Annual Oration

ON

NEW TREATMENTS FOR OLD

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON,
MAY 8TH, 1933

BY

LORD HORDER, K.C.V.O., M.D., F.R.C.P.

PHYSICIAN-IN-ORDINARY TO H.R.H. THE PRINCE OF WALES; SENIOR
PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL

I should like to begin with the customary word of appreciation of the honour you pay me in asking me to deliver this Annual Oration—customary, and yet by no means perfunctory, because I am very sensible of the note of distinction which your choice carries with it. The Medical Society of London provides a unique *milieu* for observations which range rather widely over the field of medicine, using this word in its fullest and best sense. And that these observations are being made this evening by one whose sphere of thought and work is also wide—some may say much too wide to be useful—is perhaps not inappropriate, having regard to the fact that this society is not sectional, but universal, in its ambit. I am content with the reflection that our society in its aims, and your present Orator in his outlook upon medicine, either fall together or together stand justified. The word “pathology” has been wrested from its original and true meaning, has become stunted in its connotation; otherwise I would remind you that there is a unity in which is worth preserving, and that though much may be gained by way of progress if we view it compartmentally, there is something lost if we do not now and again make the effort to see it steadily and see it whole. And this is what the Medical Society stands for, or so I understand its purpose.

Especially do I think this observation true of therapeutics. To get a proper conception of pathology we must not separate off one organ from the rest. To be good therapeutists we must remember the harmony that exists and must be preserved between the various organs and tissues when we seek to restore a state of equilibrium which has been temporarily upset. A good doctor, though he may call himself physician, surgeon, psychologist, or immunologist, must in spirit be all of these. He must think physiologically and he must think pathologically. Having worked out carefully in his mind the indications for treatment, he must meet these indications in the best-informed and most skilful manner that he himself, together with his colleagues, can achieve. It is this thought that induces me to believe that a society like ours, which is quite unspecialized, is the right place to discuss some changed aspects in therapeutics and to consider their bearings upon the present position of medicine.

THERAPEUTICS AND TECHNIQUE

Our friend the public has no doubt about the progress made by medicine during the last few decades. Nor, with all our chafing when faced with incurable disease, have we ourselves, on serious consideration, any doubt. There are certain advances to which we can point, and they not only give us hopes for the future, but they show the way by which fresh successes may be gained. (I am not to-day including preventive medicine in my purview.) In the realm of therapeutic research the stories of insulin and of liver therapy stand out prominently as having provided us with novel methods of treatment. The dreary lives and outlook of thousands of diabetics and sufferers from pernicious anaemia have been completely changed

by these two advances. In both cases the results have been achieved by long and patient research and strict adherence to the principles of physiology and the established facts of histology and chemistry.

The application of technique to therapeutics has led to equally sound new methods. The surgeon has fused his efforts with those of the physician in more than one field; that of pulmonary tuberculosis affords a striking example: artificial pneumothorax, phrenic avulsion, and thoracoplasty have assisted greatly in securing physiological rest and healing of the diseased lung. Blood transfusion has saved many lives, and has assisted greatly in enabling us to exploit methods of treatment which would otherwise fail of their purpose. The technique of the radiotherapist has become highly efficient, both in x rays and in radium, and the overlap of his work with general medicine grows steadily. The physiotherapist, too, has brought many forms of technical help to a high pitch of usefulness. Indeed, he offers us almost an embarrassment of riches, and we are perhaps a little in danger of being cluttered up by pieces of machinery which we are tempted to use a little indiscriminately, rather as an inexperienced fireman might play with his hose and wield his axe, first here, then there, without much definite purpose, and perhaps doing harm as well as good. Only for a hose and an axe we must substitute numerous kinds of implements: ionization, diathermy, ultra-violet rays, high-frequency, the sinusoidal current, Finsen light—a whole series of physical methods. The fashionable quack tries all in turn on the same patient, hoping by trial and error to get a result before the client gets tired. Inside the profession there is more and more evidence that the man controls the method rather than the method the man. And this is what matters in all such things. So that physiotherapy may be counted upon to go much further, and is bound to exercise great influence in modern therapeutics, so long as it is guided by physiological principles. It has already changed the aspect of the treatment of many diseases not a little.

We have no difficulty in appreciating that if technique be added to therapeutics in the ways just mentioned, and in other ways, success, to be real and lasting, depends upon the subservience of the method to physical principles on the one hand and to physiological principles on the other. Abrams's box is an example of a piece of machinery (save the mark!) which offends against both of these principles: the wires do not join up, and nothing demonstrable happens to the patient. But the credulous public so loves a piece of apparatus which it believes capable of eliminating the fallible human element, whether in diagnosis or in treatment, that the business still goes on, and seems likely so to do. We see clearly, I say, that the skilled physicist, to be a therapist, must wed his physics to the patient's physiology.

WORDS AND PRINCIPLES

I want to touch on some of those more complex fields of therapeutics in which the necessity for this same alliance between the method and the principles, though it is equally essential that it be observed, is broken, and where it may not be very easy to see exactly where the divorce has taken place.

In passing, I should like to say that if we get slovenly on the point of terms and definitions, it follows that only by a happy accident can we achieve anything. The curse of Babel is not more calculated to prevent concerted action among laymen than is indifference in the use of terms calculated to hold up progress in any branch of science. Take the word “specific” for example. Until quite recently the meaning of the word was precise and entirely free from ambiguity when used in immunology. But we

have arrived at a state of confusion as regards its connotation in therapeutics—or some people have. If the result of the use of an antigen, or even a drug, in the treatment of an acute infection is sufficiently dramatic, whether the result be good or bad, the substance used is called “specific,” quite regardless of its mode of action. Certain preparations put on the market for use in acute infections of quite different nature, differing as much as influenza differs from furunculosis, are credited with containing “the specific antibody,” whatever that may mean. But this is merely a protest in passing.

When we think carefully on the question, most of our treatments, and some that are quite successful, are matters of expediency; they are not matters of right or wrong. This arises from the fact that it is always Nature that cures, and not we. The disharmony we call disease can only be adjusted by the operation of processes which are already inherent in the body: we cannot substitute new processes, we can only help and control those by which life and health are being already maintained. This basic fact is, I take it, the *raison d'être* of the preliminary studies in the medical student's curriculum. To tamper unduly with these fundamentals would inevitably lead to an extension of what is already—or so I believe—a disastrous tendency in modern therapeutics, the tendency to think that what I may call “direct action” is the best way of getting an ill person restored to health. I am not a believer in the efficacy of direct action in the political sphere, but, however this may be, I am convinced that it is doomed to ultimate failure in the sphere of therapeutics. Moreover, it is becoming more and more popular, and I think it needs to be watched and to be resisted.

LIMITATIONS OF DIRECT ACTION

There are, it is true, some diseases which call for treatment by direct action—action which is urgent, perhaps life-saving in its insistency; but for the most part these are accidents rather than disease processes. Acute poisoning calls for prompt elimination and appropriate antidotes. Cessation of breathing demands artificial respiration. A foreign body in the larynx must be extracted as soon as may be. In the “acute abdomen,” if the diagnosis favours the rupture of a hollow viscus, the peritoneal cavity must be opened forthwith. But even in the acute abdomen, if the diagnosis is clearly that of an inflammation, direct action is not necessarily indicated. Judging by the closeness of the voting at a recent discussion it would appear that after nearly forty years of familiarity with so common a disease as acute appendicitis no rule of practice carries conviction: two authorities of equal experience and equal technical ability, and both of them surgeons, may decide upon quite different lines of treatment. And it is fairly certain that the mortality incidence in the practice of both men is much the same.

WHAT'S IN A NAME?

Direct action is of course the main appeal of the quack medicine to the credulous public. The reader of the advertisement cannot withhold his confidence in a remedy whose very name suggests that his dominant symptom is its sole and its immediate objective: “Jones's back-ache pills,” “Smith's blood mixture,” “Robinson's asthma cure,” and so on. “Purple pellets for pallid persons,” in addition to the attraction of alliteration, stresses the appositeness of the remedy for the particular purpose. These things lie outside medicine. The empirics, however, do not monopolize this form of appeal; and though such names as “spasmalgia” and “phenodorm” are perhaps admissible, seeing that the main actions of these drugs may be allowed to dictate their names (“morphine” might be advanced as a precedent) and even

“regulin” may be forgiven for somewhat similar reasons, what shall we say of “arthrytin” and “anti-bacsyn” and “antimalignyn”? These names offend, not only because they put the doctor's mentality on a level with that of the ignorant layman, but because they suggest that a number of disease processes which are widely different are all of them amenable to the same chemical substance. I do not think that the doctor-turned-chemist is of help to us in these matters. I think we have trouble enough as it is to resist the blandishments of the chemist proper. Formerly the chemist was the servant of the doctor; to-day he tends to become the doctor's master. His preparations are so elegant, the troubles for which he offers them are so obviously just those for which we have long been awaiting an efficient remedy, and the presentation of his thesis is so attractive, that we succumb very easily to his dictation.

I recently asked a friend of mine engaged in a busy practice what determined his decision to try any of these new remedies with advertisements of which we are all of us daily bombarded. He said he was governed by two criteria. The first was the reputation of the firm which put the preparation on the market, and the second was the quality of the literature which introduced it, by which he meant the degree to which he was convinced by this literature. Now I believe his first criterion to be a sound one. There are at least a couple of old-established firms trading in this country whose products can not only be counted upon to be pure and accurately assayed, but who spend a large sum of money annually in useful experimental work, and maintain efficient laboratories with a distinguished personnel, designed to place their newer preparations upon a sound scientific footing before they recommend them. Of a number of other firms, and some private individuals, the same cannot be said. The tendency to rush a remedy on to the market before it has been brought under scientific control is increasing, and should be severely discouraged. The second of my friend's criteria is more difficult to assess, and it is no reflection upon a busy practitioner to suggest that he may not be familiar with the fallacies involved in a specious pamphlet. The alleged actions of a drug which call forth the eloquence of the traveller, untrained as he is in the principles of our work, do not necessarily always appeal to us. The other day I was solicited to give a trial to a new and perfect intestinal disinfectant, that consummation so devoutly to be wished by many. I was told that it rendered the faeces quite sterile. My imagination toyed with the thought of what might happen to a patient with sterile faeces, and my interviewer seemed surprised that I did not share his enthusiasm, even if I could not deny his fact.

DOSES: LARGE AND SMALL

In the matter of dosage of drugs we have in recent years tended in the direction of the mass attack. In some cases this has proved useful, but not, I think, in all. We have seen a revival in popularity of a number of old remedies, some of which, though they have never entirely dropped out of use, have come to be employed less frequently and with less confidence in their efficacy. The revival has, in some cases, been accompanied by an effort at greater systematization, and this has undoubtedly been to the good. We cannot accuse all the physicians of the last century of engaging in dilute therapeutics (*pace* our homoeopathic friends), but we have, in some well-known instances, gone far beyond them. Even in the use of salicylates in rheumatic fever our doses exceed theirs, and this though we see much less than they did of the severe forms of the disease. The prevalent use of quinine in malaria is another instance of the same tendency. Alkalis were given in peptic ulcer, but the effort now

made at "alkalinization" is relatively new, and the picture of alkalosis, occasionally seen, was probably unknown to our teachers. Iron, again, was given in chlorosis, and freely, but with the disappearance of that disease and the experience that the metal was of little service in Addisonian anaemia, iron dropped very largely out of practice, or was only employed as a tonic, and chiefly in the form of the scaly preparations. We now give iron more frequently, and in a variety of anaemias, prescribing massive doses. The metal has so low a degree of toxicity that, even when these large doses are not helpful, they do not seem to harm the patient. In streptothrix infections we use the iodides, or some other form of iodine, in much larger doses than did our predecessors, and with good results. True, there was always a school of therapists that gave iodides very freely in syphilis, though another school took the view that the same good results might be achieved by smaller doses.

Of special interest in this connexion is the use of digitalis in cardiac diseases. "Digitalization," achieved by giving large doses at frequent intervals until physiological effects are observed, has become a familiar method. It is interesting to note that this was suggested by Balfour. One result of the popularization of this intensive method seems to be that digitalis has fallen into disuse to a large extent in a number of the less dramatic forms of circulatory trouble in which it was formerly employed with benefit. The extreme position in this matter is taken up by those who teach that the only indication for digitalis is auricular fibrillation. Such a severe limitation to the use of the drug denies to many patients its helpfulness in a number of other conditions—for example, in the milder cases of the senile heart and in the circulatory disturbances associated with renal disease. No doubt the great relative infrequency of primary mitral incompetence in these days, *pari passu* with the infrequency of rheumatic valvulitis of the more acute type, denies the younger practitioner the ocular demonstration of the dramatic effect of digitalis, with relapse after relapse in such cases (showing no arrhythmia), which was formerly such a common experience. In short, the apotheosis of mitral stenosis has aroused so much interest in this form of cardiac disease that some of the other forms, especially as seen in private practice, have been, as it were, "blackened out" of the doctor's mind. And it is in these forms that smaller doses of the drug are still so effective.

THE PENDULUM OF PRACTICE

Thoroughness in treatment always makes a great appeal to me. Sceptical by nature, my first reflection when I am told that a patient is cured is that he probably is not. The dogged persistence of a disease process, once started, and whether the original irritant be microbic or not—but especially if it be microbic—is a lesson that experience alone teaches us. In particular we see this with such infecting agents as those of syphilis, tubercle, and the less virulent types of the streptococcus and coliform bacillus groups. "Remissions," yes; "quiescence," yes; but "arrest," possibly "yes," but probably "no." Anyway, better to assume "no" in the patient's interest and persevere with whatever appropriate remedies we have, long after the signs and symptoms have gone, and even after specific "reactions" have disappeared. Our fathers knew this and acted accordingly. But should it be by intensive methods from time to time, or by steady slow persistence with small doses, or by intensive methods first and by slow persistence with small doses afterwards? Even to-day this question has not been finally answered. The pendulum of practice still swings. Syphilis is, as we know, a pertinent example. The arrival of "606" was heralded by the hope of a *sterilisatio magna*. But with the reluctant relinquishing of this ideal, and the resent-

ment shown, in many patients, by certain organs, and especially the liver, to a mass attack, a less vigorous onslaught has been made, and this even though the modern equivalents of the drug, and supplemental or substitutional drugs, are much less toxic than was the original. The problem, indeed, is not the simple one that some of us still seem to think it—of a foreign foe invading the home country, wandering about the surface of the land, and capable either of being rounded up and chased back across the frontier or killed in the open by shrapnel and machine-guns. The very first symptoms of the disease indicate that the enemy is already dug in; more than that, he has fraternized with the home troops and with the civilian populace, and even with the governing elements themselves.

In syphilis, which certainly does give us a model for therapeutic exploitation—even though we may not subscribe to that quaint doctrine which holds that there is one disease, and syphilis is its name—it is interesting to note a recent tendency to return to the older method of Hutchinson, and to treat the patient by small doses of mercury over a period of two years at least. This method of using drugs known as "alteratives," of which mercury was one of the most important, was in vogue long before Hutchinson's day. The poet Crabbe has a couple of lines that clearly refer to this custom:

"Here alt'ratives, by slow degrees controul
The chronic habits of the sickly soul."

But the method of the storm troops is still the favourite with many—to make a sudden and overwhelming attack. Exactly what the human body will stand in this way, with damage it is true, though with damage which may not be lethal, is well illustrated by a patient recently under my care in St. Bartholomew's.

A healthy young Jew of 22 was admitted on April 4th. His history was that he had developed a primary sore and also showed some symptoms of a general infection three years before. He went to the venereal department of a London hospital, was found to have a positive Wassermann reaction, and was treated by arsenic and bismuth. He received in the course of three months 4.95 grams of N.A.B. and 8 c.cm. of a 20 per cent. glucose solution of bismuth. His Wassermann reaction was negative at the end of this treatment. Five months ago he presented himself again at the same hospital. His Wassermann reaction was still negative. He was given two injections of neokharsivan, and, as he felt ill, this was changed to acetylarsan, of which he received 2 c.cm. on two occasions. He was then given four injections of 0.6 gram each of sulphostab, and also four injections of 2 c.cm. each of bismuth oxychloride. He then complained of irritation and redness of the skin of his lower limbs. Two months ago, between February 10th and February 24th, he received three injections of 0.6 gram each of the same sulphur preparation and three injections of 2 c.cm. each of bismuth oxychloride. Eight days before admission the patient complained of colicky pains which doubled him up, nausea, constipation, and cramps in the legs. On admission there was an intense black line on the gums, a good deal of gingivitis, and all the front teeth were loose. Four days after admission deep jaundice appeared. My colleague Dr. Harrison demonstrated bismuth in as little as 150 c.cm. of urine, and Dr. Archer detected arsenic in 0.25 gram of hair. But the patient left hospital on April 28th apparently well.

Such thoroughness, such an implacable determination to purge the patient of his peccant humour at all costs, is reminiscent of the old story of the French dermatologist who accepted the challenge to cure the intractable skin disease—another arsenic story. It also reminds me of a candidate whose examination paper I once corrected. The question was about "anthrax (wool-sorters' disease), with special reference to its preventive treatment." "This," he said, "is very important." (He might count on full marks thus far, at all events.) "All

infected animals," he proceeded, "must be burnt or buried alive; and the wool-sorter must be boiled." And so this dangerous trade should come to an end for ever; nor would the distracted student, unless questioned upon the history of medicine, ever be subjected to this particular form of tyranny again.

SHOCK THERAPY

In the case of drugs the individual tolerance varies greatly for particular poisons, as we know: therein lies the chief risk. The trouble is, no doubt, that we know so little about the way in which drugs act. That they act indirectly, rather than directly, seems certain. This supposition is very old: witness the very word "alterative." We do not seem to have got much nearer to an explanation than had those who coined the word originally. The chief change we have made, or rather attempted, is to try and effect the alteration rapidly instead of slowly, and we are quite uncertain if this effort of ours spells an advance or no. That same power of adaptation to which I have referred is what makes "shock therapy" possible. Quite a large number of modern treatments are really of the nature of shock therapy, though they do not always carry this name. In treating patients suffering from acute infections, provided the severe jostle which we give to them by the use of chemical shock can be withstood, it is hoped we may cut short the course of their disease. Thus, I read in a brochure issued by a well-known firm of chemists that "a timely injection" of one of their preparations "will often enable an influenza patient to resume work on the third day." If this be so, to use a vulgarism, that is clearly "the stuff to give him." Unfortunately, the reliance placed upon this class of remedy is often such that nothing else is thought necessary by way of treatment, or even by way of comfort.

During the recent epidemic of influenza I was summoned one evening to see a doctor whose wife was alarmed by his condition. On arrival I found my friend collapsed. It appears that he had developed the disease the night before and had sent for a colleague in the morning. The colleague injected a dose of this very preparation (and surely in "timely fashion") which makes work possible on the third day, and assured him that he would be all right as the result of it. But finding himself distinctly worse in the afternoon, he rang up his colleague, who was out on his rounds. His partner kindly called and injected a rival remedy, likewise departing with the same hopeful assurance. In the evening he was so ill that, as I say, his wife took fright and sent for me. I rendered first aid by way of volatile stimulants and tepid sponging, and installed a nurse. The disease then seemed to run its natural course, uninterrupted by the use of large chemical molecules designed to "disperse the negative particles of the blood" or by "calcium in association with specific globulin." A grateful letter from the patient completed the incident.

I present you with this modern version of the story of the Good Samaritan without elaboration.

Safer, but much more canny, was the method adopted by another doctor who was consulted by a patient on the first day of an influenzal attack. "Yes, it is called influenza," he said, "but 'influenza' is really the result of intestinal intoxication. However, I will put you right." He reached down a dose of his own particular variety of chemical shock and injected it. He then wrote out a prescription, just as any of us more ordinary folk might do, for ammonium acetate, squill, and sal volatile, to be taken every four hours. And finally, to make assurance trebly sure, he handed over twelve homoeopathic powders, one to be swallowed hourly until the fever abated. Some of us hope to succeed in making the best of both worlds, but here was a bid to make the best of three!

"CAN NOTHING BE DONE?"

The lust for specific and single remedies which may yield quick results lays bare a paucity of resource in many of us which strikes the older practitioner as evidence either of hasty and incomplete training or of lack of experience. In the treatment of the pneumonic patient there is often much talk of serum, but very little contribution to recovery along the lines that were formerly called "expectant." Expectant measures have always been scouted by the lay friends of the patient; in these days of quickly acting remedies such things are regarded as signs of inactivity. "Then is there nothing you can do, doctor?" is, as we know, a common question. The older practitioner, faced with this query, carried on in silence, or, if time and patience allowed and a semblance of understanding in one or two of the relatives deceived him into so doing, he pointed out that, though no one of these expectant measures was of great importance in itself, the dozen or more of them, taken together, often meant the difference between life and death. To-day the doctor has to a large extent yielded wholly to the demand, and, having injected the magic dose, does little else, and so is expectant indeed.

The relative infrequency nowadays of certain diseases, and the lessened severity of others, have removed from the doctor's experience, and also from that of the nurse, very valuable material for providing schemes of treatment. Thoracic aneurysm is comparatively uncommon, so much so that when a case comes under treatment accessory measures, such as absolute recumbent rest and a special diet, find no place in the programme. The name of Tufnell may not even be known. Severe typhoid fever, which gave us so many opportunities for handling continued and high pyrexia, troublesome tympanites, diarrhoea, and rectal haemorrhage, is rarely seen to-day. When, therefore, these symptoms appear, either, as occasionally, in severe typhoid, or in other diseases, they are prone to get very scant attention. The management of high pyrexia in influenza is often of the crudest kind. The patient gets the bedclothes which his sensation of "chilliness" demands rather than those which the thermometer indicates, and the arts of cradling and sponging have been to a large extent lost. The older practitioner must, again, be struck with the general air of restlessness and bustle in our modern efforts. Hilton's *Rest and Pain* was one of his textbooks, now read but rarely. But have the principles governing, say, resolution of inflammation in the mitral cusps, the kidney, or the lung, changed? No, Nature is just as conservative as ever, and though *we* turn radical, with the best will in the world we shall not make her budge one iota. Coax her, yes; lead her, yes; educate her, yes; but bully, shove, or hector her, no. The time element cannot be eliminated, even if it can be shortened, in the processes of healing.

INCURSION OF THE "MASS-MAN"

On reflection I fear it may be thought that much of what I have been saying this evening sounds like an indictment of modern therapeutic methods in general. But I do not intend this. (To stress one's criticisms rather than one's approval is a defect of temperament.) I have referred to what can be done by the working out of therapeutic problems when the accumulated facts of animal chemistry and histology are submitted to patient thought and research. I have also referred to the great change along certain lines of treatment which technical skill in physics and in the craftsmanship of surgery have brought about. But I do feel that a word of warning is necessary against the incursion of what I may call the "mass-man"—the apostle of direct action—into medicine. I share the feeling of discontent as to the past, and I

want, as much as anybody, to—if I may use a vulgarism again—"get on with it." I do not say that the past times were better than these, but I believe that if we want to avoid the past our only way of avoiding something worse is to use the past and all its teaching for the purpose of new endeavours. I am sceptical of tendencies that dissociate themselves from known physiological principles, and therefore I am sceptical of remedies that are thrust upon us from outside, the result of ill-digested hypotheses, at which have never been submitted to proper control. Equally am I sceptical of remedies which, though they arise inside, are hurried into the therapeutic field by enthusiasts and jealously guarded against healthy criticism.

No doubt our fathers in the therapeutic field thought too much and tried too little. I am not sure that we, in our turn, have not reversed the error. We have been deluged with new facts and we clamour for still more. Though we are already dyspeptic, we want more food to bolt. We suffer from a sort of mental achylia. There seems no time to chew; and thought, which is the juice by which facts may be prepared for assimilation, has become *démodé*. Our textbooks are "synopses," our scientific meetings serve very largely only to catalogue more and more conclusions of disconnected researches. A table of figures or even a mathematical formula gives us the comfortable feeling that we are at last arriving at exactness and precision. But to produce these things is the function of the instrument and the machine rather than of the mind. They are merely the pabulum for the mind; they are not the product of the mind's synthetic, or even its analytic, faculty.

PACINGS TO AND FRO

I believe whole-heartedly in research. "Seek out Nature by observation and experiment," said the great founder of scientific medicine. But Harvey's real greatness lay not in the discovery of new facts, but in the power of his mind to dissociate and to assimilate, and thus to construct new ideas. The labours in his laboratory were essential, but those frequent pacings to and fro under the trees at Coombe were vital. I sometimes wonder if it would help us to close down the laboratories for a while, to hand over the wards to our juniors, and to get together and to try to see where we are. Perhaps we could then marshal our facts—clinical, immunological, and morbid anatomical—see where the gaps are, and begin to make more concerted efforts to fill them. Having done this we might try to dissociate and combine them by deliberation and some constructive thought.

The truth is, although science never offered us so many new facts before or so many new instruments for possible exploitation in therapeutics, we seem for the time being less capable than we were of making use of them, except, as I have said, by way of direct action. But the proper adaptation of scientific discovery to therapeutics requires the careful application of physiological principles and a knowledge of the deviations from the physiological that constitute disease. This involves indirect action, which does not fit with the spirit of the times. Just as nations have become intolerant of the past, have revolted against the lag which tradition and convention seemed to be putting upon human progress, and have decided to attack their troubles by some direct and dramatic movement, so in the struggle with disease we are exhibiting a like intolerance with the slower methods of past generations, and many of us have decided upon direct action. In both cases the decision leads to a great adventure which, if it succeeds in establishing harmony for the time being, must still and inevitably be followed by a return to principles from which there is no permanent escape. But

if the adventure fails it spells a worse disease, or death, to the body politic and to the patient alike.

There is a story told concerning the men who first conceived and drew up the constitution and working plan of the Soviet State. Whilst in doubt about the practicability of their scheme it was suggested to them that they should inquire of a certain wise old rabbi if the thing were feasible. Accordingly, they presented themselves at the cave of the recluse and, showing and explaining the scheme, they asked if it could be accomplished in Russia. The old man reserved judgement and bade them come again next day. They returned in due course, and the rabbi said to them: "Yes, this thing can be done in Russia . . . *but no one will live there.*" There are things that can be done in therapeutics which may not be worth doing. I trust I do not offend anyone by my topical references. I say what I believe, and the references seem apposite to my theme. The mass-man, in his effort to heal the troubles of the world, has become primitive. That he is Bolshevik or Fascist or Nazi is not the thing that matters. What matters is that he has cut himself adrift from culture—a fatal detachment. I think that we are seeing an analogous movement in therapeutics—its invasion by primitives, bent on seeing what can be done by direct action severed from physiological principles. To which, inevitably, we shall some day return; I trust at not too distant a date.

SOME MEDICAL ASPECTS OF BOARDING-SCHOOL LIFE*

BY

REGINALD MILLER, M.D., F.R.C.P.

SENIOR PHYSICIAN, PADDINGTON GREEN CHILDREN'S HOSPITAL;
PHYSICIAN, ST. MARY'S HOSPITAL, LONDON

Children of well-to-do parents may spend ten or more most important years at our private or public boarding schools, and often for the best results there is need for co-operation between the school authorities and the doctor. Yet members of the scholastic and medical professions seem seldom to meet to discuss matters of common interest. Perhaps this is because, as a general rule, school life of to-day goes smoothly, happily, and successfully. Certainly doctors need not, for the majority of children, regard the school years as a period of unavoidable strain and difficulty: rather they have every reason to anticipate nothing but benefit for their child patients. No one can admire more than I the charming and sensible type of child that our preparatory schools turn out to-day.

Yet there must always be a certain number of children who will fit into school life only with considerable difficulty. In them there is a possibility of success and a possibility of failure. They may not, perhaps, be very numerous; but their importance lies in the fact that they are the children who need the benefit of boarding-school life most. Such children are of various types. In some the difficulty lies in physical ill-health or delicacy, and in some the sensitive nervous system feels unduly the strain of school life. In others fears and shyness cause them to be so overlooked (as indeed they desire) that they do very little good at school. In another type difficulty arises from a devoted mother, whose stranglehold is such that neither the school nor the child has much chance to break away and make a success of things. Mention might be made of many other types of children who require, at least in their earlier terms, extra care on the part of the school and of the doctor. From a medical point of

* An address given at Broadstairs to a combined meeting of the medical and scholastic professions of Thanet, February, 1933.