

calculated on this basis. The pressure in any one capillary is, of course, infinitely small.

Dr. Campbell says he cannot think the organism would "self-inflict a wearing-out of the heart and arteries without any countervailing good" (when it has the means of self-adjustment of pressures). Well, we have come to think many things which at first are difficult, and this difficulty applies still more forcibly to Sir Richard Douglas Powell's vaso-motor hypothesis which may turn out, of course, to be the true one, though I "find it difficult to think so." All I will say at present is that, as a matter of clinical and anatomical experience the heart and arteries do "wear themselves out" after a period of compensatory dilatation-hypertrophy, and this is the chief matter I have urged so long against the French and German assertions that arterio-sclerosis (of the kind I now contemplate) is "a cardio-arterio-sclerosis"—"a cardio-arteriopathy," and the like—names positively misleading if the machine, as engineers say, is "self-strained." After such persistence in this clinical doctrine I am amply rewarded by the adhesion of Dr. Campbell, Sir William Broadbent, and, I think I may add, of Sir Richard Douglas Powell also. Where we may differ is now only as to the mechanism itself, and I repeat once more that my suggestion herein as to viscosity is a mere suggestion which does not amount to hypothesis, still less to "theory," as someone put it. In favour of my surmise I learnt from Dr. Bodington in his thesis for the M.D. degree of this University (Feb. 26th, 1903) that the injection of nucleo-proteid into the circulation causes a manifest thickening of the blood; in some of his experiments with these products the blood became so "viscid" that it was difficult to draw it from the vessels of the still living animal.

Dr. Campbell is evidently of opinion, as I was, that Dr. H. Oliphant Nicholson's letter contained many statements which, if true, are very important, but that they were stated without indications of proof. I wrote to Dr. Nicholson to put this criticism before him. He was so kind as to send me in answer a long and very interesting letter which if it did not contain, as it scarcely could, the proofs of his several propositions, yet proved most indisputably his competence to express an opinion and set forth a large amount of careful experiment upon which they were made.

I am, Sirs, yours faithfully,

T. CLIFFORD ALLBUTT.

St. Radegund's, Cambridge, March 24th, 1903.

PS.—I cannot close without reference to the importance of the criticism by my friend Dr. E. H. Colbeck (in THE LANCET of March 21st, p. 793) of my interpretation of angina pectoris. His paper will have my careful consideration in my Cavendish Lecture next June.

THE VIRCHOW MEMORIAL.

To the Editors of THE LANCET.

SIRS,—Allow me to inform through the medium of your columns all those who have kindly contributed to the Virchow Memorial that the list of subscriptions was closed, as intended, on Feb. 28th, and that the total after deduction of the small expenses for stationery amounts to £265 11s., contributed by 122 subscribers. A cheque for that amount has been sent, together with the list of the contributors, by the honorary treasurer, the Right Hon. the Lord Avebury, F.R.S., to the treasurer of the Berlin committee, Herrn Geheimen Kommerzienrath A. von Mendelssohn-Bartholdy. The chairman of the Berlin committee, Professor Dr. W. Waldeyer, has addressed to me a letter in which he expresses in the name of the Berlin committee his very sincere thanks to all those who in Great Britain and Ireland have contributed to the memorial. He winds up by saying that England had again shown that she knew how to honour genuine science and its representatives.

I am, Sirs, yours faithfully,

FELIX SEMON,
Honorary Secretary.

Wimpole-street, W., March 23rd, 1903.

GLASGOW AND WEST OF SCOTLAND COÖPERATION FOR TRAINED NURSES.

To the Editors of THE LANCET.

SIRS,—I enclose a copy of the eleventh annual report of the above institution, containing the new constitution and rules which were unanimously passed at a special general meeting of members held in the Religious Institution Rooms, Glasgow, on Feb. 23rd. The coöperation was started in 1892, the necessary funds

being contributed by members of the public who were anxious to provide an association of fully trained nurses with Glasgow as a centre. The expectations of the founders have been more than fully realised and now the nurses on the staff number close upon 200. In view of the rapid development it became necessary to recast the original constitution and rules. This matter has occupied the careful attention of the executive committee during the past year. With the aid of their honorary solicitor, Mr. William Brodie, the committee drew up the revised constitution and rules which were submitted to the annual meeting of the coöperation in November of last year. The confirmation of the constitution was, however, delayed in order that all the nurses on the staff might have an opportunity of more fully considering its terms. Since the annual meeting a copy of the new constitution and rules has been sent to all the nurses on the staff, as well as brought before a meeting of representative nurses, at which all the details were explained by the honorary solicitor. The nurses have without exception accepted the new constitution and many have expressed themselves as greatly indebted to the executive committee for the trouble it has taken in connexion with the matter.

Having regard to some general criticism which has been passed on the constitution and rules as now adopted, I think it right to note the following: 1. The rights of nurses who are members of the coöperation have in no way been altered by the new constitution and it is not the case, as has been asserted, that the position of the nurses has been reduced to that of servants of the coöperation. They, as formerly, obtain employment through the coöperation and are paid by those to whom they render service—namely, the public. 2. Among various usual powers has been inserted one enabling the coöperation if need be to solicit and to collect subscriptions, but the inclusion of this power does not thereby, as has been asserted, reduce the coöperation to the position of a charitable institution. As above noted the coöperation was founded by contributions which have largely enabled the executive committee not only to finance the working of the association, but also to purchase the "home" in Sardinia-terrace, which has been considerably added to since its acquisition. The premises have been refurnished and refitted for the nurses' comfort and convenience and a "holiday home" at the seaside has also been established where the nurses can recruit. It is thus obvious that through the original capital subscribed by the public the coöperation has been relieved of house-rent and the working expenses which are contributed by way of commission by the nurses have accordingly been considerably reduced. The benefits derived are enjoyed solely by the nurses, who have expressed themselves as being very grateful to the ladies and gentlemen who by service on the executive committee have contributed so largely to their welfare and comfort. In conducting the affairs of a coöperation of which the nurse members are necessarily for the greater part of the year scattered all over the country, it is essential that the members of the executive committee (which is elected annually) should be armed with wide and extensive powers. All those who have been interesting themselves in the coöperation are gratified by its steady progress and increasing efficiency and it has now become an institution conferring not only substantial benefits on the trained nurses who form its staff but also on the sick who require their services.

The standard required for admission is exceptionally high, no nurse being admitted who has not three years' continuous and systematic training in a recognised general hospital where the education of nurses is attended to and a qualifying diploma granted after examination. No monthly nurses can now join who have not also general medical and surgical training the same as the other nurses. In this respect probably the coöperation is not excelled by any similar organisation of the kind.

I am, Sirs, yours faithfully,

DAVID NEWMAN, M.D. Glasg.,
Chairman of the Executive Committee.

Glasgow, March 24th, 1903.

SUGGESTION, AUTO-SUGGESTION, AND CHRISTIAN SCIENCE.

To the Editors of THE LANCET.

SIRS,—The few scattered prosecutions of so-called Christian Scientists in this country for attempting and failing to treat disease and thus allowing the patients under

their charge to die without any attempt at medical treatment have not as yet aroused public attention owing to their scarcity. But that the movement is spreading in this country cannot be doubted.

To the public at large this so-called "science" would be of comparatively little interest were it a mere religion pure and simple. Its interest—and, I may add, its danger—lies in that it professes to be much more than a religion: it claims to hold the keys of health, to check disease, and to place the patient under treatment on the high road to health, not by drugs or any physical method of treatment, but simply by a sustained effort of the will. To us with all the elaborate mechanism of modern science at our disposal, and the painfully accumulated clinical experience of centuries at our back, this may seem the veriest charlatanism to be dismissed on *a priori* grounds as a palpable absurdity. But we find—not in this country but in the "States"—that there are over one million people bold enough to claim from their own experience benefit from this method. Their statements are a factor whose influence on public opinion cannot be ignored; and a brief account of the methods of "Christian Science" may therefore serve some useful purpose. To do this I must first describe the phenomena of "suggestion" and "auto-suggestion." Every hospital resident knows that when a patient for any reason has been treated with sleeping draughts or hypodermics of morphia for some little time he can readily be made to go to sleep by feigning to give him his usual draught, substituting any harmless placebo or giving a hypodermic of sterilised water instead of morphia. The idea of sleep is induced in his mind by the performance and he rapidly quiets down into natural slumber. This and many cognate phenomena come under the head of "natural suggestion."

An analogous but more powerful form is what is known as "hypnotic suggestion." It is not much practised in this country and need not further be referred to. "Auto-suggestion," as its name would imply, is where the idea emanates from the patient himself. He has made up his mind that certain things will happen and within limits they do. Any practitioner who has seen cholera abroad will tell you that when an epidemic starts those who are most afraid of taking it almost invariably do. The explanation, of course, is that the vibrios are already present in the intestines (just as one often finds the diphtheritic bacillus in swabs from the throats of healthy people during an epidemic of diphtheria), but the resistance of the tissues has been lowered by fear and the individual who might otherwise have escaped becomes a victim under the influence of auto-suggestion.

Bearing these two phenomena in mind the methods of the "Christian Scientist" are easily explained. To take a concrete example. A Christian Scientist gets a headache. Instead of looking for sympathy he sits down calmly and repeats a formula something like this: "I have no pain. There is no pain. I feel no pain. There is no such thing as pain. Nothing is real but mind. There is no pain." By keeping his mind fixed on this one idea he states that presently the pain is gone. Now if one comes to analyse his method it is at once seen to be one of pure "auto-suggestion." In a similar manner by "natural suggestion" one can work on the feelings and beliefs of others. Hysterical aphonia, imitative chorea, &c., can readily be treated and, in fact, are treated regularly in everyday practice by the exercise of a strong will over a weaker. The success of many a practitioner is largely due to his hopeful manner with his patients. He sets them thinking, not of how ill they are, but of how soon they will get better. And this is exactly the method of the Christian Scientist. He works by "diverting his mind from unhealthy channels and compelling it to travel in healthy ones." In the jargon of his religion he calls it "right thinking" in contra-distinction to "wrong thinking," which is the origin of all unhappiness and disease according to his view.

Backed by the glamour and mystery of a new religion it is obvious what a powerful weapon he wields against imaginary ailments and all the protean forms of hysterical and hypochondriacal fancies. But it is here the danger begins. He is not content to stop here. He claims to be able to cure all diseases by this method. But, unfortunately, the most powerful forms of suggestion will not reduce a strangulated hernia or all the thinking in the world stop the insidious course of the tubercle bacillus. As long as the Christian Scientist contents himself with treating the thousand-and-one small ailments which affect the mind rather

than the body he serves a useful purpose, for faith based on any foundation, no matter how dubious, is always powerful. But when he professes to cure diseases of which he can have no practical knowledge—diseases in which there is some distinct pathological lesion—he immediately becomes a danger to the State and a person to be avoided as one would the plague.

I am, Sirs, yours faithfully,

March 21st, 1903.

J. JOHNSTON ABRAHAM.

SHORTENING THE SACRO-UTERINE LIGAMENT IN THE TREATMENT OF PROLAPSUS UTERI.

To the Editors of THE LANCET.

SIRS,—Mr. E. Stanmore Bishop in his admirable paper on shortening the sacro-uterine ligaments in the treatment of prolapsus uteri in THE LANCET of March 14th, p. 725, has most courteously alluded to my paper read before the British Gynaecological Society upon the same subject. In theory his operation and mine are identically the same, but in practice, as he points out, they differ in one or two important points. Mr. Stanmore Bishop does not suspend the uterus at all to the abdominal wall; his objection to this is the fact that if the uterus is so attached by "ventrofixation" serious difficulties may arise in the future. Now in my opinion "ventro-fixation" is a misnomer; it should be termed "ventro-suspension," as in my experience I do not think it possible to fix the uterus absolutely to the abdominal parietes without the fundus is fastened directly to the recti muscles, but so long as it is only attached to the peritoneum no fixation will take place, as it will be found, as I have proved, that the attachments are always half an inch or more long and composed solely of peritoneal tissues which readily stretch. The importance of this attachment is, I think, that if the sacro-iliac ligaments are shortened without some parietal attachment to the fundus there is considerable risk of the uterus becoming strongly anteverted and to the patient in consequence being subject to all the inconvenience appertaining to this condition.

The *rationale* of the operation is readily understood if one considers that the uterus is a motile body suspended by the lateral ligaments and maintained in its normal antero-posterior position mainly by the sacro-uterine ligaments. Should these ligaments become weakened the uterus has a tendency to revolve backwards on its axis, the broad ligaments, thus throwing more and more strain upon their posterior attachments which, continuing to elongate, eventually drag the fundus completely round, causing retroversion. The uterus, now lying in the axis of the vagina and the supports from above being weakened and elongated, gradually becomes more and more prolapsed and if the perineal supports are weakened or perhaps non-existing it is readily seen that there is nothing to prevent the whole organ prolapsing. The only natural way of restoring the organ to its normal position is unquestionably to repair those attachments which in its normal state keep it in position and the chief of these unquestionably are the posterior attachments or those which suspend the os and cervix posteriorly and which tend to keep the uterus in the antero-posterior position; this can only be done by passing a couple or three sutures deeply into the tissues on each side of the rectum in the position of the sacro-uterine ligaments, bringing these forward so as to pass through the peritoneum and subperitoneal tissues in two or three places, and catching the cervix of the uterus; the two ends are then tied firmly. The elongated and sacculated pouch of Douglas is by a darning stitch puckered up and a firm suspensory ligament formed. In many cases colpo-perineoplasty will have to be performed, but even without this, if sacro-uterine suspension be properly performed, I am convinced that the uterus may be retained in its proper position.

I am, Sirs, yours faithfully,

FREDERIC BOWREMAN JESSETT.

Brook-street, W., March 23rd, 1903.

A NEW ILLUMINANT FOR THE FUNDUS OCULI.

To the Editors of THE LANCET.

SIRS,—The large number of red rays reflected from the fundus of the eye when examining it by the ordinary light tends to mask some of the detail; this is especially the case