that is to say, of rupturing adhesions; being deterred either by the resistance that he feels or by the pain complained of by the patient.

It needs no demonstration that a timid operator may easily do mischief by traction upon a joint, which, after all, he fails to relieve, when a bolder and more rapid movement would at once have set the patient free. I am disposed to think that much of the fear of articular inflammation entertained by surgeons is based, if upon any clinical facts at all, almost entirely upon the results of passive motion of an inefficient kind; sufficient to increase the hurtful traction of an adhesion, but at the same time insufficient for its destruction.

In a few cases Mr. Hutton was consulted on account of stiffness about the neck or cervical vertebræ; and he then was accustomed to straighten them in the following way:—His left forearm would be placed under the lowered chin of the patient, with the hand coming round to the base of the occipital bone. The right thumb would then be placed on any painful spot on the cervical spine, and the chin suddenly elevated as much as seemed to be required. As far as my observation extends, the instances of this kind are not *bonâ-fide* examples of adhesion, but generally such as might be attributed to slight muscular rigidity, or even to some form of imaginary malady. The benefit gained was probably rather due to the pain of the operation, and the effect produced by it upon the mind of the patient, than to any actual change in the physical conditions concerned.

My next paper will be devoted to an account of the methods of manipulating the lower extremities.

(To be continued.)

A CONSIDERATION OF THE CRITICISMS ADVANCED ON SIR JAS. Y. SIMPSON'S PAPERS ON "HOSPITALISM," SPECIALLY THOSE OF MR. HOLMES.

By LAWSON TAIT.

THE position I have taken up in this controversy is one confessedly of difficulty and danger; for, on the one hand, I may lay myself open to the charge of following blindly the views of one to whom I, like many others, owe very much; and, on the other, I may be blamed for presumption in criticising the opinions of those far above me in seniority, as in all else, in my profession. I shall, however, as far as possible, avoid the weakness of being *addictus jurare in verba magistri*; and if I have to offer criticisms adverse to the opinions of men like Mr. Holmes, Mr. Callender, and Dr. Matthews Duncan, I trust that they will take them as honestly intended, and arising from a study of the subject as full as I can make it.

At the outset, I may say that I think the choice of the word "Hospitalism" for the heading of the papers was not fortunate. We all owe so much—most of us owe everything—to hospitals, that, whatever be their faults, they should be treated tenderly. Certainly the name ought not to be used as a root from which to coin a word that, in popular parlance, is now a term of reproach. For this reason I shall discard the term.

The first and most conspicuous point of weakness in the arguments of Sir James is to be found in the anonymous returns from private practitioners. It was most unfortunate that he should have chosen to publish those returns without the names attached to them of the gentlemen who supplied them. Nothing was, of course, easier than to cast doubts on these returns; but I am quite sure that it would be little more difficult to substantiate them, were it worth the trouble. But the fact is that those who have criticised Sir James's papers were not cognisant of his method of working. What I can see clearly he meant merely as the last step of his *sortites*, they have understood as his major premiss, and have wasted their energies on what, considering the state he left the argument in, was of comparatively little moment. This is remarkably the case with Dr. Matthews Duncan, through whose elaborate book I have gone carefully without finding anything bearing on any

points other than the treacherous memories and the "amiability" of the gentlemen who were asked for returns. When we bethink ourselves that for the "amiability" a much uglier word might be substituted as a tolerably literal rendering, we cannot wonder at the somewhat indignant tone of the letter of Dr. Cullen, of Airdrie, the "marvellous" and "miraculous" surgeon who had 52 amputations without a death, which is to be found at page 547 of the volume of the *British Medical Journal* for 1869. I have gone most carefully over all these returns in the original manuscript, and in every case where suspicion of the correctness of the return could be reasonably entertained I took measures to ascertain the facts; and the errors I have discovered are so trivial in amount as not to affect the general results in the least. Were it essential to my purpose I should at once publish the names of the practitioners along with the returns, and leave the authors to discuss their "amiability" with their critics. I could also easily reconsider Mr. Callender's ingenious twisting of the figures, and show that both for his and Mr. Holmes's position he has really shown too much. But for the present the returns from private practice may be left out of consideration. The comparisons must first be fairly made between different hospitals; and it is very curious to notice how carefully Sir James's critics, with the exception of Mr. Callender, have evaded this. Mr. Holmes Coote has made a special plea in defence of St. Bartholomew's—on the principle, I fancy, of *qui s'excuse s'accuse*; I can see no other reason for it. Mr. Callender has made a collection of statistics of amputations from various hospitals, purporting to be the same, with few exceptions, as those from which Sir James derived his. Mr. Callender's figures are not identified with the names of the hospitals; and I regret that, in a private note, he has informed me that he cannot again go into the matter. His results are utterly irreconcilable with the tables printed by Sir James Simpson; and as in these latter the name of each hospital is opposite the list of its amputations, correction of errors would be easy. I have not yet heard that any such have been found, and I therefore must at present decline to accept Mr. Callender's figures.

One other point of criticism advanced by Dr. Duncan, and I have done with the "Mortality of Childbed and Maternity Hospitals." Speaking of the method of computing hospital statistics, at page 149, he writes as follows: "The proper data for judging of the value of ovariectomy are those from the large and long experience of Wells and Keith. Judged by the Le Fort and Simpson argument, it might be condemned as murderous; judged justly, it is commended as a triumph of modern surgery." Something new this, certainly, for actuaries! And who shall be blamed after this for publishing selected cases? For, after all, the experience of one man, whether favourable or unfavourable, is but a selected case; and even the most fortunate, as in the well-known cases of the Norwich lithotomists, have their averages brought down at last to the usual rates. Have Messrs. Keith and Wells any guarantee that a run of bad luck in the next hundred cases may not bring down their returns to the 50 per cent. which is about the usual rate of recoveries in ovariectomy? Or, should this occur, would any member of the medical profession raise the charge of murder against these distinguished surgeons, which Dr. Duncan so liberally deals out to all, myself included, who, having tried ovariectomy, have not been so successful as Dr. Thomas Keith or as Mr. Spencer Wells? Carrying out his peculiar statistical reasoning, Dr. Duncan tells us further, that "the statement of a mortality of 1 in 29 is a slander on such hospitals as that of Dublin." It is equally a slander on at least three-fourths of England to be told that the district mortality of the country averages 19 in 1000, while in these three-fourths it is really not more than 25 in 1000. Still more is it a slander on us in Birmingham to say that the mortality of large towns is 32 in 1000, while ours is only 23. Would the shareholders of an insurance company thank their managers for basing their system of life acceptance on the tables of Bristol and Birmingham, to the exclusion of Liverpool? If any system of institutions is to be judged, it must be on the whole scheme, and not on a part only; and it is really a matter of surprise that anyone in Dr. Duncan's position could be persuaded to think otherwise, much less to write it.

The fullest criticisms on the "Hospitalism" papers, certainly the best, are those of Mr. Holmes. So much of his

position, however, depends upon the deductions of the Report on Hospitals written by him in conjunction with Dr. Bristowe, that it cannot be fully considered without a criticism of that paper too elaborate for these columns, but which I hope to be able to bring forward elsewhere. I may here state in passing, that a careful examination of that Report, and a comparison of its data with some of my own collecting, have obliged me to come to the conclusion that the former are quite insufficient to support the deductions arrived at by the authors of the Report. The whole question of hospital results is a difficult and complicated one, and it is quite likely that I shall leave it very much as I found it; but I am quite certain that, save in some minor points, Dr. Bristowe and Mr. Holmes have not added much to our knowledge. To come to Mr. Holmes's "reply" in THE LANCET. I must first refer to the regret he expresses "at the too hasty publication, particularly in the ordinary newspapers, of indiscriminate charges against that hospital system which I believe to be the most successful of all our efforts at public charity." It is only too sadly notorious that medical life in the Scotch metropolis is mixed up with personal polemics to a degree that is elsewhere unknown in civilised society; and how much this had to do with those public letters I am not prepared to say. It had its influence I dare say; but it must also be borne in mind that at that time the rebuilding of the Edinburgh Infirmary was being first mooted in public, and hospital construction and its results being amongst the thousand and one varied subjects on which Sir James's vigorous brain had exercised itself, it was not one on which he was likely to be silent when it practically affected the school he had done so much for. Whether the charges were indiscriminate, is still *sub judice*; that they were not immature we know from his writings.

Mr. Holmes criticises at great length, in his first paper, the doings of country surgeons; and, practically, his conclusion about them is this: that, having learnt certain general rules for surgical practice at St. George's and other hospitals during their studentship, they go down to the country and unlearn these rules; for while at the hospital they saw amputations performed in every case where there was a ghost of a chance—and even, according to Mr. Holmes's own showing, in some cases where there was not even that slender thread,—in the country they select their cases, and have better results. If Mr. Holmes would read over the notes appended to very many of the 374 returns received by Sir James, now in my possession, he would there find detailed records of daring surgery—amputations done under apparently the most hopeless circumstances, and done successfully—which rival anything I know of hospital practice, and which I would fain believe would cause him to regret having made such insinuations. If country surgeons as a body do select their cases that they may get favourable returns, have we not every reason to believe that in this, as in most other things, they are addicted to swearing by the practice of their teachers—the hospital surgeons? Or will Mr. Holmes place himself on one or other of the horns of this dilemma: that the country surgeons, after their country experience, find that they have been badly taught; or that there is one rule for amputations in hospitals—to take off the leg because it is Thursday,—and another in the country—to save the leg if possible, and not to amputate simply for the operation. I fear that, from the tenour of a note written by Mr. Holmes in the *British Medical Journal* for Feb. 6th, 1869, he will choose the latter alternative. Mr. Holmes displays considerable ignorance of the practice of the surgeons of collieries and of the habits of colliers when he says, at page 9 of THE LANCET for 1871, that the former select their cases, that the latter are "persons of extraordinarily healthy constitution and habits [!], and that the urban population contains a large proportion of drunken and diseased persons." Some of our black countries have a mortality-rate nearly double that of London; and colliers are about the most shortlived and dissipated class of our population. From a large experience amongst them, I know that they do not recover well from illnesses, still less from operations. Amongst the urban population he finds "the accidents are, in a great majority of cases, the results of intoxication, and occur to habitual drunkards, or they are extensive railway injuries, in which amputation is practised as a last resource"—a set of conditions which, if true of the urban, is

equally true of a collier, population. I trust the conclusion of the sentence just quoted expresses a general rule which is peculiar to St. George's; for the practice is more than questionable, "and even sometimes [amputation is practised] as a mere charity to substitute a less for a more painful mode of death." Yet Mr. Holmes says, at page 195 of THE LANCET for 1869, "I admit, of course, that in each individual case success appears not impossible, otherwise the amputation ought not to be performed."

Mr. Holmes has views on the influence of the mere fact of amputation which are so peculiar as to deserve notice. He seems to think that the result is mostly due to the nature of the case and to what has gone before the operation. It is, he says, "only part of the treatment of a surgical case, and that its failure or success depends very commonly on the nature of the case to which it is applied; and this is not shown by a bare collection of figures." Surely Mr. Holmes will admit that in every case there are certain circumstances which lead to or decide against the performance of amputation, and that the limits on either hand are tolerably definite; otherwise surgery is much less of a science than we have been taught to regard it. Then it is not cases of "amputation" we have to consider, but really a number of cases of disease or accident sufficiently serious to require a definite and uniform line of treatment, the rules for which are practically so decided, that in a large collection of cases we are certain, by the ordinary rules of probabilities, to eliminate serious errors and arrive at just results. Various sets of these definite cases, then, treated under various but equally definite circumstances, are fair subjects for comparison. In hospital practice cases must constantly occur—I know they have done in my own experience—where precisely similar reasons in different cases decide the course of treatment as far as amputation is concerned; and in a mass of cases any difference in mortality must be due in very great measure to surrounding circumstances, otherwise we take blame on our own shoulders which may be more safely, and I think more justly and correctly, explained as Sir James Simpson endeavoured to do it. The comparison of amputations in private practice with those in hospitals may be in some respects unfair. I am almost inclined to grant that it is. But the comparison of cases in hospitals containing five hundred beds with similar cases in hospitals containing a hundred is not open to objection; and, if we find that there is the "evidently enormous" difference shown in Sir James's tables, it is indeed time we altered our plans of hospital construction and administration. Amputation deaths influence only to a very slight degree the death-rates of hospitals; but what influences their increase must of necessity influence the increase of the death-rate in other cases; and if we find, as we most emphatically do, that the death-rate of hospitals increases with their size to an extent which is altogether inexplicable by the propositions of Dr. Bristowe and Mr. Holmes, we cannot resist the conclusion that large hospitals are an unmitigated evil. At the Leeds debate, Mr. Hutchinson pleaded that amputations, like confinements, constitute a special class of cases, limited in number and demanding isolation; and that any argument from them is inapplicable to general and medical cases. On the point of isolation Mr. Hutchinson is at variance with Dr. Bristowe and Mr. Holmes; for they consider it safer that all diseases, except small-pox, should be distributed within certain limits in general wards. This seems to me only a matter of common sense. We talk of fever patients "throwing off the poison"; and we are probably literally correct, for they manage to poison others. Then, is a case of fever, individually bad, at all likely to be benefited by being constantly exposed to the castings off of twenty other cases equally bad, or perhaps worse? Are the mild cases in a fever ward likely to be made milder by a continual repetition of doses of poison? It has always seemed to me something like madness to fill a ward with fever cases—pretty much like collecting a lot of burning houses together, the better to subdue the flames. At Leeds we had a very definite opinion on this point from Dr. Gairdner, whose view is that the smallness of the fever hospital meant a corresponding depression of the death-rate. Now, in fevers, as in other cases, the evil of the general aggregation of the sick in large buildings is simply that the chances of centres of origin are very much increased, and the nidus for the spread of the affections is correspondingly large. In fact, it would be a most ex-

traordinary circumstance if, when we find these influences having such a powerful effect on healthy people, it should not be the case that the larger a hospital, the greater, on that account, its mortality. I shall show the effects of aggregation in general cases elsewhere; and, whatever be the results of my investigations, they will be candidly given, whether they confirm or upset my present views. I do not yet know the complete results, but what I have seen of them certainly confirms Sir James Simpson's statements.

(To be continued.)

A Mirror OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

AMPUTATION OF THE THIGH.

(By Mr. HOLDEN.)

On the 25th March Mr. Holden amputated the thigh of a girl about twenty years of age. Seven weeks previously, while coming down stairs in a pair of high-heeled boots, she had slipped down and sustained a compound fracture of the lower third of the femur, with protrusion of the pointed end of the upper fragment through the integument immediately above the upper margin of the patella, and oozing of synovial fluid. Encouraged by the remarkable success of conservative treatment as applied to a case of compound fracture of the patella into the knee-joint some time previously under Mr. Holden's care, the house-surgeon in charge put up the injured limb in splints—a course which Mr. Holden approved on the occasion of his next visit. For six weeks the patient progressed so favourably that recovery with ankylosis of the joint was confidently expected; but a few days before the above-named date the patient had a rigor, the knee-joint became the seat of intense pain, and it soon became evident that amputation was imperatively necessary.

After the operation the articular cartilages of the knee-joint were found to have been the seat of recent acute inflammation; in places they were completely destroyed. It was also noticed that no union had taken place between the fragments of the fractured femur. Though the patient was young and healthy, Mr. Holden's prognosis was not favourable.

AMPUTATION AT THE SHOULDER-JOINT FOR MALIGNANT DISEASE.

(By Mr. SAVORY.)

The subject of this operation was a pale-looking lad of ten years. He is said to have received some time last summer a blow on the shoulder; and shortly afterwards a swelling, which had ever since increased in size, appeared on the part.

On admission, a tumour of the size and shape of half a large orange, smooth, and tense and elastic as though containing fluid, was found on the right shoulder; the superficial veins were rather unnaturally distinct, but the swelling was free from pain; there were no glandular enlargements, and the movements of the arm were quite unimpeded.

Suspecting malignant disease, Mr. Savory confirmed his diagnosis by means of an exploratory incision, and forthwith proceeded to remove the limb at the shoulder-joint. A longitudinal section through the tumour into the head and shaft of the humerus exhibited an excellent specimen of a medullary cancer, which had already invaded the cancellous structure of the subjacent bone to a depth of about half an

inch. Mr. Savory ventured to predict that within another twelvemonth, or a little more, the patient would be afflicted with a return of the disease.

ST. GEORGE'S HOSPITAL.

CASES UNDER THE CARE OF DR. JOHN OGLE.

Tumour of the Abdomen.—A highly interesting case of tumour below the right costal cartilages, in the situation of the left lobe of the liver, which attained the size of a hen's egg, and at the same time softened and became superficial. It was opened, and was found to be an abscess. The patient was a woman, aged thirty-nine years, who had only been aware of any swelling in the affected part nine days, but who three weeks previously had had an attack of pain at the pit of the stomach, with sickness. On admission, the liver appeared to be greatly enlarged, and the hard swelling in the abdomen seemed to be continuous with the liver, having a roughened and somewhat nodulated base, which appeared to be the liver itself. Speculations as to whether the swelling was due to a hydatid, or to abscess, or to carcinoma of the liver, or to deposit superficial to the liver, existed. The tumour quickly increased in size, and became fluctuating; it was opened, proving to be an abscess, containing 4 oz. of pus. No bile or shreds of liver-tissue existed in the pus removed, and no "hooklets" were found. The patient is doing well.

Case of Delirium Tremens, with Congestion of the Liver, and Spasmodic Stricture.—The patient was a footman. He had slight but decided jaundice, passed much bile and lithates in acid urine, and every now and then had spasmodic stricture (to which he had never been subject), requiring the catheter, as hot fomentations and baths gave no relief. Chloral was given with good results at bedtime; and alkalies, diuretics, and subsequently vegetable bitters, were given. No stimulants of any kind were administered until the urine and skin showed that the hepatic congestion was being removed, when a little brandy was given with his food, which at first consisted of milk and beef-tea, with light puddings, subsequently of fish, and then meat. After a time the urine became alkaline, and contained a little albumen. He has become very much thinner since his illness began, but otherwise he is now rapidly convalescing. It was found on several occasions that the temperature was high, being 102·2°, again 101·8°, a little later 100·4°, and now it is normal.

Hemiplegia on the Right Side of the Body, Face and Tongue; Memory defective; Speech affected.—The patient was a woman aged thirty-two, who had had a child five years before marriage. Dr. Ogle suspected syphilis to be the cause of the disease; but no proof could be obtained. It appeared that she had been paralysed since a fall which she had in getting out of bed six weeks before admission, after which she lost her speech for some time. She suffered greatly from pain in the head, which did not seem to yield to bromide of potassium, but which under the use of the bichloride of mercury, with iodide of potassium and bark, and blisters to the nape of the neck (one of which was dressed with mercurial ointment), has, after fluctuations, gradually given way, the last report being that it had quite gone. For some days after admission the temperature in the arm on the paralysed side was much lower than that on the other. Thus at the right elbow it was 95·4°, whilst at the left it was 95·6°; at the right hand it was 82·2°, whilst at the left it was 85·2°, there being no difference in the temperature of the axillæ. The temperature of the right knee was two degrees lower than that of the left. At the present time the two sides are much more equal in temperature, and the power in the right limb has been much regained; but speech has not improved.

Severe Case of Acute Rheumatic Fever.—This was a first attack in a patient, aged twenty-three, a brewer's man. Throughout the attack the heart remained quite free and healthy. The case was treated by diluents and opium in some form or other every three or four hours; mainly crude opium, with or without a small quantity of calomel to guard the secretions, but sometimes morphia or Dover's powder. Later on, a little brandy was given from time to time. At the end of ten days the opium was discontinued, and simple effervescing draughts, with neutral citrate of