

subjects has been absolutely thrown away. For students who are disposed to appear for a science tripos, or who have such a line of life open for them, or the tendency towards it, who are possible professors of anatomy or biology, this kind of work is of course admirable; but of our medical students, nine hundred and ninety-nine out of every thousand will have to find their positions at the bedsides of their fellow countrymen in times of accident and sickness, and there such knowledge is useless.

"In the old days—days which I can remember—it was charged against the corporations that they turned out a large number of ill-educated empirical practitioners who knew nothing but their patients. Now I say the tendency is to turn out a still larger number, a very much larger number, of scientific young tyros, who know neither patients nor their diseases till they have gone through a second pupilage extending for years after they have left their university. This second pupilage lies in the rough school of experience, and in its second training they will be found deliberately and at once to throw overboard at least two-thirds of what they have learned in the first. What the boy wants after his general education has been fully developed, and his fundamental knowledge of useful anatomical facts and physiological principles has been made perfect to the utmost of their extent for usefulness, and not one scrap beyond that, is that he should be dealt with as we deal with the cutter of blanks in the button manufactory. He should be put at once into contact with his material. I therefore vote cordially with those who demand the restoration of the apprenticeship system in such fashion as modern requirements indicate. It is, of course, no longer to be a seven years' slavery in mixing pills and spreading plasters, for the modern manufacturing chemist does all that for us now, but it should be a period of at least two years spent in learning how to deal with patients, how to divine their peculiarities, and in learning how to avoid making an ass of himself in the sick room as the modern, newly-fledged, qualified assistant is certain to do for the first few years of his second pupilage, in spite of his biological lore.

"The road to success in the practice of our art lies not only in knowing how to deal with disease, but how to deal with men and women while they suffer from it. Our biological practitioners have no experience of either of these lines of research, and

they therefore fail miserably. I had to meet a most excellent and estimable practitioner of the old school in the north of England some months ago, and he told me that within a year he had had three assistants, all Bachelors of Medicine and Masters of Surgery from one of our most flourishing biological schools. "Sir, would you believe it," he said to me, boiling with indignation as he thought of the needs of his large colliery practice, "not one of them could put on a splint! and the third was such an ass that he used to lecture a collier's wife on how fishes lost their eyes in coal pits instead of supporting her perineum." I am speaking from a lamentable fulness of similar experience, and I feel that no other remedy is possible than that which I recommend, and the sooner we begin to cry out for it the better. Our corporations are deaf to our appeals upon such subjects, because their rulers no more understand the requirements of the general practitioner than they understand the Confucian system of philosophy."

#### THE REPARATIVE PROCESS IN THE HEALING OF WOUNDS.

There seemed at one time to be almost a unanimity of opinion among the leading observers upon this question, when once Cohnheim's view of inflammation had recommended itself for general acceptance, as against Virchow's earlier theory of "attraction," or increased nutritive activity, or against the neuropathic theory held by Henle, Stilling, Lubbock and others. The origin of the fibro-blasts, which are the real agents in the *restitutio ad integrum* of an inflamed area, in which the lesion has gone on beyond the possibility of resolution, is now the disputed point. Virchow's theory, long ago advanced, that they originate from the injured but not killed connective and other tissues of the part, has been refused acceptance by observers since, and such authorities as Ziegler have been followed by most of the English text-books on pathology, with the theory that the fibro-blast originates only, or almost only, from the leucocyte. The old theory of Virchow, that the fibro-blast is not a modified leucocyte, but a proliferated connective tissue product, is taken up and defended with the utmost vigor by Hamilton, of Aberdeen, in his text-book on pathology lately issued, and a statement of his