The Transactions

of the

Edinburgh Obstetrical Society

VALEDICTORY ADDRESS.*

By PROFESSOR R. W. JOHNSTONE.

TWO years have passed since you did me the unforgettable honour of electing me to the office of President, and, before I hand over the reins of office to my successor, it behoves me to render some account of my stewardship.

In the first place, may I sound a personal note and thank you for all the enjoyment which the duties and privileges of my office have brought to me? In so far as the duties have been onerous, the work has been made easy for me by the thoughtful foresight and energy of the Secretaries—Dr Douglas Miller and Dr Fahmy—to whom in your name as well as in my own I should like to tender most cordial thanks.

In your name I would also offer our sincere thanks to the Treasurer for his continued careful management of our finances, and to Dr Haultain for his editorial work in connection with the Transactions. The other Members of Council have attended the Council meetings faithfully, and in the case of country members have done so at some inconvenience to themselves. I think the Society ought to be aware of the loyal service which it receives in this way from its Fellows, and it is a pleasure to thank them for it.

It is a pious and seemly custom in the Society for the President in his valedictory remarks to recall the names of those Fellows who have died during his period of office. So far as I have been able to ascertain, the total number of our losses is seven Ordinary Fellows and four Honorary Fellows. I count the late Dr Barbour as an Honorary Fellow, for we honoured ourselves in 1925 by making him such, but it was as an Ordinary Fellow that he served the Society so long and so faithfully. Dr Barbour was admitted as a Fellow in the

* Delivered 9th November 1927.

year 1879, and two years later was elected to the office of Secretary, which he held for five years. In 1892 he was appointed a Vice-President, and in 1894 he became President of the Society. Subsequently his counsel was always at the disposal of the Society, and he again took office as Vice-President in 1909. Practically all Dr Barbour's scientific work was first brought to the public notice through the Society's meetings, and few of our Fellows have done more to enrich our Transactions with work of scientific value. Students of any one generation are apt to take for granted much of the knowledge that previous generations established only by diligent labour and research. This is the case in particular with work like Dr Barbour's on the Anatomy of Labour. The mere collection of the material for his observations involved a vast deal of trouble. The subsequent work of preparing the organs by means of freezing mixtures was also a serious task, and it is all the more creditable that the actual observations were made with such painstaking accuracy and that there was never any attempt to read more into the frozen sections than the observed facts revealed. As a consequence, Dr Barbour's work passed almost immediately into the current literature of obstetrics, and has long since come to form an important and integral part of modern teaching on the subject. His well-known papers on the Anatomy of Labour were given to the Society many years before I became a Fellow, but I well remember the peculiar interest with which we heard him return to the subject in 1913, when he re-opened the controversy on the origin of the lower uterine segment and gave us a masterly criticism of Bumm and Blumreich's section, and of the claims which they based upon it. For that one night the Society returned to what he was wont to term the "ice age" of obstetrical anatomy. The pathological anatomy of the pelvis also claimed Barbour's attention, especially the kyphotic and kypho-scoliotic pelves. The mechanism of labour and various forms of dystocia likewise formed the subjects of several papers. In his later years his contributions were more gynæcological in nature, based on his experiences at the Royal Infirmary. Such, for example, were his papers on sclerosis of the uterine vessels as a cause of climacteric hæmorrhage, and on the cystic ovary, and his numerous descriptions of cases of special pathological interest.

The impression which one retains of his papers is of the

simplicity, brevity, and lucidity with which he expressed his views, the meticulous accuracy of his observations, and the true scientific spirit in which he refrained from anything like exaggerated claims regarding any point he was discussing.

The other Honorary Fellows who have died in the last two years are Sir John Williams, Professor John G. Clark of Philadelphia, and Professor Paul Zweifel of Leipzig.

The name of Sir John Williams is perhaps better known to the older generation of obstetricians than to the present, for he had retired from active professional work for a considerable number of years before his death. He was formerly obstetric physician to University College Hospital, London, and was President of the London Obstetrical Society in 1887. I quote the following tribute from his successor, Professor Herbert Spencer: "Sir John Williams and Matthews Duncan were the great teachers in the 'seventies and 'eighties, but, although Duncan was intellectually his superior, Williams had the great advantage of being an operator, and it is not too much to say that it was his success as an ovariotomist at University College Hospital that was the chief factor in obtaining for obstetricians the right to operate at the hospitals of other Schools, a right now universally recognised to the great advantage of gynæcology." Our Society elected him an Honorary Fellow in the year 1897, so that, with the single exception of Professor Martin of Berlin, he was the most senior Honorary Fellow on the list.

Professor John G. Clark of the University of Pennsylvania was elected to the Honorary Fellowship in 1925, in recognition of the eminent position in gynæcology which he had attained in America and of the world-wide appreciation of his gynæcological writings. I have long had the greatest admiration for Professor Clark's writings, which gave one the impression that he was a man of not only large experience and great skill but above all of sound judgment. This, I believe, was an absolutely accurate impression, and in addition Professor Clark's reputation amongst his American colleagues was that of a surgeon of brilliant dexterity and with almost uncanny powers of diagnosis. He was one of the earliest advocates of the radical operation for cancer of the cervix, and was likewise a pioneer in the use of radium in pelvic diseases. Gynæcology is unquestionably the poorer to-day by his premature death at the age of fifty-nine.

Professor R. W. Johnstone

Professor Paul Zweifel, who died in August of this year, was one of the great German gynæcologists of the generation that is now rapidly passing. He was appointed at the age of thirty-nine to the Chair of Midwifery and Gynæcology in the University of Leipzig, where he remained for thirty-four years until his retiral in 1921. Zweifel wrote a large and valuable text-book of midwifery and a volume on gynæcology, as well as many papers. The prevention of puerperal infection was perhaps the subject to which he devoted most attention, but there is hardly any important subject in either midwifery or gynæcology upon which at one time or another he did not write. He was elected an Honorary Fellow of this Society in 1905 in recognition of the distinguished place which he held amongst continental gynæcologists and of his contributions to literature.

Of the Ordinary Fellows who have died in the last two years, Dr James Ritchie was the one who most regularly attended our meetings. Dr Ritchie became a Fellow in 1880, Vice-President in 1894, and President in 1902. He contributed papers on the mechanism of labour, on osteomalacia, and other subjects, and exhibited from time to time specimens of special interest encountered in the course of his large general practice. Dr Ritchie was a man who was scrupulously conscientious and faithful in all he undertook, and, while his health permitted, he was a most regular attender at our meetings and took an active part in many discussions, in which the richness and width of his medical experience were of particular value.

Dr John Thomson, who died in July 1926, made his name so honoured in the sphere of children's diseases that one scarcely associates him in thought with the work of our Society. He was elected a Fellow in 1887 and made nearly a dozen contributions to our work, all of them in the domain of fœtal or infantile pathology—achondroplasia, chondrodystrophia fœtalis, congenital obliteration of the bile ducts, acute phthisis in the infant, and so forth. So far as I know, his scientific interest did not extend from the product of gestation to the processes of pregnancy or labour or to gynæcology, but even if he did not actively share our interests in these matters, yet it is a pleasure to recall a man so universally beloved and honoured, and to link his memory with our Society.

Dr Owen C. Mackness of Broughty-Ferry, Dr T. M. Callender of Sidcup, Dr Thomson of Musselburgh and Dr

Petrie Simpson of Bathgate, who have died during the last two years, were all engaged in general practice, and, while not taking any very active part in the work of the Society, they certainly adorned it by their professional life and work.

Lastly, mention must be made of Professor Harvey Littlejohn, who was a Fellow of the Society from 1890 to 1925, when he resigned. So much has recently been written and said about him by those who knew him intimately that I need hardly say anything here. His brilliant reputation was won in a field of work which is closely connected in some of its aspects with both midwifery and gynæcology, and it was always an exhilarating experience to meet him in discussion on any point of common ground. Circumstances provided Professor Littlejohn from time to time with obstetrical specimens of peculiar interest, which he was ever ready to demonstrate. Many of us owe much to his helpfulness and suggestive criticism in cases of a more or less forensic nature, and in this as well as in other more personal ways we all feel a sense of great loss in his death.

It may be within the recollection of some of you that in my introductory address twelve months ago I referred to the main lines of effort by which such a society as ours could best fulfil its functions. In looking back over the two years during which I have had the privilege of presiding at the meetings, I cannot but feel that, judged by the tests which I then applied, the work of the Society has been more than creditable. Twenty-four contributions were read to the Society by Fellows, both in Edinburgh and in other parts of the country, or by distinguished visitors from other Societies. Of these twenty-four papers, twenty dealt with obstetrical and four with gynæcological subjects. Personally I think that this marked preponderance of obstetrics is a good thing, and this proportion of five to one is a ratio which I should like to see maintained.

An analysis of the papers on obstetrics shows an agreeable catholicity of interest on the part of the Fellows, and there are comparatively few subjects of any great practical importance which have not received the attention of the Society during these years. To begin at the beginning of the obstetric cycle, we had last session the great pleasure of hearing an address by Dr Crew on the subject of the sex ratio. Dr Crew produced evidence that at the time of conception the ratio of males to

females was probably about 140 to 100, and traced the gradual fall of this preponderance of males as pregnancy advanced and the continued fall in early post-natal life. Fortunately it is not necessary for us to follow this argument to a strictly logical conclusion and contemplate the period when, as Dr Crew humorously adumbrated it, our government would be matriarchal and polygamy would be a matter of necessity!

Another contribution dealing with conditions in early pregnancy was Dr James Young's demonstration of an early human ovum. Dr Young drew attention to the possible identity of the menstrual hormone, which causes the premenstrual changes with the chorionic hormone, and it is interesting that a conclusion suggested by histological study should conform so accurately with the experimental conclusions of other researchers in the biochemical field, such as Frank, and Allen, and Doisy.

Professor Ranken Lyle of Newcastle-on-Tyne came to us in December 1925, when his paper on the "ethics of the prevention, conservation and destruction of intra-uterine life" gave rise to a lively discussion, as indeed Professor Lyle's papers usually do. He tilted at a number of commonly held views, and the force of his attack compelled us to reconsider the basis upon which some of our cherished opinions were founded.

The pathology of pregnancy scarcely received as much attention as it has done in most sessions of the last decade. This is a matter which is regrettable if, as seems probable, it indicates that our younger Fellows are not carrying out any research in this important field. As I said last year, the prosecution and encouragement of research form one of the most important of all the functions of such a Society as ours. Of necessity, such work must, for the most part, be carried out by the younger Fellows, and it is to them that we must look in the main for scientific papers based upon original research. The toxæmia of pregnancy could of course scarcely be expected to escape discussion altogether. It is too profoundly important and too terribly prevalent for that. Dr Young laid before the Society the suggestion that the causes of eclampsia and non-convulsive forms of toxæmia may be found amongst the causes of abortion, premature labour, accidental hæmorrhage and stillbirth. The connecting link was, in his opinion, damage to placental tissue. The analysis of cases whereby

he sought to demonstrate this connection is a complicated and difficult matter, but apart from the intrinsic importance of the subject, it was a pleasure and interest to the Society to find Dr Young returning in this way to his first love, and again setting out to explore grounds of research in which he has already made a high reputation.

Another important paper was presented to the Society by Dr Lambie, who discussed the relationship of diabetes with pregnancy and parturition in the light of modern research in connection with insulin. There is no doubt that Dr Lambie's paper is the most exhaustive and authoritative monograph on this important subject, and it forms a notable enrichment of our Transactions.

Dr Haultain and Dr Miller gave us interesting papers based on clinical and statistical investigations at the Royal Maternity Hospital on the value of antenatal examination and on the difficulties and complications of occipito-posterior cases respectively. Both of these papers contained much of real practical importance. The Society had particular pleasure in receiving maiden contributions from Dr Fahmy on a case of post-partum convulsions, and from Dr Lodge on an analysis of the cases of hydatidiform mole in the Maternity Hospital.

In connection with the conduct of labour, we had two important papers. The first was by Dr Haig Ferguson, in which he described the details of his well-known modification of the axis-traction forceps, an instrument which has received very laudatory notice from those who have employed it. The second was a paper by Professor Clark, in which he discussed the question of the existence of any really active principles in the pharmacopeial preparations of ergot, and proved conclusively that there were none. His paper was supplemented by Professor Barger, who has done a great amount of original research in regard to the ergot alkaloids. The Society has every reason for satisfaction in that this important practical subject was presented to us by two of the greatest authorities upon it.

During the last ten years or more it has been becoming increasingly obvious that in many cases of accidental hæmorrhage there is a toxæmic factor at work. I think it probable that in this connection we are on the verge of discoveries which will ultimately elucidate the whole subject of the etiology of the toxæmia of pregnancy. The experimental work on this subject, which was presented to us by Professor F. J. Browne, is therefore

of first-rate importance in obstetrics, and his paper is another notable addition to our Transactions. The subject of accidental hæmorrhage also received attention on its clinical side, both from Professor Browne and more particularly from Dr Cameron and Dr Hewitt of Glasgow. The claim of the two latter observers, that in cases of concealed accidental hæmorrhage the uterus is in a state of sustained and painful spasm, is alike novel and important, and doubtless more will be heard of this question and of its bearing on the treatment of the condition.

It is significant of the trend of obstetrics in recent years that the subject of Cæsarean Section has come to bulk more and more largely in our Transactions, and it is still more significant that since Cæsarean section became a relatively frequent operation, the subject of rupture of the uterus has been brought forward with increasing frequency. There is no apparent escape from the view that the risk of rupture through an old Cæsarean scar during a subsequent pregnancy or labour is likely to remain one of the most important remote risks of an operation of which the relative ease and attractiveness form a distinct stumbling-block to impartial surgical judgment. Professor Kynoch of Dundee dealt with both these subjects. In January 1926 he recorded three cases of Cæsarean section for somewhat unusual indications—namely, concealed accidental hæmorrhage, prolapse of the cord, and funnel-shaped pelvis, and in the following session he brought before us two cases of antepartum rupture of the uterus through a Cæsarean section scar. Another Fellow of the Society—Professor James Hendry —returned to the same subject in our last meeting in June, when he brought before us the history of four cases in which rupture of the uterus threatened or occurred. In one of these the rupture occurred through a previous Cæsarean section scar. Yet again Dr Farquhar Murray brought the subject of rupture and also of inversion of the uterus before us in February last, so that this subject has certainly received an unusual and, as I said, somewhat significant amount of attention.

Lastly, in connection with operative obstetrics, we had the all too rare pleasure of hearing a paper from Dr H. S. Davidson, on the question of the therapeutic induction of abortion. This is always a thorny subject, and it was a disappointment to many of us that there was little time left in which to discuss Dr Davidson's paper.

In regard to the gynæcological papers, we had the pleasure

of an address from Professor Carlton Oldfield of Leeds upon conditions which he regards as of functional origin, as, for example, incontinence of urine, backache, and hyperemesis gravidarum. The Society was not by any means prepared to go the whole way with Professor Oldfield in his views, but it was exceedingly instructive to hear his views, and the subsequent discussion was of great interest. Professor Beckwith-Whitehouse visited us last summer and gave us a masterly address on his views in regard to the nature and cause of the changes in the uterus in menstruation. Professor Whitehouse's work in this matter is one of the best pieces of gynæcological research which has been done in this country in recent years, and it was a privilege for us to have the matter expounded at first hand.

Dr Fordyce brought before us one of his favourite subjects—namely, ectopic gestation — and gave us a characteristically brilliant account of the clinical features of a case of a rather unusual nature. Lastly, Professor Watson gave us a lantern demonstration of his method of operating in cases of rectocele by defining and uniting the split edges of the fascia in the posterior vaginal wall. I am sure that I express the feelings of all of us when I hope that the rapid narrowing of the Atlantic Ocean may enable us to have the pleasure of receiving contributions from Professor Watson on many future occasions.

I think that perhaps I ought to report to you that in April last I attended the Fifth British Congress of Obstetrics and Gynæcology, of which our Society is a constituent part. The meetings, which were held at Manchester, were most successful and enjoyable, and our colleagues in the "cotton metropolis" entertained us most royally. As your President I had the honour to preside over the Congress at the first afternoon meeting, when the papers read at the morning session on the treatment of inflammatory disease of the uterine appendages were discussed. We had the pleasure of hearing the views of Dr Curtis of Chicago on gonorrhœal infections, a subject upon which he is an acknowledged master. And at another session Professor Graves of Harvard gave us a most suggestive address on the possible bearing of inadequate drainage on the etiology of cancer of the uterus as well as of other organs.

Such in brief have been the activities of our Society in these last two years, and I submit, without fear of contradiction, that

they indicate that in its 85th and 86th sessions it is a really live association. To modify a popular phrase—"born in 1840—it is still going strong"—and is every year continuing to exercise that influence for the good of the obstetrical and gynæcological branches of the profession, to which end it was established.

The Preventive Frame of Mind in Obstetrics.—And now, in the short time remaining to me of this meeting, I am offered the last privilege pertaining to my office, and by a generous tradition am given the opportunity of again addressing the Society from the Chair. By force of circumstances my thoughts in the last twelve months have been running on the great question of how we can improve the practice of midwifery and reduce the still excessive mortality associated with childbirth. Even if it may seem a trite subject to some of you, yet I make no apology for returning to it. For it is, after all, the crux of the whole science and art of obstetrics; the central problem towards the solution of which all our energies and efforts must be directed, and towards which indeed all the work of our Society is ultimately, if not always directly, aimed.

The kernel of the problem is simply that, despite the advent of Listerism, the results of midwifery practice, although unquestionably improved by the introduction of antiseptic and aseptic principles, have not, outside of well-conducted maternity hospitals, improved *pari passu* with the results obtained in surgical work, and the death-rate of some five or six mothers per 1000 live births in Scotland remains much what it was a generation ago.

So much has been written and said on this subject in recent years that the public are now aware that everything is not as it ought to be. Reproaches are levelled at us from many quarters, and a veritable cross-fire of criticism has been directed at the teaching and the practice of midwifery. The greatest reproach, however, lies in the figures just quoted, while the most helpful and constructive criticism must surely be sought within our own profession.

In his two presidential addresses to us, my predecessor, Professor Watson, dealt with certain aspects of the same problem in most admirable but somewhat detailed fashion. I shall not try to traverse again the subject which he discussed so lucidly. Rather would I confine myself to the broad outlines of the problem, in the hope that thereby we may round off our consideration of the subject.

I confess that I sometimes think we are in danger of losing sight of the real big difficulties of the situation if we constantly focus our attention on the often conflicting suggestions as to details of treatment. Most of us are engrossed in our daily work to a degree which leaves little leisure for thinking over the question in a broad way; we are too deeply amongst the trees to perceive the general outline of the wood. The pathologist, to change the metaphor, requires to use the naked eye and the low power of the microscope as well as the high power, if he is to get a correct idea of the problem he is studying. All I would attempt to-night, therefore, is to consider the broad outlines of the position and try to discern at what points our attack may most profitably be directed. Accordingly I put to you at the outset a proposition which I hope will meet with your acceptance as I pursue my argument, namely that, although improvement in many matters of detail is unquestionably required, yet the appreciation of certain general principles is the most fundamental necessity in the present phase of obstetric practice. Of these, the most profound and far-reaching is that prevention is better than cure. We require to apprehend, to practise in our work, and to inculcate in our teaching, that obstetrics should largely partake of a preventive character and is essentially an important part of preventive medicine. I think that the profession owes not a little to Dr J. S. Fairbairn for crystallising into words this point of view, towards which we were all feeling our way, for once a point of view becomes formulated in words it is much more easy to appreciate it.

Obstetrics has, I think, always suffered by being unfairly compared with the two great sister branches of our practical work, medicine and surgery, for there is really no proper basis of comparison. Medicine and surgery are in practice concerned with conditions which are wholly pathological. In so far as they deal with the preservation of the physiological they come under the heading of preventive medicine. The functions with which the science and art of obstetrics deal partake of both physiological and pathological characters. Obstetrics is thus in a somewhat equivocal position, and, as Mahomet's coffin was believed to be suspended between heaven and earth, so it lies mid-way between the heaven of the purely physiological and the lower earth of the pathological. On the earthly side we have distinguished obstetricians as, for example, Professor De Lee in America, who would have us believe that the

function of parturition is becoming more and more pathological under the influence of the increasing artificiality of modern life. Our own friend Dr C. E. Douglas had certainly one foot firmly on the earth when he propounded the suggestion that possibly there was something inherent in the condition of pregnancy which made a woman more prone to death—some diminished power of resistance to disease—call it what you will—some sacrifice which the individual woman offers to the race. On the other side you have the optimists, who regard parturition as a purely normal physiological function, regardless of the false analogy which such an expression implies. As has been pointed out again and again, parturition differs from all other physiological functions in that it is performed in the interests of the race, while all others are performed in the interests of the individual only. The truth is that the proper place of obstetrics is partly on the earth and partly in the heavens, and our business is to keep it as far as possible on the higher physiological levels. This, I maintain, can only be done by deliberately adopting and practising a preventive frame of mind.

When we come to think of it in rather more detail, the functions of the modern obstetrician are most pronouncedly bound up with preventive medicine. I submit to you that these functions may be summed up as follows:—

(1) To watch over the health of the expectant mother, and as far as may be possible of the unborn child, during the period of utero-gestation.
(2) To foresee conditions calculated to create difficulty or danger in childbirth, and to take steps either to remove them if possible or to arrange for the birth to take place in circumstances in which the best obstetric skill may be available.
(3) To conduct the delivery so that both mother and child are exposed to the minimum of risk and injury.
(4) To restore the mother to her ordinary vocation in life with health and vigour as far as possible unimpaired.
(5) To foster her capacity to nurse her child.
(6) To see to it that the mother's reproductive organs return to a healthy normal condition fit for further normal functioning.
(7) To watch over the health of the infant and thus begin the antenatal care of the succeeding generation.

Could any programme well be more preventive than this?

The problem which we are considering—the persistent maternal mortality rate—seems to me to offer three sides upon which it is susceptible to attack and to some degree of remedy. The first of these is in regard to *the methods of practice*, the second is in regard to *the conditions of practice*, and the third is in regard to *the teaching of midwifery*. To take the first line of approach—namely, the methods of practice—how does our general principle of prevention apply to it? The first part of the answer is obvious, to wit that the routine and universal practice of antenatal examination and supervision promises an immediate improvement in maternal mortality. To recall to you in detail the benefits to be obtained by antenatal care would be to take you over ground that is already familiar. But what we have to keep in view and to emphasise in our advocacy is that the benefits are not theoretical or merely possible, but absolutely certain. To avert difficulties by foresight and foreknowledge, or to prepare in advance for unavoidable difficulties, is bound in the long run to produce better results than follow from trusting to one's ability to treat unexpected complications as and when they arise. The general public requires education on this point, and I earnestly suggest that one of the duties devolving on each member of such a Society as ours is to preach this gospel of antenatal supervision amongst the public until it becomes universally understood. That the profession also needs to be educated on this point is not so generally appreciated, but it is a fact. In one sense antenatal care is nothing new, but in another sense—in the sense of the general routine exercise of such supervision—it is a new doctrine to the great majority of the present-day practitioners. It is only graduates of the last dozen years or so who have had the doctrine hammered into them as students. To all the older practitioners the teaching that such supervision is an integral part of the obstetrician's duty is new, and it is always a difficult thing to arrest the attention of the profession to new teaching except it be accompanied by some striking discovery such as, for example, insulin. I am speaking of what I know when I say that our young graduates are sometimes actually discouraged in their efforts to practise antenatal supervision by seniors who are not alive to its importance. One graduate of two or three years' standing told me recently that while assistant in a large general practice, in which he had most

of the midwifery work to do, he was told by his principal to stop the routine examination of the urines in pregnancy as "he was converting the surgery into a regular urinal"! Furthermore, in connection with this subject of antenatal supervision it must be pointed out that its methods are simple. A very little practice will produce a reasonable degree of skill in estimating the relative sizes of the head and the pelvis, and in other respects the antenatal examination is along ordinary medical lines. Another great point is that the means to carry out this principle are already to hand. Financial assistance is offered by the Government to every municipality which starts an antenatal centre. But it is not enough to establish centres. We must get the women to go to the centres. Our own experience in Edinburgh certainly encourages us to believe that, if the centres are established and well run, the patients will be forthcoming in increasing numbers. Furthermore, the practice must be adopted in private by the profession throughout the whole country. When this is done we shall be making a gallant and fruitful effort to attack our problem. At present in Scotland not more than 9 per cent. of the mothers attend the antenatal centres. I venture to think that if we could convert that 9 into 90 we should have in large measure solved our problem.

Another avenue along which the problem may be attacked on the side of the methods of practice is the improvement of intranatal care. Here our general principle of prevention again makes itself manifest in a way which would appear, if we are to judge by results, to be not fully apprehended. It is simply that in the absence of complications, a natural unassisted labour is always more favourable to both mother and child than an instrumental one. There is no shadow of doubt in my own mind that if this were held as a guiding principle in the obstetric practice of the country the maternal and fœtal mortality would be very markedly diminished. That the forceps used under proper indications is an invaluable instrument is a truism, but will anyone deny that it is employed many times where proper obstetric indications are awanting for once where its use is truly indicated? And surely such employment is really better labelled "abuse" than "use"? This is a point upon which I submit to you that the specialist is more able to pronounce an opinion than the general practitioner. Only those with experience of maternity hospital

work can fully appreciate the horrors of "the failed-forceps case," and only the gynæcologist realises how many of his hospital beds are occupied with the so-called "successful" instrumental cases of five, ten, or even twenty years ago. In this matter we can see very clearly the effect which certain discoveries had upon midwifery. The work of Simpson and of Lister conferred upon the obstetrician a much greater liberty of action than he had previously dared to exercise. Immediately thereafter the further improvements in the axis-traction forceps gave a decided impetus to the employment of that instrument, and to instrumental obstetrics generally. Doctors and patients alike found that labour could be shortened by the use of forceps, and they appreciated this apparent advantage before the less obvious and more remote disadvantages obtruded themselves upon the professional consciousness. As matters stand to-day the public, as well as the profession, have to be re-educated to the much greater safety, both immediate and remote, of a natural non-instrumental labour—always, of course, provided that real obstetrical indications for the forceps operation are absent. Until this re-education is accomplished our younger graduates will receive discouragement in this respect mainly from their patients. The young doctor who, acting up to the teaching which he has received at his medical school, gives Nature the prolonged time which she often requires to accomplish the descent and rotation of the head in an occipito-posterior position, or the moulding of the head through a slightly contracted pelvic brim, runs the risk of being most unfavourably compared by his patients and their friends with other neighbouring practitioners who are prompt to interfere even, it may be, at the cost of a stillbirth. The pendulum has swung too far in the direction of instrumental interference, and we must try to bring it back to the greater safety of the middle line.

Now, putting aside complications such as antepartum hæmorrhage, which in the present state of our knowledge must still be labelled as largely unpreventable, and also the minor complications which form the proper obstetrical indications for forceps delivery, the fact again obtrudes itself that antenatal examination enables us to divide our cases in advance into those in which labour is likely to be normal, and those in which some form of dystocia may be anticipated. That being admitted, all I am really urging is that the cases

in the first group should be *allowed to be normal*—a simple application of our preventive principle but profoundly far-reaching in its results.

This brings me to the next point. It has been shown more than once that the maternal mortality is less in the practice of competent midwives than in the hands of general practitioners. Granted that the figures adduced in support of this claim may be challenged on some detailed points, and admitting that the nurses' figures deal with cases in the main uncomplicated, yet the comparison is very striking when one considers that, so far as normal cases are concerned, the main difference between midwives and doctors is that the former cannot interfere instrumentally with the natural course of labour. Septic infection is easily the greatest cause of maternal mortality, and equally the greatest risk associated with instrumental interference, and it seems obvious that, as has been laboriously demonstrated by Geddes and others, the doctor engaged in general practice, especially in industrial areas, is in this respect a potentially greater danger to the parturient woman than a trained, competent, and properly supervised midwife whose practice does not bring her into frequent contact with virulent organisms.

Experience in some large practices and considerations such as we have been discussing suggest that no slight advantage might follow the adoption of the plan of handing over a larger proportion of normal cases to the care of carefully-chosen competent midwives. An essential condition of this would be that every woman should see a doctor at least once or more during her pregnancy, and should receive adequate antenatal examination and supervision, as well as a subsequent postnatal examination. The separation of those in whom conditions are perfectly normal throughout pregnancy, and in whom labour may be expected to be normal, from those in whom there are existing complications or conditions likely to lead to difficulty in labour, can and ought to be made only by a qualified medical practitioner. But with this proviso the plan offers certain advantages. It would avoid the ever-present temptation to which medical men and women are exposed of hurrying a delivery because of other calls upon their time, and would thereby secure a considerably larger number of normal spontaneous deliveries. In the second place it would, if our reasoning is correct, lead to a diminution in sepsis through the

diminution in instrumental interference. In the third place it would relieve the medical practitioner of a great deal of work that is often irksome and harassing, as well as physically exhausting, and would give him more time and leisure to study and to interest himself in the cases which present pathological features.

When we come to consider how best to deal with the second group of cases in which difficulty is to be anticipated, we find ourselves facing one of the complexities of any such remedial schemes. Logically and, I believe, actually, complicated cases occurring in general practice can be much better dealt with if the patient is placed either in a maternity hospital or in a nursing home where the conditions are suitable for operative interference. This brings us at once to the all-important point that an increase in the provision of maternity hospital accommodation is an urgent necessity throughout the whole country. But in passing you will note that if pressed to a logical conclusion this plan would in many cases mean that the family doctor would have almost no midwifery to do. Many doctors would be greatly relieved at such an outcome, but others who are interested in midwifery would feel aggrieved. This is one of the points which require careful consideration, but in considering it let us not lose sight of the big general principle that complicated obstetric cases are in the same category as major surgical operations, and obstetric operations are no more suited for performance in the average conditions of general practice than are such surgical operations. Where circumstances permit the family doctor to do his own surgery, then presumably they would also allow of his doing his own difficult midwifery, but where either the inclinations and experience of the doctor or the circumstances in which he practises are adverse to his undertaking surgery, then my contention is that they should be accepted as equally adverse to his undertaking difficult midwifery.

Another proposal, which has received support from Professor Munro Kerr amongst others, involves again the establishment of maternity hospitals in all large centres of population, or at least maternity departments in existing hospitals, and also the establishment of an official maternity service ramifying from those centres over the whole country. From the point of view of obstetrics alone this is merely a further and possibly a more complete development of the plan which we have been consider-

ing. The maternity service would exercise practical supervision over all maternity nurses and midwives, and the scheme would include sweeping as many as possible of cases, both normal and abnormal, into hospitals. It would involve the appointment of obstetric specialists in an increased number, who in the larger centres might well be whole-time salaried specialists, while in the smaller centres such work would naturally devolve upon doctors engaged in other practice as well. Such part-time appointments would of themselves constitute a formidable difficulty in the harmonious working of such a scheme, and, however logical, admirable, and desirable it may be, the plan would in my view lead directly to obstetrics becoming wholly a specialty. I am not at all clear in my mind that this is a desirable solution, and I should personally regard with considerable reluctance any scheme which would deprive the doctor, who has a natural interest in obstetrics, of the opportunity of midwifery practice, unless he was prepared to specialise wholly in obstetrics. Such a separation of obstetrics from the practice of medicine and surgery would, I think, tend still further to degrade the status of the family doctor in the eyes of the public, and, as Dr Douglas has so ably shown in his recent "Alexander Black Memorial Lecture," this is a very real danger. I would suggest that an adequate provision of maternity hospitals or maternity departments in cottage hospitals, where family doctors who wish to attend their own obstetric cases could do so under conditions of asepticity conducive to the safety of the patients, provides a possible and suitable compromise. And there is no doubt but that the provision of more hospital accommodation and the general encouragement of women to enter hospitals for their confinements, although in the case of small local hospitals not necessarily to place themselves in the hands of specialists, would tend to raise the standard of midwifery amongst the profession generally.

The first scheme, of encouraging the handing over of normal cases in large numbers to the midwife, with the doctor exercising a general supervision and available at need, seems practicable, always provided it is associated with regular routine antenatal and postnatal examination by the doctor. In a sense it is a reversal of the great struggle which the profession waged and won in the eighteenth century to remove midwifery practice from the control of the midwife. But the difference between the trained midwife of to-day, practising under the supervision

of the doctor and the legal control of an active Central Midwives' Board, and the ignorant, untrained, and uncontrolled handywoman of the eighteenth century, is so vast that I do not think such an apparent reversal of the evolutionary process would necessarily be any retrogression. All complicated cases would still come under the care of the medical practitioner, whether outside or inside hospital, and in this way the profession with, I am quite sure, the weight of an enlightened public opinion and the authority of the State behind it, would continue to hold complete control of the whole position.

These then seem to me to be two avenues opening up before us, and along one or other of them, perchance in some measure along both, the future practice of midwifery is, I think, bound to develop, if we are going to make any serious effort to improve conditions. I do not think that either line of advance is wholly devoid of difficulties and disadvantages, and I do not wish to appear to be advocating either to the exclusion of the other. All I want to do is to lay the matter before you in the hope that you will give earnest consideration to it. We cannot afford to stand still, nor can we afford to advance blindly. We must consider the ground carefully from every point of view, and then advance along the line which promises best.

The second side upon which the problem of maternal mortality is susceptible of improvement is in *the conditions of practice.* This is mainly a matter for legislative and administrative action, but the medical profession outside the official medical services must exercise effort to secure such action and be prepared to offer skilled and experienced judgment to mould and guide it. The public must be made to realise that for the safety of the mother a confinement demands conditions comparable only with those which it is accustomed to associate with a major surgical operation. It is an interesting fact that maternal mortality is not necessarily or always at its highest in the poorest slums. The unfortunate denizens of those areas seem to be protected by Providence by a process of immunisation through constant contact with dirt. But that does not alter the great principle involved. To my mind the best solution by far of this problem is to provide the necessary increase in maternity hospital accommodation, and then to encourage, and if need be compel, every woman in such slum areas to go into a lying-in hospital for her confinement. If experience proves that it is not enough, to adapt the words

of the parable recorded by the Good Physician, "to go out into the streets and lanes of the city and bring in the poor," then we must go farther, as the Lord in the parable did, and " send out into the highways and hedges and *compel* them to come in."

In the next place there is the economic factor as it touches the medical profession. The profession is not an organised system of philanthropy, and despite the fact that our work affords us more opportunities of helping our fellows than fall to the lot of other professions—opportunities which, one is proud to think, are usually grasped—yet we have our full share of human failings. It is futile to expect in medicine, any more than in mining, that poorly paid work will be as well done as well paid work. Midwifery in industrial-class practice is not adequately paid, and we cannot hope to raise the standard of obstetric practice very much unless the public, individually or in the form of the State, is prepared to pay for it. This is an unpalatable statement to make, and it is usually for that reason neglected. But I believe it to be a fundamental truth of great importance in this connection, and I am certain that it is an aspect of our problem that must be considered and remedied.

There are many other points on which I might touch in connection with the conditions of practice, but my time is short, and I conclude by saying that the general proposition to keep in view here is that we must welcome and not resent the co-operation of the official and administrative section of the profession in these matters. Without their help we cannot press home the attack along this line.

I pass on now, and very briefly, to *the teaching of obstetrics*, which forms the third line of attack on our problem. If the general practitioner has been criticised in the discussions which have been proceeding in more or less desultory form in the medical press upon our main topic, the teacher of obstetrics has of a truth not escaped censure. I think and hope that we have not made the mistake of confusing criticism for abuse, but have taken the censure in the right spirit and tried to apply it. Personally I have yet to meet the teacher of obstetrics who is satisfied with the present position. The main weakness, and the only one of which I propose to speak, lies in the limited opportunities available to the student for gaining practical clinical experience before he embarks on practice. The cause of this lies partly in the number of subjects which require to be

crammed into a curriculum to which economic conditions put, in general, a time limit: partly in the fact that most teaching hospitals are engaged in training nurses as well as medical students, and a difficulty arises in making adequate provision for both. The obvious solution is in the increase of the number of maternity beds available for teaching — a consummation towards which, you will observe, we come by all three lines of approach to our main problem. But until this consummation is achieved, and even afterwards, more stress should, I think, be placed upon what has been aptly described as "an obstetric atmosphere." The naturally erratic incidence of deliveries in any maternity hospital removes the clinical teaching of practical obstetrics from any very fair or helpful comparison with the teaching of clinical surgery or clinical medicine. The main theatre of clinical obstetric training must be the labour ward, supplemented by the antenatal department and the puerperal wards. To obtain the full advantage of his time of study the student ought to be free to devote his whole days, and as much as need be of his nights, to his clinical midwifery along with clinical gynæcology. He ought to reside in the Maternity Hospital, so that he may indeed "live, move, and have his being" in an obstetric atmosphere. I entirely agree with Dr Fairbairn's recent remarks at Glasgow as to the supreme educative advantage thus obtained. I am glad to say that in Edinburgh we have advanced towards this ideal as far as our present inadequate Maternity Hospital provision and our present curriculum permit. But I take this opportunity to point out that, if the great new obstetric and gynæcological department in the Royal Infirmary, to which we are all looking forward, is to prove the gain which it ought to be, ample provision for students to reside in it is a *sine qua non*. Furthermore, the curriculum must be altered. The conditions of practice at present are such that a newly fledged graduate is much more likely to be called upon to attend a complicated obstetric case than to perform a major surgical operation, and public opinion expects, although to my mind quite unreasonably, that he will be fully equal to any obstetric emergency. Yet the time allotted to the vital study of clinical midwifery is approximately only one-third of that given to clinical surgery, and is practically the same as is allotted to venereal diseases, to tuberculosis, to diseases of the eye, or of the ear, nose and throat, or even of the skin. Opportunities to alter the curriculum are few and far

between. When the next opportunity will occur I cannot forecast, but meantime we must wait like the man at the pool of Bethesda, ready to seize the chance of the troubling of the waters and press for the remedying of this source of weakness.

May I in conclusion summarise what I have been endeavouring to lay before you? My first point is that the whole position requires to be considered in broad outline and freed from questions of detail in treatment, which only tend to obscure the big general outlines of the situation. The second is the need to apprehend fully the newer doctrine of the essentially preventive nature of midwifery practice. This embraces in the first place the doctrine of antenatal examination and supervision; secondly, the supreme advantages of obtaining a natural labour wherever possible. As a corollary to this there is the urgent necessity of increasing maternity hospital accommodation for complicated cases and for women whose houses are unsuitable for even a normal delivery. In the third place the consideration of midwifery from this preventive standpoint stresses the necessity of carrying out adequate postnatal care of the mother and the linking up of the work of the obstetrician with that of the pædiatrician so that the child-life may be protected. The intimate relationship of the work of venereal clinics with maternity work in this connection needs only to be mentioned. In the next place there is an admitted need for fuller clinical teaching of medical students; while lastly I would repeat that if we are to make any real advance in regard to conditions of practice we must be prepared to welcome the assistance of the official administrative section of the profession. Without their help we shall be unable to move in these matters as we ought to do, and we must be prepared to give them the advice and guidance of our experience in the matter. If I may borrow a sporting metaphor, I would say that those of us who are engaged in the active practice of midwifery, and who are, so to speak, in the front line, must use our heads as well as our weight in the scrimmage, and heel the ball out so that the executive back line may be enabled to carry it forward to the goal towards which we are all striving.

It is now my peculiar pleasure to ask Dr Haig Ferguson to take over the responsibility of the Chair. I know that I speak for you all when I say that there is no Fellow of the Society whom it more delights us to honour. The fact that we are calling

upon him to undertake the duties of President for a second time after a lapse of fourteen years is, and is intended to be, but a reiteration of our unbounded admiration and affection for one who, both within our Society and in the wider field of the School, has done so much to maintain the dignity of our profession and specialty, and the prestige of Edinburgh as an obstetric centre.

Two years ago, when welcoming me in your name to this Chair, Dr Haig Ferguson was kind enough to say that, having known me from my youth up, he felt an almost paternal interest in the accession of one of his old pupils to the honour. I would return now the compliment which I so deeply appreciated. Personally I owe to Dr Haig Ferguson's teaching and example, as well as to his unfailing kindness, more than I can possibly say, and it is with feelings of the sincerest filial respect and affection that I invite him to take charge once again of the destinies of our Society.

Discussion.

Dr Haig Ferguson said he wished to thank the Society most cordially for the great honour they had done him in electing him President for the second time. Fifteen years ago he regarded it as a very great honour, but it was a still greater honour after all these years to know that they considered him as worthy of occupying such a distinguished post. He thanked Professor Johnstone for the very kind remarks he had made about him personally. In assuming the Presidential Chair, which he did with some diffidence and with a great feeling of humility, he felt nevertheless assured in having the loyal assistance of such able colleagues as the secretaries and other office-bearers, without whose unfailing help his duties as President would indeed be onerous. He wished to impress upon all present that he looked to each of them to do their very best for the Society. The high standard he would put before them in this respect was that which their retiring President had set during the last two years. With their co-operation he hoped the Society would continue to keep up to this high level.

He then asked Dr Fordyce to propose a vote of thanks to the retiring President for his most excellent valedictory address and for his conduct in the Chair during his term of office.

Dr Fordyce said he was sure everyone would join with him in saying that they had seldom enjoyed any valedictory address so much nor heard such a scholarly oration as had been given them by the

retiring President. A valedictory address was generally nothing more than a valedictory address—the President usually felt he had done his duty and had no more to say. Professor Johnstone had given an address on a subject which he called trite, but surely, after having heard it, they would all feel it called for no apology. It was a subject upon which much had been written and said, and one had wondered if anything new could be said on the subject, but Professor Johnstone had approached the matter in a way that made it most deeply interesting, and had avoided the many controversial topics in connection with the subject. Everyone would agree that the traditions of the Edinburgh Obstetric School in the University would be maintained and increased by Professor Johnstone's term of office, as he had many gifts; not the least of these gifts were fully demonstrated to-night by the clearness of exposition, the gift of oratory and lucid explanations, which must be of the greatest value in the teaching of his students. The Society was grateful to him for his conduct in the Chair during the past two years. During and after the War the Society had languished, but when Professor Watson's term of office began it started a new lease of life, and since Professor Johnstone had taken the Chair it had now resumed the vigour that it had in those bygone days when one used to hear those discussions on the lower uterine segment and the fierce quarrels over the separation of the placenta by Dr Berry Hart and Dr Barbour which were the life of the Society in those days. In the name of the Society he thanked Professor Johnstone for his address and for the services he had rendered to the Society during his term of office.

Dr H. S. Davidson seconded the vote of thanks to the retiring President.

Professor Johnstone thanked the Society for the very cordial way in which they had received his remarks, as well as for the kind expressions made in regard to him by Dr Fordyce, Dr Davidson, and the President. It had been a very great pleasure as well as an unforgettable honour to preside over the meetings of the Society for the past two years. He had come to the meeting with considerable trepidation, as he was afraid the subject of his address might be felt to be trite, but at the same time he felt that the subject was so all-important that he was prepared to take that risk. He was most thankful that the Society had found it of interest, and he hoped that it might prove fruitful.