

surgeon, though it would be ridiculous. The law, however, allows him to inspect the farm, the walls and floors and drains, and to take action regarding the cows as a result of this inspection of the buildings; but he must not presume to cast inquiring glances toward the cows, the essential point, unless there is a veterinary surgeon or inspector present to inspect himself! This section is altogether so badly drawn that it needs thorough amendment, so as to give power of efficient and prompt action to the medical officer.

The problem of how to make suitable provision for the wholesomeness of milk which is sent hundreds of miles to its consumers, as is the case with London and other great cities, is a serious and difficult one. But Parliament is elected for the purpose of solving difficult questions, and this one ought to be laid before it without delay.—I am, etc.,

Bradford, Dec. 11th.

THOS. WHITESIDE HIME.

INFANT MORTALITY.

SIR,—It is needless in a medical journal to discuss the amount or dangers of high infant mortality, but I should like to mention one of the causes, and also point out how that cause is likely to increase and how it may be diminished.

Dr. Newsholme, in his well-known work on *Vital Statistics*, says that one of the causes is the omission on the part of the parents to call in medical aid soon enough. Dr. Harris, the M.O.H. for Islington, in a recent report, attributed many of the deaths from measles to the same cause. Recently in an Oxfordshire village a large number of children had diphtheria and went about in this condition, and even attended school with their throats swathed up, no doctor being in attendance upon them.

It is needless to multiply instances; and the reason is obvious.

Poor people of the labouring classes cannot afford to pay doctors' bills, or even to subscribe to clubs. If the baby is upset or a child has a sore throat, a father or widowed mother will hesitate to call in the doctor when the result will be (even on the very moderate terms on which doctors attend poor people) that the family have to go without dinner for several days.

But, it will be said, the Poor Law provides a doctor for the poorest. Yes, so it does; but unfortunately there is a "hard school" of so-called Poor-law reformers. These people have persuaded many Boards of Guardians to use methods of deterring the poor from applying for medical relief; such as giving all medical relief on loan (in the first instance), or compelling the parent to come before the Committee. In unions which have adopted these measures, "medical relief" has largely diminished, and it is, I think, practically certain that this must have caused much suffering, and, in some cases, death.

I think the attention of the medical profession, and of the Local Government Board, should be drawn to this subject.—I am, etc.,

J. THEODORE DODD.

Oxford, Dec. 15th.

HERBERT SPENCER AND EVOLUTIONARY PATHOLOGY.

SIR,—More than twenty years ago I drew the attention of the profession to the valuable results which were likely to accrue from application of the principles which it was Mr. Herbert Spencer's life-work to elucidate to some of our unsolved pathological questions. At that time I pointed out that the influence of evolution in pathology had been almost *nil*. The specificity doctrines of Laennec, Bretonneau, Trousseau, and indeed of Sydenham still held the field. The immutability of species of disease was regarded with as much sanctity as was the immutability of species of animals and plants in the eyes of the older biologists. I then ventured to urge "that the common ancestry of specific diseases once recognized would do much to remove the hard and fast lines so often drawn between disease and disease in textbooks and dissertations, but of which Nature knows nothing."¹ These views were afterwards included in a pamphlet entitled *Specificity and Evolution in Disease* (H. K. Lewis, 1884), and Mr. Herbert Spencer, in accepting the dedication of the work to himself, was so good as to add that "its conception is thoroughly philosophical, and promises to open the way to a considerable reform in pathology."

At the present time, when we are regretting the close of the great evolutionist philosopher's life work, there is not wanting evidence that light may be shed on pathology by the further application of Spencer's doctrines. In 1838² I claimed that:

¹ *Lancet*, May 14th, 1881.

² *Ibid.*, August 25th.

The hard-and-fast line which once in the minds of pathologists, though never in the methods of Nature, sharply divided, upon a morphological basis, the benign from the malign, has been wiped out, and that the old doctrine of the "heterology" of malignant growths has been so qualified, restricted, and modified to meet modern requirements that it is practically ruled "out of court."

I then propounded the following thesis. I said:

If, then, we believe that in her wildest vagaries of pathological neoplasm nature makes no jumps; if we recognize a transition between the simple and the specific, the innocent and the malign, chronic inflammation and cancerous infiltration, sarcoma and carcinoma—in what, then, does cancer consist? In generation, in inflammation, in repair, in carcinomata and sarcomata the individual factor is morphologically apparently identical; what differences there may be are latent, not expressed. In inflammation, repair, and in malignant growths, then, there is a reversion to embryonal cell type. In the two former processes there is either organization of embryonal cells into tissue or liquefaction into pus. In the neoplasms, on the other hand, there is indispotion of the component cells either to differentiate into tissue or to suppurate. They lack the influence which makes for organization; their instincts are of the lowest—are amoeboid, in fact. They possess the fecundity of cells unfitted for "colonial" life, and share their vagabond propensities. Herein lie the factors of malignancy, the causes alike of rapid growth and the infectivity of cancer.

I then cited the felicitous suggestion of Dr. Creighton as to the quasi-spermatic influence of malignant cells. By their contact they appear to cause other cells to generate, and make the offspring like themselves. The demonstration then recently made of similarity in the nuclear structure of cancer cells and spermatoblasts, I pointed out, afforded a morphological peg on which this theory might be suspended. Researches carried out since these views were promulgated have served both negatively and positively to confirm the position then advanced. It seems to me there is accumulating evidence to support the contention that in the evolution hypothesis we shall find guidance to the solution of the mystery of malignant growths.

That we are "the heirs of all the ages," of the lowly amoeba as well as of our parents. That, as we believe with von Baer the history of the individual repeats the history of the race, so we carry within us (happily not all in the same degree) the idiosyncrasies which pertained to the life-history of our earliest progenitors. That while, in the processes of repair and of organizing inflammation we see a survival of tendencies inherited from a later generation, a generation which had acquired colonial habits and a lower grade of fecundity, and which we regard as beneficent, in the life-history and tendencies of the cancer cell, we see occasional persistence of, or reversions to, that still earlier type of a structureless cell, inapt at specialization, indisposed to colonial collaboration, and multiplying by fission with that terrific rapidity characteristic of the lowliest of living things.

I should like to add that recent work in connexion with the protozoal bodies in malignant growths seems to point in the same direction. Are not these bodies the bastard brood of some anomalous form of cell conjugation?

In the case of cancer bacteriology has apparently drawn blank, despite its zealous search for a *causa causans*. A return to cellular pathology illuminated by evolutionary principles seems to offer a more fruitful line of research.—I am, etc.,

London, N.W., Dec. 16th.

W. J. COLLINS.

THE FINANCES OF THE GENERAL MEDICAL COUNCIL.

SIR,—When I wrote the letter which appeared in the *BRITISH MEDICAL JOURNAL* of November 14th I dealt with the question of the finances of the General Medical Council from a circumscribed point of view—the view of temporary expediency. Mr. George Jackson, of Plymouth, however, one of our valued Direct Representatives of England, in his letter published in the *JOURNAL* of November 21st, raises the question to the higher platform of medical reform. That so eminent a medical politician as Dr. Laffan, of Cashel, should, in the *JOURNAL* of November 28th, follow in a similar strain is not surprising: the author of the "Carmichael Prize Essay" of 1879 has ever been an earnest advocate of progressive medical legislation: what he says is a vigorous and terse expression of what many think. Nor, in the same number, do your correspondents "M.R.C.P.Ed." and "Spectator" deal less trenchantly with their subject; their criticisms of the business habits of the Council are levelled with singular directness at what undoubtedly is the dominant contributory factor in the Council's financial crisis.

It is beyond dispute that the General Medical Council has so far outgrown its original proportions that the increase taxation of the profession for its support cannot for many sessions be longer delayed; the harmonizing of the conflicting opinions advanced by the representatives of interested