lectures, several cases are narrated to support his ideas, and illustrate excellently the clinical relation I have sought to establish, although a different inference is drawn as to the mode of causation.

Haygarth I have already quoted. Fuller speaks decidedly as to the fact that "rheumatic gout attacks women rather than men". "It fixes", he says, "upon the girl just arriving at puberty, whose menstrual functions are ill-performed", and it occurs frequently at the "cessation of menstruation", or during the debility which follows a miscarriage or a difficult or protracted labour, more particularly when accompanied by flooding".

After reading this, it is somewhat perplexing to find, on reference to Adams of Dublin, that, in his experience, Haygarth's statements are not confirmed; that he finds men to be as subject to "chronic rheumatic arthritis" as women. But then he says further that men suffer most in the hips, women most in the hands and wrists. And if, instead of crossing St. George's, we cross the British Channel, we find an equal discrepancy among French authors; for, while Trousseau regards this arthritis as more common in women, Follin and Duplay say that it is more common in men. Here again the attention of the observers has evidently been bestowed on different classes of affections. Trousseau speaks of the polyarthroses, Follin and Duplay of the monarthroses, typified in *morbus coxæ senilis*. It is evident that differences of individual practice, of climate, of social position, and of occupation, will bring very different groups of ailments under different observers; but it is also clear that the testimony of the excellent clinicians here referred to confirms the first proposition that there is a definite relation between uterine affections, particularly when they involve congestion, and chronic rheumatoid arthritis, particularly with that form of it which affects the finger-joints and wrists.

The assumption that any specific poison is at the root of this and other rheumatic or rheumatoid affections, rests upon very slender evidence. Even the great authority of Prout has not led to the acceptance of the lactic acid theory. The idea, no doubt, affords a very plausible explanation of many of the phenomena, but it is quite inapplicable to many. Thus, the arthropathy of spinal affection, and the arthritis of traumatic origin, would clearly be outside it; and the steps by which these are connected with other forms of arthritis are so much in favour of a source in common, that, without further argument, I shall put aside the *materies morbi* idea, and go on to the consideration of the nervous relations.

The existence of what one may call a middle term, in the shape of exalted susceptibility or reflex activity of the spinal cord, must enter into the comprehension of our subject. All writers have attached importance to enfeebling influences in the causation of rheumatoid arthritis. Anæmia, however arising, all drains on the system, all sorts of wear and tear, have had their share in the total effect estimated. One of the most notable effects of such causes is undue excitability of the central nervous system. In all organs, excitability increases as nutrition is impaired. The ratio of excitability to poverty reaches the highest development in the organs devoted to reception and response. We find, therefore, an over-sensitive spinal cord co-operating with an excited uterine system to induce, by reflex agency, lesions in the joints, just as we may find a similar alliance of irritated prostatic urethra and spinal weakness leading to arthritis or paralysis. The part played by the spinal cord may, however, be here a direct one, and not a reflex one. The opinion that a myelitis by extension is the true cause of the joint-affection is extensively held on the continent.

We have now seen rheumatoid arthritis as a lesion common to several kinds of ailment; we have seen it as a product of mischief in the spinal cord, as an effect of gonorrhœa and simple urethritis in the male, and of ovario-uterine irritations in the female. We find it next a result of direct injury to the joint affected (as in *morbus coxæ senilis*); and from a joint thus affected, it may spread to the rest, in a way only explicable by reflex nervous influence. The setting up of rheumatoid arthritis in one joint by an injury; its extension to a symmetrical joint soon afterwards, and its further symmetrical invasion of a large proportion of the joints, has been described in a case reported by me elsewhere. I may here adduce another case in which nervous intermediation offers the best, if not the only, explanation. A single lady aged 47 had, at the age of forty, cut the end of the index finger of her left hand. The cut was exceedingly painful, and healed imperfectly. Before it healed, the last joint of the same finger became inflamed and swollen. Soon afterwards, the rest of the knuckles of that hand were all involved. Three years later, the left foot was attacked, then the right foot, and at last the right hand. There were no gouty concretions anywhere; no lead-poisoning, and no catamenial disorder. Later on, the catamenia ceased without giving trouble. We may find also a rheumatoid arthritis, according to the observations of P. Berger, produced in the knee-joint by fracture of the femur near the hip. Further,

although it is generally held that chronic rheumatism is not attended with the local changes of rheumatoid arthritis, and a distinction is thereby held to be established between rheumatism generally and rheumatoid arthritis, there are not wanting cases in which a true rheumatoid arthritis has its beginning in an attack of acute rheumatism. I have lately had a case in which the lesions of rheumatoid arthritis were present in a typical form in a patient who had mitral disease as a result of acute rheumatism, the arthritis having begun as a continuation of the acute attack. The nature of the affections in the heart and joints was in this case verified by *post mortem* examination. And lastly, the lesions of rheumatoid arthritis are found in conjunction with foreign growths in joints, and with chronic gout. The natural inference is surely that "rheumatoid arthritis" is not justly separable as a disease of independent character; that the lesions are those of a chronic arthritis, which may be variously produced, in the same way as a neuralgia may be variously produced. I should propose, therefore, to drop the word rheumatoid altogether in the general classifications of arthritis, and to refer the condition to its proper cause, local or remote. Accordingly, in nosology, I should retain such terms as "blennorrhagic arthritis", "urethral arthritis", "rheumatic arthritis", and "arthropathée des ataxiques", and introduce new terms, such as "hystero-arthritis", "myelo-arthritis", "traumatic arthritis", and others that may be necessary; while, for the popular designation of the local malady, I should still use the expression "rheumatic gout". This distinction, I beg to urge, is a thoroughly practical one. As long as we give one name in our own minds to a variety of conditions, we tend to treat them alike. We can only be successful in our treatment of the conditions when we sift our cases, when we single out the particular agent in the production of each arthritis, and take measures to oppose, abolish, or control that agent.

REMARKS

ON THE

COMPULSORY NOTIFICATION AND REGISTRATION OF INFECTIOUS DISEASES.*

By JOHN WILLIAM MOORE, M.D., M.Ch.Dubl., F.K.Q.C.P.,

Physician to the Meath Hospital and to Cork Street (Fever) Hospital, Dublin;
Lecturer on Practice of Medicine in the Carmichael College of Medicine
and Surgery; ex-Scholar and Diplomate in State Medicine,
Trinity College, Dublin.

MANY years have passed since the late Dr. Henry W. Rumsey of Cheltenham, one of the most distinguished of the founders of State Medicine, wrote the following words:—"There are literally no published records of the cases of sickness attended at the cost of the community. The sanitary state of the people is, therefore, inferred solely from the number of deaths—that is, from only one of the results of sickness—no public account being taken of the number and duration of the attacks which shorten the effective lifetime of the population." He continued:—"Facts are accumulating to prove that the mere number of deaths occurring in any locality bears no constant or even approximate ratio to the real amount of unhealthiness existing there. As a necessary result of improvement in domestic management and medical treatment, and owing to the removal or absence of those more virulent agents of destruction which prematurely sever the threads of life, its duration has been lengthened in our great cities, but at the same time the sickly and infirm period of existence has been prolonged, probably in a greater degree than even life itself. Chronic diseases, or, at least, functional disorders, have increased, vital force is lowered, man's work is arrested, his duties are unperformed, his objects fail, though he still lives. Weakly diseased children are now mercifully helped, as they never were in olden time, to grow up into weakly, ailing adults, whose children inherit their unsoundness. Is this true sanitary progress? Does it deserve the ostentatious parade of a decreasing death-rate?"

When these eloquent words were penned, only a few far-sighted thinkers like Rumsey, Acland, Farr, and Stokes, had turned their attention to the registration of disease; and in this connection I would particularly allude to a thoughtful paper by Dr. Arthur Ransome "On the Need of Combined Medical Observation", which was published in the BRITISH MEDICAL JOURNAL of October 8th, 1864. At the present day, however, it seems to be generally acknowledged that statistics of deaths, although founded on a more or less complete system of registration, are to a large extent wanting in precision and in scientific value. But, nevertheless, the advantages which have ever resulted from an approxi-

* Read before the annual meeting of the Dublin Branch

mative knowledge of the variations in the death-rate from season to season, and of the probable cause of the same, more than counter-balance the defects of the registration system as at present organised. How far these shortcomings may be obviated is a question which has yet to be answered. But even granting that our registration system may be perfected, we may well ask whether there is not a further step to be taken—whether it would not be politic to extend the principle of registration, which has hitherto been restricted to *mortality*, to *disease* also. Nor should it be forgotten that even in the United Kingdom the registration of epizootic infectious diseases is already in force, a fact which cannot but be regarded as a strong argument in support of the necessity for, and the practicability of, a registration of infectious diseases affecting mankind.

Viewed as a problem in political economy, there can be no doubt regarding the paramount importance of ascertaining the actual sanitary state of a population at any given time.

Death is one thing—disease is essentially another. An epidemic of influenza or of *rotheln*, characterised perhaps by a very low percentage of mortality, may, notwithstanding, by its mere excessive prevalence, paralyse a community to a far greater degree than a very fatal, yet limited, outbreak of cholera. Sir Thomas Watson states (*Lectures on the Principles and Practice of Physic*. Third Edition, vol. ii, page 41) on the authority of the Transactions of the College of Physicians, that on the 2nd of May, 1782, Admiral Kempenfelt sailed from Spithead with a squadron, of which the *Goliath* was one. The crew of that vessel were attacked with influenza—"la grippe", as the French expressively term it—on the 29th of May, and the crews of the other vessels were at different times affected, so many of the men being rendered incapable of duty by this prevailing sickness that the whole squadron was obliged to return into port within a few days. Mercatus asserts that before the beginning of autumn, in the year 1557, influenza attacked all parts of Spain *at once*, so that the greatest part of the population in that kingdom were seized with the disease almost on the same day. At St. Petersburg, in the epidemic of 1782, Maertens says that on a cold night the thermometer rose 30 deg. Fahrenheit, and next morning 40,000 people were taken ill with the influenza. We can readily imagine what serious consequences might possibly attend outbreaks of sickness such as these, although they would not necessarily leave their mark upon the statistics of mortality.

Again, under ordinary circumstances the prevalence, or otherwise, of an endemic disease stands in no direct relation to the published returns of mortality attributed to it. The argument in favour of registration of disease deducible from this fact applies *à fortiori* in the instance of an epidemic, where the ratio of cases to deaths is of a most varying and uncertain character.

Difficulties, no doubt, stand in the way of carrying out an effective system of disease registration, but they are not insurmountable, and the fact that several European governments have long since inaugurated and prosecuted such a system should encourage us in essaying to follow their example. In the vanguard of progress in this direction the Scandinavian nations occupy the place of honour.

For many years back, the College of Health at Stockholm has received monthly and annual reports of the sanitary state of the country, including an account of the prevailing endemic and epidemic diseases, from a corps of officially appointed medical men, styled provincial and district physicians, subsidised by the State. The monthly reports furnished by these physicians are published from time to time in the Swedish medical periodical *Hygiea*, while the annual returns are compiled and arranged by an official whom we may call the Swedish Registrar-General, and are finally presented to the king in the form of a "blue-book", or volume of official reports and tables.

A similar organisation exists in both Norway and Denmark—so far, at all events, as relates to the registration of epidemic diseases. In the "Weekly Report of Diseases, Deaths, and Births in Copenhagen", communicated by Dr. P. A. Schleisner, Medical Officer of Health, and published by authority of the Municipal Council, the first table gives the cases of epidemic and contagious (infectious) diseases reported to him by the medical men practising in the Danish capital. The notification of these affections is compulsory.

Our American cousins have also adopted a system of registration of disease in some of their large cities, and the authorities of some of the Swiss cantons are following their example. (See BRITISH MEDICAL JOURNAL, December 27th, 1879, page 1030.)

Before I proceed to sketch the progress already made in establishing a registration of disease in our own country, it may not be amiss to state that the powerful Association of which we—the Dublin branch—form a by no means unimportant integral part, have, for fifteen years, at least, consistently and constantly promoted the registration of disease. Dr. Grimshaw, the present able Registrar-General for Ireland, stated,

in his recent address to the section of Public Medicine at the Annual Meeting of the British Medical Association in Cork, that at the Leamington meeting of the Association, in 1865, a committee was appointed to promote the registration of disease. (*The Public Work of the British Medical Association*. Dublin: Fannin and Co. 1879. Page 10 *et seq.*) This committee attempted to establish a voluntary registration of sickness in public practice, but the attempt ultimately failed. Unsuccessful, but not discouraged, the committee never ceased urging upon the Government the importance of the systematic registration of disease, and suggested it as a fit subject for the consideration of the Royal Sanitary Commissioners. A national system of registration of disease in general unfortunately still remains a thing of the future.

There is, however, one class of affections which, in the interests of the community, should be registered with as little delay as possible—at least in all large towns. I allude to epidemic infectious diseases. Instances are constantly coming under the notice of hospital physicians in which scarlatina, small-pox, measles, and fever have spread far and wide, because the first case of illness, either through wanton neglect or ignorance, was not isolated in due time. Some weeks ago several cases of scarlatina were admitted into Cork Street Hospital from a tenement house in which a child died of this disease and was waked. No medical man had been called in to see the patient, nor was any report made to the sanitary authorities until other children in the house had been attacked. At least two lives were lost in this instance, which is only one of many which might be adduced.

Two things would seem to be necessary in the case of outbreaks of epidemic infectious diseases—first, the *immediate compulsory notification of such outbreaks to the sanitary authorities*; secondly, the *early registration of all cases of these affections, and the publication of the tabulated results at frequent intervals by the General Registration Offices* of each division of the United Kingdom. Towards securing the second object but little has yet been done. As regards the notification of infectious disease, on the contrary, Parliamentary powers have already been sought and obtained by fifteen towns in England and Scotland—viz., Huddersfield, Bolton, Greenock, Burton-on-Trent, Nottingham, Jarrow, Llandudno, Warrington, Blackburn, Norwich, Edinburgh, Rotherham, Blackpool, Leicester, and Derby.

Mr. Ernest Hart, the chairman of the Parliamentary Bills Committee of this Association, in an admirable report "On the Recent Progress of Legislation with regard to the Notification to Sanitary Authorities of the Occurrence of Cases of Infectious Disease" (see BRITISH MEDICAL JOURNAL, November 22nd, 1879, page 830) gives a synopsis of the clauses in the local Acts of Parliament relating to such notification in the towns mentioned above. From this synopsis, it appears that by the Bolton Act, and by the Jarrow, Llandudno, Warrington, Blackpool, Rotherham, Leicester, and Derby Acts, founded more or less upon it, the duty of making this notification is imposed alike on the occupier and on the medical attendant—the *primâ facie* duty of complying with the statute is cast upon the occupier, and a fee of half-a-crown in most cases, but only one shilling in the case of Jarrow, is payable to the medical man for his certificate. The Burton-on-Trent and Blackburn Acts require the occupier to give notice only when a medical man is not called in, and, as Mr. Hart says, thus obviously offer a premium to delay in seeking for medical advice in cases of infectious disease. The Edinburgh Act, again, by imposing no duty at all upon the occupier, is likely to lead to the employment of quacks and unregistered practitioners to even a greater extent than at present. At Greenock, the notification, to be given by the householder to the sanitary inspector within twenty-four hours, is required only on its being certified by the medical officer of health that "epidemic, contagious or infectious disease" exists within the limits of the town. At Nottingham and Norwich, as well as, to a less extent, at Huddersfield, the plan proposed by the committee of this Association has been adopted. "By the Nottingham plan", Mr. Hart observes, "the medical attendant is required to fill up, sign, and deliver to the occupier or person having the management or control of the building, or, in case such person is suffering from infectious disease, to the person in charge of the patient, a certificate, which must be forthwith delivered by the person to whom it is given by the medical practitioner, at the town hall, to a clerk or servant of the corporation. If no medical attendant be called in, the occupier or other person is, so soon as he becomes aware of the existence of the disease, to give notice to the Corporation forthwith. In the event of the sufferer not being a member of the occupier's family, the head of the family (resident in such building) to which the patient belongs, or, if there be no head, the patient himself (unless prevented by such disease, or by youth) is to give notice of the existence of the disease to the occupier or other person as above."

In the Report of the Committee on the Registration of Disease, adopted by the British Medical Association in 1876, the position of the