcome of this unsatisfactory state of affairs is that at the present time younger men mainly follow the attractive rewards of surgical practice which now deals so successfully with many diseases formerly within the province of the physician. The experience gained by operative measures so increases the surgeon's powers of diagnosis that he may declare, with the humour which conceals a great truth, that "a surgeon is a physician who can use his hands," and even act on the maxim "Chirurgus sum! nihil medicum a me alienum puto."[7] Not only has the physician's field of activity thus become narrowed but his function as a diagnostician is increasingly restricted by the importance of bacteriological tests and skiagraphy, for the accuracy and value of which he must depend on experts. Further, immunisation has come to take a prominent part in treatment other than purely surgical, and Sir Almroth Wright has predicted that "the physician of the future will be an immunisator"; it must, therefore, be admitted that the pure physician, should he still survive, will be in a parlous plight between the surgeon and the deep sea of bacteriology. The remedy for this, it would seem, is, as foreshadowed by

[7] Vide The Annual Oration for 1908, Transactions of the Medical Society of London, 1908, vol. xxxi., p. 332.

Sir Clifford Allbutt in the preface to his address, "On the Historical Relations of Medicine and Surgery," delivered at St. Louis in 1904, that the existing spheres of influence should be rearranged ; therefore, as a first step the general physician and the general surgeon of hospitals should be merged and reappear as medical officers to departments or wards for special parts of the body. The medical officer in charge of the neurological department should be equally competent to diagnose and treat tuberculous meningitis, a cerebral abscess, a fractured spine, and neurasthenia ; the medical officers in charge of the wards for abdominal diseases should be trained to operate when required, and in like manner the medical officers responsible for intrathoracic disease, with which might be combined disorders of the blood and of the ductless glands, should undertake the entire treatment of their cases. There are no doubt many initial difficulties in such a radical alteration in the established order of the profession, and it would necessarily have to come about very gradually. In the first place, it would naturally be objected that present physicians, being unskilled in operative technique, would only slowly be replaced by their competent successors ; this is undeniable, but in the period of transition the active association of operating assistants would enable the hospital routine to be carried on. Difficulties would also arise in connexion with the allotment of some forms of disease, though in course of time a satisfactory arrangement would, no doubt, be arrived at after due consideration. Possibly surgery of the extremities and removal of superficial tumours, such as carcinoma of the breast, might, together with orthopædics, form a special group ; diseases of the kidneys might be associated with diseases of the male genito-urinary organs and gynæcology respectively in the two sexes, and there might well be a department for fevers and for conditions of doubtful diagnosis. The out-patient departments would probably have to be less specialised, so as to insure a general education both for the medical officers and for students. This may seem visionary, but, as has been said, the principle is already in practice in the case of gynæcology and obstetrics.

On the Nomenclature of Diseases.

The nomenclature of disease is an interesting subject, but in the hurry of the day's work there is little or no time to consider the meaning or the origin of the names of the diseases we are attempting to treat. The nomenclature exists for practical purposes and is convenient but not consistent. Our official nomenclature of the Royal College of Physicians of London undertaken in 1857 was first published in 1869 and is therefore of comparatively recent date. The advantages from a statistical point of view of such a standard

nomenclature are obvious; indeed, it was to meet the need felt by the medical department of the army that the construction of such a nomenclature was first mooted. A very definite advantage which should result from such an official pronouncement is the gradual extinction of the numerous synonyms for diseases which often serve only to confuse. By the greater uniformity and accuracy of nomenclature thus obtained conclusions of real value are rendered possible as the result of statistical compilations. The names of diseases have been arrived at in various ways. Some refer to the cause of the disease—for example, alcoholism; some recall the morbid change underlying the symptoms—e.g., neuritis; others mention the most striking symptoms—e.g., paraplegia; or the disease may have a more or less arbitrary name which does not attempt to describe or explain its nature.

To refer to the last category first. In some cases the popular or folk names of diseases, such as "mumps," "influenza," or "scarlatina," have passed into official use and nomenclature. The name is then merely a label, and its meaning and origin may become obscured and almost forgotten in the dust of years; for example, there is room for some discussion as to the exact derivation of "rickets." Names of this kind, however, are so identified with our conception of the disease that any change is undesirable; they are proper and not descriptive names, and though they have no pretension to scientific exactitude, there is the distinct advantage that they do not pledge us to any special hypothesis. With so many new titles and forms of disease it is a comfort to retain the familiar names and to speak of "measles" instead of "morbilli," and of "German measles" in place of "rubella" or "rötheln."

Among the names employed as labels are those named after the observers responsible for their recognition. Thus Bright's, Addison's, and Hodgkin's diseases, all emanating from one metropolitan hospital, Guy's—an unparalleled achievement—are fully accepted. In passing, it may be mentioned that in quite recent years the terms "Addisonism" and even "Brightism" have been suggested to describe cases which approach but do not quite correspond to Addison's and Bright's disease. These two words, being in much the same category as "meningismus" and "peritonismus," may offend the exact thinker, though they are convenient as non-committal diagnoses. Besides doing honour to masters in medicine whose names might otherwise cease to be remembered, this pious method of nomenclature recalls the history of the disease and in most cases serves as a guide to the original description of the disease. It seems only right and proper that, if retained, the discoverer's name should be religiously confined to the condition which he described, and not extended to cover some allied and modified condition, or applied to part only of what he described. At the present time there is a decided tendency to restrict the title

"Bright's disease" to those medical diseases of the kidney which are regarded as nephritis—namely, acute nephritis, the large white and the contracted white kidney, and to exclude from the category the red granular kidney and the lardaceous kidney. Reference to Bright's paper and plates in Vol. I. of the "Reports of Medical Cases" (1827) shows that with the forms of nephritis just mentioned he included the red granular kidney and, though the words lardaceous or amyloid are not used, the lardaceous kidney. When the original author's name comes to be applied to a condition different from that which he described, it is in most instances time to abandon the patronymic and to employ some suitable synonym if this is ready to hand. It must, however, be admitted that there is something to be said for the use in certain circumstances of the describer's name for incomplete examples of the disease which he described in its most characteristic form; for example, Graves's disease is a much more satisfactory label for an incomplete case than exophthalmic goitre, qualified, to make the description accurate, by the words "without any exophthalmos or goitre."

In some instances the original descriptive title is altogether too cumbrous for ordinary practice, and as a result there is an almost irresistible temptation to substitute "Marie's disease" for "hypertrophic pulmonary osteo-arthropathy," and "Raynaud's disease" for "local asphyxia and symmetrical gangrene of the extremities." This is a point worthy of due consideration by those who have occasion to describe a new syndrome. Had it not been for Ord's suggestion of "myxœdema" for "a cretinoid state supervening in adult life in women," "Gull's disease," which indeed was put forward by Professor Osler in the third edition of his text-book (1898), would probably be in daily use. The adopted name for this disease indeed illustrates another advantage of using the discoverer's name—viz., that it does not commit us to a hypothesis of the disease which may or may not prove to be correct. For "myxœdema" implies an excess of mucin in the tissues which is not constant throughout the disease. It might be urged in favour of employing the discoverer's name for diseases, the exact nature of which is not yet clear, that it is a more or less provisional epithet pending exact knowledge, and that in course of time the name will be changed. To some extent this is coming about; the medical diseases of the kidney are as often spoken of as forms of nephritis as of Bright's disease, and "lymphadenoma" is now the official name of Hodgkin's disease.

Whilst admitting the established examples of diseases named after their describers, there is a considerable reluctance to confer this honour widely. In some instances the plunge has been made by admirers in a country other than that which produced the prophet; thus we owe the title "Addison's disease" to Trousseau, and that of "Stokes-

Adams disease" to Huchard, showing that from a medical point of view the *entente cordiale* knows no restrictions of time. In some instances, indeed, the describer's name is applied to the disease only or mainly in the foreign country where the baptism occurred. Thus, in 1815, Joseph Hodgson, who was President of the Royal College of Surgeons of England nearly 50 years later (1864), described dilatation of the arch of the aorta, which he distinguished from ordinary aneurysm, and pointed out that the symptoms were those of heart disease rather than of aneurysm. This condition is known in France as "maladie de Hodgson," but in this country the use of this title would probably convey little and might even lead to the suspicion of confusion with Hodgkin's disease. In Germany infantile scurvy is commonly known as "Barlow's disease" from his full accounts of it first in the Transactions of the Royal Medical and Chirurgical Society for 1884 and again in the Bradshaw lecture of 1894. An objection often raised to the use of an authority's name for a disease is that it may do injustice to the man who really, though perhaps less publicly or fully, first drew attention to it. But it is a question whether the observer who first in point of time notes a certain association of symptoms and morbid changes, or he who more thoroughly works out the details and fully establishes the existence of the disease foreshadowed by his predecessor, deserves the most credit. Advances in medicine, as in other sciences, are seldom due to the isolated efforts of one worker; the same idea is maturing in the brains of several, and it is rare that an affection previously quite unsuspected is brought out in such a complete manner as was the malady rightly known as Addison's disease. Thus, as Bright was the first to point out, the association between dropsy, albuminuria, and renal disease was previously recognised by John Blackall. In some instances this difficulty has been solved by the compromise of blending the later describer's name with that of the original observer. In the case of both Stokes-Adams disease and Cheyne-Stokes respiration, the later and fuller account was published by Stokes. Adams's original description of heart-block in 1827 did not attract any attention until the appearance of Stokes's authoritative contribution in 1846; for this reason, or possibly for euphony, Stokes's name is often put first, although Huchard, who baptised it, called it Adams-Stokes syndrome. It is perhaps a matter for regret that the loyal efforts and distinguished name of the veteran Sir Samuel Wilks are not to be perpetuated in Hodgkin-Wilks disease as a synonym for lymphadenoma; for in 1865 he both fully described the disease and unearthed Hodgkin's original account, which lay buried in the Medico-Chirurgical Transactions for 1832.

Another objection, which, however, is not of much weight, is that an observer may be so active and distinguished

that his name becomes attached to more than one disease. Thus we have Addison's disease of the suprarenal capsules, Addison's cheloid (morphœa or circumscribed sclerodermia), and Addison's (pernicious) anæmia; and on the surgical side Pott's disease of the spine, Pott's fracture, and Pott's puffy tumour of the skull, and Paget's disease of bone, Paget's disease of the nipple, and the almost forgotten Paget's "recurrent fibroid" (spindle-celled sarcoma of the subcutaneous tissues). Marie's disease, a synonym which is generally used to describe hypertrophic pulmonary osteo-arthropathy, has also been employed to denote hereditary cerebellar ataxia, spondylosis rhizomelica, and even acromegaly. The last is specially unfortunate because Marie's name is more properly connected with osteo-arthropathy, which he was the first to distinguish from acromegaly. Von Recklinghausen's disease is the name commonly employed to describe the combination of multiple neurofibromatosis, areas of cutaneous pigmentation, and molluscous tumours of the skin; but it is also occasionally applied to a combination of conditions described by him—namely, hæmochromatosis, or bronzing of the skin, cirrhosis of the liver, and of the pancreas terminating in diabetes.

On questions of priority national feeling may come in and a disease may have different names in different tongues. The most extreme example of this is probably exophthalmic goitre, which has no less than seven synonyms—Basedow's, Flajani's, Graves's, Marsh's, Parry's, Parsons's, Stokes's disease. Fortunately, some of these, such as Marsh's, Parsons's, and Stokes's disease, are seldom, if ever, used.

Medical men have often described the diseases they suffered from, and in a few instances this double proprietary claim has been recognised by the name of the disease as in Thomsen's disease (myotonia congenita), and Pott's fracture, which this eminent surgeon sustained in 1756. Cruikshank the anatomist and a near relative of his both suffered from certain cerebral symptoms about which they often compared notes; the relative died first and Cruikshank examined him with care but apparently did not publish the details of the necropsy. With regard to this, Sir Jonathan Hutchinson writes: "If no one has already a better name for the occurrence of sudden epileptoid attacks marked by subjective kakosmia, extreme pallor of face, and a sense of impending death I would venture to suggest that they should be called 'Cruikshank's malady.'"[8] In the case of a few extremely rare and aberrant forms of disease the patient's name has been employed as a label. Thus, Sir Jonathan Hutchinson[9] briefly designates as "Mortimer's malady" what would otherwise be described as "Lupus vulgaris multiplex non-ulcerans et non-serpiginosus" occurring in a patient of the

[8] Hutchinson: Archives of Surgery, 1890-91, vol. ii., p. 305.
[9] Idem, Ibid., 1903, vol. ix., p. 307.

name of Mortimer. He also mentions that Marie referred to two brothers (Hagner), who had been regarded by Erb as probably suffering from acromegaly, as being the subjects not of that syndrome but of Hagner's disease. In connexion with this method of labelling diseases we may recall the baptism of the Flexner-Harris strain of the *Bacillus dysenteriæ*, which depends on its isolation by Flexner from the stools of a patient named Harris. To name diseases after the patients is obviously unscientific, and might if it became prevalent lead to endless confusion. But at present this method of nomenclature is so little employed, and then only for extremely rare diseases which otherwise appear to require very lengthy titles, that it need not give rise to serious anxiety.

The most usual method of describing a disease is to mention the morbid change accompanying or causing the symptoms—for example, cerebral hæmorrhage. To this category belong the diseases terminating in "-itis," an affix which, though from the time of Boerhaave usually synonymous with "inflammation of," has only acquired this significance in course of years. As the derivation of this familiar suffix is hardly common knowledge, a few words on this point may perhaps be allowed. Mason Good[10] derived *itis* from ἴτης, meaning hasty, headlong, and attempts to explain its applicability by the sense of "increased and impetuous action" which it conveys. A much more satisfactory derivation and account were given by Dr. T. Buzzard[11] who, twenty years ago, in discussing the question whether the word neuritis rightly described a process of degeneration, quoted an authoritative statement from Professor Kontos of Athens as to the original meaning of words such as nephritis and myelitis: they are really adjectives, the word νόσος (disease) being understood; the association with the idea of inflammation is of later introduction and is probably explained by the overwhelming importance of inflammatory diseases of the various parts of the body. Diseases and morbid conditions can thus be very, perhaps too, easily named by adding the feminine adjectival termination ιτις to the name of the organ inflamed, and some of the words thus coined have aroused considerable criticism on the ground of their polyglot nature and have been described as barbarous; and it must be admitted that there are objections to "Bartholinitis" (inflammation of Bartholin's glands) or "Wirsungitis" (inflammation of Wirsung's duct). The word "appendicitis," constructed by Fitz in 1886, has survived much opposition, Nothnagel's attempt to substitute "scolecoiditis" (inflammation of the worm-shaped appendix, σκωληκοειδής ἀπόφυσις) having an historical interest only. It is hardly to be

[10] J. Mason Good: A Physiological System of Nosology, 1820, p. lx.

[11] T. Buzzard: Transactions of the Pathological Society of London, 1889, vol. xl., p. 347.

wondered at that "appendicitis" did not appear under A in the New English Dictionary as that volume appeared in 1888, but etymological prejudice perhaps explains why it took 20 years to gain admission into the official "Nomenclature of Diseases" (edition of 1906). In the same way the masculine adjectival termination ιτης is found in ascites (ἀσκός = the belly) and tympanites.[12] Ascites qualifies the word dropsy (ὕδρωψ) understood, and means (ὁ ἀσκίτης ὕδρωψ) the abdominal dropsy; and tympanites (ὁ τυμπάνιτης ὕδρωψ) describes the drum-like or windy dropsy. Pneumonia or *the* pulmonary disease is arrived at in a somewhat similar manner, but in the present era of bacteriology it may perhaps seem curious that the title "*the* disease of the lungs" should not have been conferred on the commonest—namely, tuberculosis, but on acute inflammation.

The pathological method of nomenclature is, on the whole, the most satisfactory, for it usually carries with it an attempt at diagnosis, but it cannot be universally applied, as in some diseases the morbid changes responsible for the group of clinical symptoms are uncertain or unknown; for example, no pathological title could be employed for the important and more or less established class of the neuroses. In some cases the most prominent symptom or manifestation of the disease supplies its title, as in aphonia, agraphia, paroxysmal hæmoglobinuria, or hæmaturia. This often answers well, but in some instances, as in whooping-cough, for which we have no alternative name in English now that the words "kink-host," "kink-cough," and "chin-cough" employed in the North are no longer, as far as I know, used, a patient may have the disease, but at some period of the disease may not present the symptom (the whoop) which is responsible for its name.[13]

Diseases due to Treatment.

In considering the worldly rewards of medicine some have been known to complain that it is the only profession, or perhaps in this connexion we should say trade, which is persistently occupied in cutting its own throat. This is a bald, if not invidious, way of describing the incalculable benefits due to preventive medicine in which this country has played such an important part both in its origination and in its most recent developments—namely, the campaigns against malaria

[12] See Achilles Rose, Medical Greek, p. 216, New York, 1908.

[13] "Kink-cough is mostly confined to Scotland. It is derived from the circumstance that the cough returns in paroxysms. The first part of the term is a Scots word, synonymous with fit or paroxysm."—(R. Watt: Treatise on the History, Nature, and Treatment of Chin-cough, 1813, p. 13.) Mason Good, who is somewhat independent in his derivations, says that *kin-*, or more correctly *kind-cough*, means child's cough, from the German *kind* = child. "Chin-cough" is an ancient English word; its origin is more obscure than that of kink-cough.

and tuberculosis. True as it is that medicine is always aiming at the extinction of disease, yet in a few instances new morbid conditions have been directly called into existence by methods of treatment which are in every way admirable.

Surgery has not only thrown much light on the "pathology of the living," to adopt Mr. Moynihan's phrase, but it has in a few instances manufactured new diseases. I do not, of course, refer to mistakes in technique which result in failure of the operation, such as peritonitis after laparotomy, infection of the neighbouring tissues with carcinoma during amputation of a cancerous breast, a vicious circle after gastro-enterostomy, Volkmann's ischæmic paralysis due to pressure exerted by splints, or facial paralysis from section of the nerve during removal of a parotid tumour. Probably in the allied category of surgical accidents should be placed cases of pulmonary embolism, often manifested by pleurisy when the emboli are small, after appendicectomy, the necessary manipulation in the course of the operation being sufficient to detach thrombi already formed in branches of the internal iliac and other veins. Again, the occurrence of generalised tuberculosis after excision of tuberculous glands may be explained as the result of handling of glands and the propulsion of their bacilli-laden contents into a vessel. In connexion with this group we may mention unsightly and inconvenient results directly due to operations, such as a ventral hernia after laparotomy, which is a comparatively slight penalty when life has been saved by timely interference, but a somewhat embarrassing sequel of an exploratory operation on a healthy abdomen. Post-operative cheloids probably depend more on the idiosyncrasy of the patient than on the operator.

It is difficult to estimate accurately the influence, if any, of operative interference on chronically inflamed or rapidly growing tissues in the production of malignant disease. In the subjects of multiple exostoses operation on a troublesome exostosis has been known to be rapidly followed by a sarcoma *in situ*. The difficult question then arises whether the rapid growth which necessitated operation was transformed into malignant activity by the surgeon, or whether, as might reasonably be argued, the rapid growth was the first evidence of sarcoma. In the following instance there is some, but not convincing, reason to believe that operative interference excited or accelerated the appearance of sarcoma.

A man with osteitis deformans broke his left humerus, and for eight years afterwards there was some thickening at the site of the union In April, 1908, he bruised it and swelling resulted; it was then cut down upon, as sarcoma was suspected, and scraped. The tissue removed was examined by one of the most skilled pathologists in London with a negative result as regards sarcoma. The patient then fell down and broke his humerus at the site of the incision, and shortly afterwards a large fungating mass appeared in the wound. The arm

was amputated at the end of June, 1908, and a spindle-celled sarcoma found. Recurrence has since taken place.

Occasionally operative interference may appear, and here I wish to speak with much caution, to arouse latent disease into activity.

A boy in apparently good health underwent a radical cure for a congenital inguinal hernia by my colleague, Mr. C. T. Dent; this was rapidly followed by ascites and eventually—five months later—after several tappings he died comatose, and an extremely cirrhotic liver was found at the necropsy. Here an operation appears, as in rare instances a fall or exposure to cold has been known to do, to have precipitated the ascites of cirrhosis.

As a set off to these accidents due to surgical interference it is only fair to recall the unexpected but undoubtedly good effects that may follow surgical procedures. Purely exploratory laparotomy may exert a surprising curative effect, although the surgeon is not always able to explain the success of his treatment. Numerous examples of the efficacy of "Laparotomy as a Medical Measure" will be found in Sir Frederick Treves's paper with this title in our Transactions (1898, XXI., 220). It is impossible to attempt a full explanation of these results which in itself would provide material for an interesting paper, but some may be due to the perhaps unconscious division of adhesions, some to variations in the opsonic index of the ascitic fluid before and after incision (tuberculous peritonitis), and some to the production of vascular engorgement after the manner of Bier's treatment.

However beneficial in its ultimate results an operation is necessarily to some extent of the same nature as an injury and therefore like results may follow. Thus operation may precipitate traumatic delirium tremens or an explosion of gout in disposed persons. Neurasthenia may undoubtedly date from a necessary operation and the attendant mental anxiety and profound mental disturbance. Insanity may, as Mr. Dent has shown, occasionally follow any surgical procedure, a sequel which is not necessarily due to a hereditary taint or to the anæsthetic; for between the operation and the onset of mental symptoms there is a period of quiescence, thus distinguishing it from the post-anæsthetic insanity which directly follows the narcosis. But as these results are probably in large measure the "after-effects of injuries," so exhaustively considered in the Oration of last year, and are not the outcome of special changes induced by particular operations, it would be out of place to insist on them further.

Of special interest are morbid conditions due to operations which necessitate some radical change in the normal economy of the body—for example, removal of organs, such as the ovaries or testes, exerting a definite influence on the metabolism of the body. The psychical and physical

sequels of castration have long been fully recognised and still demand attention both from the practical point of view and from their bearing on the doctrine of internal secretions. In this last connexion the production of cachexia strumipriva by complete thyroidectomy for goitre is of peculiar historical interest. In 1882 J. L. Reverdin described this sequence of events and in 1883 Kocher gave it this name, but considered that it was due to the injuries inflicted on the structures in the neck. These observations paved the way to the recognition of the causal part played by the thyroid in myxœdema and cretinism, for Sir Felix Semon, after reading Reverdin and Kocher's reports, was struck by the resemblance of the condition to myxœdema and put forward this deduction which, like many other original departures, was at first ridiculed. The discussion thus raised, however, led to the appointment of a special committee of the Clinical Society of London and so to the complete proof of his contention. It has perhaps not been sufficiently recognised that years before this—namely, in 1871—Hilton Fagge definitely associated sporadic cretinism or congenital myxœdema with absence of the thyroid gland, and that Gull's description of "a cretinoid state supervening in adult life in woman" was the first clinical account of myxœdema, so that Guy's Hospital had a considerable share in the recognition of these conditions. Here, again, as in the case of other discoveries, the conception was maturing in the minds of several workers. The connexion of myxœdema with thyroidal insufficiency is now such a well-established tenet of our faith that we have already begun to forget the labourers by whom it was established. This consideration may perhaps justify this brief historical digression.

A disease only produced by surgery and already allotted a place in the "Nomenclature of Diseases" (1906), drawn up by a joint committee appointed by the Royal College of Physicians of London, is the (peptic) jejunal ulcer which occasionally follows gastro-enterostomy, especially the anterior operation. The number of recorded cases, about 60, is so small in comparison with the frequency with which the operation has been performed that it would appear that some as yet unrecognised factor is responsible for the production of the ulcer in those cases in which it occurs.

Whilst the treatment of nasal disease, such as removal of polypi, may cure asthma, it is interesting to note that the removal of polypi has been known to be followed by asthma in a person previously free from the disease.

In a few instances ligatures employed in the course of operation may give rise to very definite morbid conditions; it is hardly necessary to point out that stitch-abscesses come under the heading of surgical accidents due to imperfect technique, and that the occurrence of anthrax and tetanus after the use of catgut ligatures, to which attention has been

recently drawn (Richardson),[14] is due to infection directly conveyed. As interesting remote effects reference may be made to gall-stones forming on ligatures and to epiploitis. I have collected eight cases in which operations on the gall-bladder for the removal of gall-stones have been followed by a recurrence of the symptoms due to calculi formed in connexion with sutures. Post-operative epiploitis of a very distinctive kind, with the appearance of an abdominal tumour of a puzzling nature, has been referred to the introduction of silk ligatures into the omentum in the course of herniotomy, of which Schnitzler[15] has collected 28 examples, and other operations, for example, after appendicitis. It may occur weeks, months, or even years after the operation. Occasionally hydrocephalus appears after the cure of a spina bifida. Although it is ungracious to look a gift horse in the mouth it does, I believe, happen, though there are few recorded cases, that after the cut facial has been sutured on to the spinal accessory the patient shrugs his shoulders when he smiles.

Though a critical survey of the subject reveals some interesting instances of what may fairly be called diseases due to surgical procedures they are so insignificant in comparison with the incalculable benefits that we owe to the craft of surgery that it would be absurd to exaggerate their importance. It is, however, obviously advisable to consider carefully beforehand what possible bad effects may follow operations which involve radical alterations in the normal relations of the organs of the body.

The effects of *x* rays on the skin and other parts of the body provide an example of a group of morbid changes produced by a new method of treatment. The dermatitis is somewhat analogous to sunburn and the occurrence of malignant disease to Kaposi's disease or the appearance of multiple squamous-celled carcinomas in freckles. Considerable interest attaches to the production of sterility as a result of exposure to *x* rays; this result is probably commoner than is known, for the absence of spermatozoa from the semen thus produced is not accompanied by impotence; Brown and Osgood,[16] indeed, found this condition of unsuspected sterility in 18 persons who had been employed in manipulating *x* rays for half an hour to four hours three times a week for from two to six years—a very startling result. It has been thought that the active destruction of cells induced in the *x* ray treatment of leukæmia may do so much damage to the liver as to give rise to cirrhosis. Mosse[17] has reported a

[14] Richardson: Tetanus occurring after Surgical Operations, Brit. Med. Jour., 1909, vol. i., p. 948.

[15] Schnitzler: Wiener klinische Rundschau, 1900, vol. xiv., p. 4.

[16] Brown and Osgood: American Journal of Surgery, 1905, quoted in Osler and Macrae's Modern Medicine, vol. i., p. 62.

[17] Mosse: Berliner klinische Wochenschrift, 1908, vol. xlvi., p. 1219.

case of lymphatic leukæmia cured by *x* rays in which the patient succumbed a year later to cirrhosis and ascites. Pleurisy with effusion has also been thought to be caused by exposure to *x* rays.

Although it might logically be only consistent to refer to the toxic effects produced by drugs, for example, arsenic and iodide of potassium, a detailed catalogue of these results would not only be tedious but indeed unnecessary, since the effects are examples of well-recognised forms of poisoning.

In the medical treatment of acute gastric hæmorrhage due to ulcer it occasionally happens that when nothing, not even water, is allowed by the mouth, parotitis follows apparently because the dry condition of the mouth favours an ascending infection of Stenson's duct. Fortunately, it appears, from the scanty references made to it in medical literature, to be rare; but in 1000 consecutive cases of gastric ulcer treated medically at St. George's Hospital it occurred in 23 cases, or 2·3 per cent.; of the 1000 cases 470 were treated by complete oral starvation, and among these there were 21, or 4·5 per cent., cases of secondary parotitis; the two remaining cases of parotitis were in patients on rectal feeding who were allowed to suck ice. It therefore appears that treatment inducing a dry mouth is a definite cause of parotitis.

Great interest attaches to the pathological effects of horse-serum, either normal or when containing specific anti-bodies as in anti-diphtheritic serum. The symptoms of the "serum disease," which in a certain proportion of cases follows the injection of a curative serum, are too well known to require any description. They are usually trivial, and even though in exceptional cases they are severe, about 19 deaths being on record, the benefits of serum therapy are so universal that these infinitesimal risks must be neglected. Recently it has been shown that the entrance of an alien serum into the blood gradually produces a condition of hyper-sensitiveness to a further dose of the serum. This condition of anaphylaxis,[18] which is exactly the opposite of immunity, has been extensively investigated in the guinea-pig, and it has been shown that in this animal death with widespread degeneration of the capillary endothelium and hæmorrhages may be brought about by a second injection of horse-serum given after a certain interval (Gay and Southard [19]). The guinea-pigs take about ten days for this hyper-sensitiveness to develop, but in human beings it appears to take longer. Thus if the interval between the two injections is from three to six

[18] The word "anaphylaxis" (contrary to protection) which has not escaped etymological criticism (THE LANCET, Dec. 12th, 1908, p. 1774) was invented by Professor Charles Richet (Comptes Rendus de la Société de Biologie, Paris, 1905, vol. lviii., p. 109).

[19] Gay and Southard: Journal of Medical Research, Boston, 1907, vol. xvi., p. 143.

weeks there is an "immediate reaction," the symptoms of serum disease (rash, &c.) appearing within a few minutes to 24 hours instead of from seven to 12 days as after a single injection. If the interval between the two injections is longer, three months or so, there is an "accelerated reaction" which appears in five or six days. From the large amount of material under their observation Currie[20] and Goodall[21] have collected a considerable number of these reactions, but fortunately it does not appear that the results in man are likely to prove fatal or that they are so severe as in experimental guinea-pigs. The importance of anaphylaxis or hyper-sensitiveness is far reaching, for it occurs in connexion with injection of vaccines and is thus the important factor underlying the positive reaction in the various tuberculin tests. In addition, the peculiar symptoms produced in some persons by eggs and usually ascribed to idiosyncrasy are probably examples of anaphylaxis, and it has been suggested that some cases of puerperal eclampsia are of this nature and due to the absorption of the products of autolysis of the placenta.

Whatever the effect on my audience I have not exhausted the subject of the diseases and morbid conditions directly due to treatment, nor is it necessary to attempt to do so, for probably we all make a practice, not only of estimating any good that may have followed our treatment, but also of closely considering what bad results may possibly be due to our active interference.

[20] Currie: Journal of Hygiene, 1907, vol. vii., p. 35.
[21] Goodall, ibid. p. 607.