of treatment that is available. Moreover, in a variety of ways it may minister indirectly to recovery; namely, by the relief of pain and sleeplessness; by the stimulation of depressed activity; by soothing over-excitement; by supplying materials of which the body is in need, such as lime, iron, or fat; by promoting elimination through the skin, bowels, or kidneys; and by efforts to obviate the tendency to death. Surely this bare enumeration is sufficient to redeem the sphere of medicinal remedies from contemptuous disregard, subordinate and adjuvant though their position may be.

Again, we use far fewer drugs than in former days. On the last revision of the *Pharmacopœia* no fewer than 188 items were omitted, and the Pharmaceutical Society urged the further omission of 82 others, which have been retained. Then, of those that remain, only a very small proportion are habitually employed by any individual practitioner, who finds it far better to know a few drugs well than a large number imperfectly. As a matter of fact, all the most important indications for effective medicinal treatment may be met by a comparatively small number of drugs; and the art which distinguishes the wise practitioner is mainly that of discovering the indication for some familiar drug, and using it at the best time and in the best way. When a great variety of medicines are used for any disease you may be quite sure that very little is known about it, or that very little can be done for it.

Again, our prescriptions are shorter and simpler in their construction than formerly, and there is a growing preference for single drugs in the place of complex galenical preparations. This is all a matter for congratulation, since it makes for greater clearness of purpose in prescribing, greater accuracy in the observation of results, and above all it implies the recognition of the fact that, while drugs have much power to do good, they have also much power to do harm; and that the risk of injury is increased by indiscriminate combinations, especially when the action of the component parts is only imperfectly understood.

At this point I cannot refrain from uttering a protest against the flood of synthetic compounds, vegetable extracts, and proprietary preparations with which we are deluged, in consequence of the ruthless enterprise of manufacturing chemists, backed up by a pseudo-scientific literature, tricked out with all the blandishments of vulgar advertisement. It is a monstrous system, which encourages empiricism of the worst sort, and strikes at the root of intelligent and rational prescription. Here and there no doubt a valuable drug or preparation may be introduced; but such a result is insignificant as compared with the vast amount of rubbish which is offered. It is easier to state the evil than to find a remedy. One can but appeal to the professional self-respect of individual practitioners to do as little as possible to encourage such a lamentable system. I have often thought it might be possible to create some authoritative organisation for the systematic investigation of current new remedies, with access to laboratories and hospitals for the purpose, and affiliated with independent workers over the country, whose business it should be to shift the wheat from the chaff to some extent, and to publish reports of their work at stated intervals, or to draw up and issue from time to time something of the nature of an authorised Extra-*Pharmacopœia*. Such an organisation might also with advantage deal with chemical analysis in relation to the composition of advertised foods, malt extracts, and proprietary articles for the information of practitioners. The idea may be only a vain dream, but the principle underlying it appears to be sound; and perhaps one day the British Medical Association may, in the intervals of its polemic activity, be able to give more attention to the matter.

Any review of modern therapeutic methods would be incomplete without at least a bare reference to the valuable remedies of organic origin which have of late been introduced to us. By extended acquaintance with bacterial products, with their varying behaviour according to the character of their environment, and with the manner in which the organism reacts to them chemically, physically, and vitally, we are gradually acquiring possession of additional powerful means of limiting or arresting their action within the body; and a new era in the treatment of microbic disease, bright with the promise of wonderful possibilities in the not distant future, is being steadily unfolded. Also, as the outcome of a better and more intimate

knowledge of normal physiological action, we have caught glimpses of the important influence exerted upon nutritional processes by internal secretions, which are being turned to striking therapeutic account, and of which Dr. Murray's treatment of myxœdema may be regarded as the first-fruits.

But the passage of time warns me that I must bring these *obiter dicta* to a close. Important and essential as are the principles to which I have referred for the establishment of our art upon rational and progressive lines, yet it must not be forgotten that the real advance of practical medicine depends no less upon the ethical principles by which our art is inspired. Our mission has a far wider range than the mastery of pathology or even the cure of disease. Standing as we do in a more intimate personal relation with the mysteries of life than those of any other calling, honoured by a more unreserved personal confidence than is extended to any other profession, constantly in touch as we are with some of the deepest experiences of existence, we are appealed to again and again as interpreters of problems which press upon those who suffer—problems the solution of which is not to be found in treatises of pathology or therapeutics, but only to be attained by a patient study of ourselves and others in the light of an all-embracing sympathy. Believe me when I say that many of the professional grievances and disabilities under which we now labour would disappear with higher ideals of our calling and its possibilities.

I make no apology for having dealt rather freely with speculative considerations, because I believe that good practice cannot be divorced from intelligent speculation without disadvantage. In this connection I may conclude by recalling a passage in one of Emerson's essays: "The Hindoos write in their sacred books—children only, and not the learned, speak of the speculative and the practical faculties as two. They are but one, for both attain the self-same end, and the place which is gained by the followers of the one is gained by the followers of the others. That man seeth who seeth that the speculative and the practical doctrines are one."

AMBIDEXTERITY.

By SIR JAMES SAWYER, M.D.LOND., F.R.C.P., F.R.S.E.,
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I DESIRE to join in recommending the general culture and adoption of ambidexterity. I have given some attention to the subject for many years. Each of our hands is capable of all those refinements, and all that precision of movement, which are usually only developed in and exercised by the right hand. Perhaps there is no occupation in which it is not an advantage to have the full use of the hands, none in which it is not an advantage to be able to use either hand with a power equal to that of its fellow.

It is very likely that Sir John Struthers's reason, as quoted by Mr. Noble Smith, for the general use of righthandedness may have some validity, namely, that the thoracic and abdominal contents on the right side of the vertical middle plane in the human body are heavier than the contents on the left side, so that "the greater weight on the right side leads to resting most on the right leg, and from the pillar of support we naturally use the right upper limb preferentially." I venture, however, to suggest that the normal position of the heart is the efficient cause, or, at least, a chief cause, of the prevalent righthandedness. In the earlier days of the human race, when "those may take who have the power, and those may keep who can," we were a fighting people, a people fighting hand to hand. In such fighting a weapon such as a stick or a sword was used. It is an advantage in so fighting to fight with a stick or with a sword which can be used by one arm and hand only; the other arm and hand being used for balance, for defensive covering, or for offensive seizing. The right hand is preferred for the wielding of the stick or sword, so that the heart may be kept away, as far as possible, from the assault of an adversary. So arising, righthandedness would thence be transmitted by imitation, and by the hereditary transmission of an acquired peculiarity. It will be found in practice that an excellent way for the acquirement of ambidexterity is in the learning of sinistral handwriting with pen and ink. When a "righthanded" man can write comfortably

with his left hand most other sinistral accomplishments will be added unto him. In our own manifold profession ambidexterity is a great equipment. In laryngoscopy, in ophthalmoscopy, in palpation, in percussion, and in examinations *per vias naturales* it is useful. Ambidexterity would prevent many occupation pareses. It would tend to a more equal use, and to an alternative and reciprocally resting use, of the two sides of the brain. It might prevent, or help in the cure of, some cases of hemiplegia. Perhaps it might prevent some cases of hemiplegia.

THE DIAGNOSIS OF DIPHTHERIA.

By H. B. DONKIN, M.D., F.R.C.P.,

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THE question of the respective rôles of the physician and pathologist in the diagnosis of diphtheria, which is so ably discussed in Dr. Andrewes's paper reported in the BRITISH MEDICAL JOURNAL of September 29th, is one of the highest practical importance, as well as of great scientific interest. In these days many educated and thoughtful laymen, whether privately interested in this and kindred matters, or, as public men, charged with the ordering of schools and other institutions, are quite as well acquainted as the average medical man with the discoveries of modern bacteriology. It is imperatively necessary, then, in the cause of rightful practice, that the real bearings of the bacteriological factor on diagnosis be clearly understood by the medical profession at large, and plainly and frankly stated, when stated at all, to the intelligent public.

To this end, as regards diphtheria at least, the well-argued paper by Dr. Andrewes above referred to appears to be of a value which cannot be overrated, and is worthy of widespread and serious notice. After giving in detail and step by step the clearest reasons for not placing absolute reliance on any of the bacteriological tests in the diagnosis of diphtheria, including even those of inoculation and control experiments with antitoxin upon animals, Dr. Andrewes practically sums up with the following dictum which was endorsed by subsequent expert speakers at the discussion: "In every case the ultimate responsibility of diagnosis must rest with the physician and not with the bacteriologist."

Now it is not to be denied that ever since the time when, partly as the result of the theories of the identity of "croup" and "diphtheria," and of the universally "diphtherial" nature of "membranous deposits," which increasingly pervaded the schools, men were led to seek more diligently, and at last to find what is believed to be the specific and causal bacillus of diphtheria, the growing and almost unopposed tendency has been for the physician to throw the ultimate responsibility of diagnosis in this disease upon the bacteriologist. This practice has now, indeed, spread so widely that it is not too much to say that the average doctor regards the exclusively bacteriological diagnosis of diphtheria as part of his scientific creed, abolishing the multiform and confessed difficulties met with along the thorny path of clinical observation, and substituting therefor a royal and simple road to a definite result. Nor is it perhaps only to a laudable desire of welcoming the new fruits of scientific research that this recent belief and practice are attributable, but also, it would seem, to that love of finality in inquiry, and that tendency to avoid difficulties and responsibility which mark the minds of many, if not most, men of all sorts.

In my experience I have come across several instances, similar to that striking one adduced by Dr. Andrewes, of more or less disastrous results arising from the custom of doctors to cast all their cares on the bacteriologists and to place implicit trust in their pronouncements. It is doubtless true, as Dr. Andrewes says, that the physician may often supply imperfect information to the bacteriologist, and misinterpret and misapply the report he receives; and, on the other hand, it is to be remembered that not every bacteriologist is so philosophic and explicit as Dr. Andrewes. Wherever the fault mainly lies, the errors arising from this misplaced faith are not to be ignored; and the conclusion that a case is not diphtheria which afterwards is proved to be so, with all its

disastrous consequences, is only more deplorable than the opposite mistake of causing vain panic and sometimes money losses of the gravest kind by giving a false alarm of diphtheria. It would be of great interest to know, for example, the extent of the injury done to the proprietor of that school, where, as Dr. Andrewes tells us, several healthy boys with healthy throats and noses were stated by several bacteriologists to be the hosts of diphtheria bacilli, or of bacilli "morphologically indistinguishable" therefrom. A school might well be ruined by such a mishap as this, which is plainly and only attributable to an ill-informed and overweening faith on the part of either schoolmaster or doctor, or both, in what to them is one of the new things in science.

Every word of Dr. Andrewes's invaluable paper might be usefully studied and weighed, not only by doctors but also by all intelligent people, especially those connected with public institutions of all kinds where human beings congregate. The remarks, also, of Dr. Klein and of Dr. T. D. Lister are worthy of close attention. I well remember the series of careful observations made by Dr. Lister not many years ago, in the wards and laboratory of the East London Hospital for Children—some of the latter ones at my request—and I can add to his remarks that he found what both he and other skilled observers pronounced to be the Klebs-Loeffler organism, and not another, in the noses of several children neither suspected of diphtheria nor subsequently its victims—noses, moreover, of which some "ran" or "snuffled" more or less, some not at all.

It is not, of course, to be doubted that from time to time and in certain cases the bacteriological factor is important in the diagnosis of diphtheria, and, among other lessons, this method of research has taught us that we have very good cause to adhere, as some of us have always adhered, to the belief that not all membranous cases of laryngitis or sore throat are diphtherial. But on carefully studying all Dr. Andrewes's remarks, and bearing in mind all the pitfalls which beset the bacteriologist in this matter, and the safeguards which are essential to his procedure, one may doubt a little whether a strictly logical criticism altogether justifies even that amount of actually practical weight which the writer of the paper seems inclined to attribute to the bacteriological factor in the diagnosis of diphtheria.

The practical teaching which the present state of knowledge on this difficult question seems to admit is apparently somewhat as follows:

1. Diagnosticians should at once regard and treat, without waiting for a bacteriological report, all cases as diphtheria, in which the clinical signs and symptoms are such as would have raised but little or no doubt in their minds as to their nature in the days before the coming of the bacillus.
2. They should also regard and treat as diphtheria all cases which, although lacking the usual clinical "stigmata," are shown by bacteriological examination to be associated with bacilli whose products kill animals and cause the characteristic lesions; albeit even here they may be in error, though on the better side.
3. The mere presence of bacilli (in the nose or elsewhere) "morphologically indistinguishable" from the pure "diphtheria bacillus," the host being healthy and inoculation results negative, may probably be ignored in practice, and so also may all negative bacteriological reports in cases where there are any clinically recognised symptoms or signs of the concrete disease. In fine, does not the diagnosis of diphtheria still rest mainly for its surest foundation on the old ground of careful clinical observation, tempered and aided in some cases, it may be, by a judicious study of the report of the bacteriologist?

THE SAN REMO HOME FOR LADIES has received ten invalid ladies during the past year. The object of the institution is to provide a temporary residence with medical care for ladies of limited means who are likely to be benefited by wintering in a dry warm climate. The inclusive charge made is 25s. a week. Applications for admission, accompanied with a certificate as to social position and means, and a medical certificate, may be sent to either of the secretaries, Mrs. Daniel, Villa Emily, San Remo; or Miss Kay Shuttleworth, 55, Aughton Street, Southport, from whom the blank forms may be obtained.