undoing. Yet farther: our comparison cannot be bounded by the study of our own nearer brethren—of the men of our time and country.

Clinical phenomena are not as the chemical or physical, which can be reproduced at will, and are calculable for any latitude. We have to learn how diseases vary with the conditions of place and time, of season and soil, and even of race and temperament. For it may turn out that the races which enter even into the composition of our own nation bring each their own tincture of decay. I remember that, when I left Sir William Jenner's class in Great Ormond Street to practice in Leeds, I was struck by the singular fitness of his description of the "tubercular" subject to the slightly built oval-faced dark-eyed prehistoric race which has survived so many subsequent incursions and defeats, and still makes so large a part of the population of a district, such as West Yorkshire, which lies under the hills of Strathclyde.

Till these studies are more complete—and as yet they are scarcely begun—we cannot hope for a system of medicine, but must content ourselves with a mere *corpus prescriptionum*; and the skill of the physician must still lie rather in a "kind of felicity" than in a measured and orderly power. Towards this higher phase of our own art let us strive. Our knowledge of the physical conditions of life is increasing daily, and not only so, but within the life of this Association marvellous discoveries have been made in one vast field of inquiry by the labours of Pasteur and Lister, and their brilliant disciples. I refer to the inquiry into those vital influences which disturb the body from without. Until we can eliminate the chief morbid factors which affect us from without we cannot understand our failures from within. In his treatise on *Airs, Waters, and Places*, Hippocrates laid the foundations of the study of the external factors of life: it has been left to our own day and to the great teachers I have named to advance this research from the study of the inorganic factors to that of the organic.

Again, the natural history of acute disease has been mapped out with a degree of completeness which enables us in the continued fevers, in acute pneumonia, in local inflammations, in pulmonary and encephalic hæmorrhages, in chorea, delirium tremens, mental diseases, and so on, to approach somewhat nearer to positive prediction, or at any rate to make some distinction between the course of nature and the effects of our own interference.

Another great and curious department of knowledge has been opened out to us during the life of this Association, one which affords yet a much wider scope for discovery and application. I refer to the embryological interpretations of the phenomena of disease; these being traced either in arrested development, as in many defects and deformities of body and mind, or in retrogressions, such as leucocythæmia. The comparison of embryonic periods in the same and in different animals may be a master-key even to the diatheses themselves, as may be suggested, for instance, in the chief functional disorder of lithiasis, wherein the formation of urates in place of urea is the resumption of a state normal to inferior types. The strumous diathesis again is, it would seem, a permanent arrest of development at a stage short of the highest, and may indeed be, and commonly is, artificially attained by exposure to conditions such as deprivation of light, etc., acting in arrest of the completion of growth, as we know that they do in case of lower forms of life. The later work of our histologists is full of suggestions of this kind drawn from the study of heterogeneous growths. Finally, I may refer briefly to a very different method of research—to the numerical—which, although by no means a new principle, may be called nevertheless a product of our own half century, as beforetimes the means of collecting statistics on scales large enough to eliminate minor variations did not exist.

Many great lines of thought and observation are thus convergent upon the study of medicine, and are enlarging the foundations of the science upon which alone the successful art can be reared. What we have then to-day to proclaim is that, during the last half century we have ceased to build castles in the air, have turned more frankly and loyally to nature, and have sought our inspiration and found our reward in the study of phenomena which our forefathers despised as gross and material.

Those outer and commoner things which they regarded as finite and mortal, and at most but baser instruments to support conceptions issuing from the mind of the philosopher himself—these we find infinite and immortal—not governed by spirit, but themselves inspired—themselves the ministers of perfect law—themselves potent with all life and all thought—themselves not the counters, but the very words of the Creator. To take once more the phrase of the father of modern thought, "*Itaque hominum intellectui non plumæ addendæ sunt, sed pænumb potius et pondera*. We have learned no more to soar aloft into emptiness, but, Antæus-like, to seek fresh life in the renewed embrace of our mother earth. This is not only a new leaven in our

thought, it is a reformation of it; it is no more a commerce of mind and things, but an identity.

As did anatomy two hundred years ago, so in our time has medicine conquered her independence; for this other men have laboured, and we are entering into their labours. And although our ways be still dark and slippery, I trust that those who shall be gathered together in our hundredth *Comitia Tributa* may rejoice in a yet more glorious light, and may think gratefully of us of to-day, for in the words of a modern poet—

"The first still follows one that goes before;
The last still hears a toiling foot behind."

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

*At the Annual Meeting of the British Medical Association,
held in Worcester, 1882.*

By AUGUSTIN PRICHARD, F.R.C.S.,

Consulting Surgeon to the Bristol Royal Infirmary; President of the Section.

A RETROSPECTIVE VIEW.

My principal duty, whilst occupying this chair, will be to listen to the papers which, I am very glad to see, have been promised in good numbers, and to learn from them, and from the discussions which we are to hold upon one or two very important subjects, all the newest and best development of our art.

But I must, first of all, record my thanks to the Council of our Society for selecting me, on this interesting occasion of our jubilee meeting, to the important post which I now hold, of President of the Surgical Section, a selection no doubt suggested by the number of years I have been a member of the surgical branch of our profession, and, I may add, of this Association; for in the year in which it attained its majority, viz., 1853, I had the honour of reading the Address in Surgery.

Now, in those old times the various addresses were called, and were supposed to be, retrospective, giving accounts of the scientific progress in the previous year of the several branches of professional work; but, in consequence of the periodical publication of "half-yearly abstracts" and "retrospects," the custom was changed, and the orators chose their own subjects, upon which they could have the rare comfort of speaking in an authoritative tone and *ex cathedra*.

And on an occasion like the present, the fiftieth birthday of our old Provincial Medical Association (to call it by its original title), to resist the temptation of looking back towards our far past is quite impossible; and, if we can rescue some material of value which is in danger of premature burial, the retrospect will be profitable also. It is not my intention to give an account of surgical changes and progress in the last fifty years; such an attempt would occupy all our time to little advantage, and I am not the surgical orator of the year; but I am bound to say a few words at the beginning of our sectional work, so as practically to introduce myself in my new position to my surgical colleagues; and as at this meeting many besides myself will find themselves turning round and taking a view of our past surgical life, I shall venture to touch on one or two objects in the far distant landscape.

In the period to which I am alluding, when I began my professional work by the usual five years' apprenticeship, there were no anæsthetics, no antiseptics, no clinical thermometer, no ophthalmoscope, none of the marvellous and invaluable revelations of the microscope; even the stethoscope itself was young, for Louis was at work in Paris at his investigations into the diseases of the chest in those early days of auscultation. It was but a very few years after the passing of the Anatomy Act, and, although I never took any personal part in the proceedings, yet exciting stories in abundance were rife with reference to the adequate supply for the dissecting-room. An uncle of mine, a very promising young man, died of disease of the chest, the effects of cold caught by being locked up with a fellow-student half the night in a damp cell, in his wet clothes, having been caught whilst out on an expedition such as I refer to. These events were long ago, it is true; but we can hardly sufficiently admire the zeal, born of necessity, which took these young fellows out, after the work and amusements of the day were over, at the smallest hours of the morning, dressed as labourers, and armed with a lantern and shovel and pickaxe, to some dark church-

yard, then dig open the newly filled grave, get out the body, and drive it home in their gig before the town was astir. A late colleague of mine, who taught anatomy in Bristol under these difficulties, in what some of you may consider prehistoric times, has, before now, shown me a heavy bunch of huge keys, all ticketed, which were duplicates that unlocked all the churchyards of Bristol and its neighbourhood. Some few of the stories connected with these events have been published from time to time, in Sir Astley Cooper's life, for example; but there are members of our profession still living who shared in these dangers and difficulties, and it would be well worth while if someone would collect some authentic accounts of these doings before the whole generation passes away, and before they come to be considered an incredible and impossible part of our professional history; and to make this suggestion is one of my reasons for touching on the subject.

In those old days we had to bleed, cup, and draw teeth, and to make setons and issues as part of our daily work. It is possible that some of my hearers may never have bled a patient, and scarcely know the look of a lancet-case; and to them, as to me, the wonderful change in practice between now and then must be striking, when I state that I have bled more than forty hospital patients in one day. We are too much afraid of the loss of blood now; and I still think that a man in robust health who meets with a crushed limb requiring primary amputation has a better recovery, if he have lost a moderate quantity of blood at the time of his accident. Those old vigorous bleeding customs have been rightly doomed, and can never return; but I am sure that surgeons are too quickly getting out of sight of one very valuable remedy in the treatment of such cases as injuries to the head and chest in certain stages.

I fear that fashion, and the opinion of an outside public uneducated and ignorant as to medical matters, have had an undue share in effecting this change; and why, except for this fashion, have we neglected another old and important aid in the treatment of disease of more chronic kind? I mean counter-irritation of various forms, which is sound in principle and most useful in practice. We are now taught to look with suspicion if not with dread on a drop of pus; our predecessors called it laudable; and in my time numerous and ingenious were the devices to produce a suppurating surface. I have no wish to defend the treatment such as I saw formerly, when Dieffenbach and Jüngken at Berlin, and Velpeau and Roux at Paris, after an amputation, would fill the stump between the flaps of skin with dry charpie, before bringing them together with bandages, to ensure a good suppurating surface. The mortality after these amputations was a sufficient warning against the plan; but for chronic joint-disease, for chronic eye-disease of various forms, especially the chronic inflammations of the cornea, for chronic inflammation of the middle ear, and, I believe, for a very much larger number of chronic internal maladies in the domain of the physician, a seton or issue, or some other discreet mode of counter-irritation, is of the greatest service, and not nearly often enough used.

And as time goes on, new operations and new remedies are brought forward and established for a while, and old ones that have fallen into disuse are resuscitated and started afresh, and rightly there ought always to be the survival of the fittest; but this is not by any means strictly the case. Certain operations, such as amputations and herniotomy, and also other remedies which we use as the acknowledged means of saving life, are established and survive; but among those not quite so urgent, fashion, or some other equally irrational cause, not unfrequently steps in to interfere with our progress. Some such inadequate cause no doubt first started the growth of the great medical imposture, homœopathy, which has attained such a development amongst us; and although it has invaded the territory of the physician much more than ours, I nevertheless think that it has had the effect in some degree of discouraging, or diverting into a wrong channel, the search for pathological truth.

In the days before the use of anesthetics, we were without the powerful argument we now use in advising a patient to submit to an operation, viz., that it would be painless; but the difference in this respect, in the majority of cases, was not very great, and patients made up their minds to what was inevitable almost as well as they do now. Nothing brings to my mind the benefit of anesthetics to the patient more forcibly, than the remembrance of the signs of terror or almost despair in the case of double amputation for crushed limbs, when the patient saw the surgeon taking up the knife to remove the second limb; and this I have seen on more than one occasion. Under such circumstances, a very important element for the patient was the speed with which the operation was completed; I consider that rapidity in operating is almost as essential now as it was then, and that it is not sufficiently attended to. The late Mr. Liston and many others would complete an amputation in three quarters of a minute, and this with the greatest accuracy and neatness. I think that I have noticed, as far as my opportunities go, a tendency to greater deliberation and slowness of

procedure in operating; and this I hold to be a mistake, for I am convinced that the shorter the time that the patient is under the influence of an anæsthetic and in the hands of the operator, the better.

Of the operations that have been revived, one of the groups is the excision of joints; the excision of the knee-joint having been performed, as is well known, with remarkable success, by Mr. Park of Liverpool in 1803, and the discussion upon the subject as part of our programme renders my saying anything about it at present superfluous; but there is an operation which, after resuscitation, is in great danger of being buried again, and I should like to say a word against its re-interment. I allude to median lithotomy. There will always be difficult cases of stone in the bladder, which lithotripsy with all its improvements will not be able to touch, and which must be cut. The advocates of the median section, and I confess myself to be a warm one, contend for it that, whilst it is equally efficacious, it is in the adult a less dangerous proceeding than the lateral operation. I have not such frequent opportunities, as I had formerly, as one of the acting surgeons of the Bristol Royal Infirmary, of performing lithotomy; but I have done no other kind of cutting operation for stone for many years, and in any future case should certainly have recourse to it again. In the young boy, the operation is more difficult; and although the usual lateral section is very little fatal in young subjects, I think that the median has two definite advantages. There is less risk of hæmorrhage from a cut in the middle line wherever it is, and the little patient is able to hold his urine sometimes from the actual date of the operation, or the next day, but always much sooner than when the neck of the bladder has been divided laterally. In many cases they have been known to get up and run about the room in two days. In the case of the adult, the wound would not be so deep, there is little or no fear of bleeding, and the power of retaining the water in the bladder is not so completely lost. I have removed stones weighing upwards of three ounces by this method without any difficulty.

The following curious case was under my care some time ago. A very tall and powerful young man, aged 23, with a large development of the external genitals, but doomed to a life of celibacy, contrived to let a cylindrical stick of red sealing-wax slip down his urethra into the bladder; and after bearing it as long as he could, he had to seek advice. His medical friend, with much ingenuity, proposed and tried the injection of a solution of borax, with the idea of dissolving the foreign substance, but without much effect; and he came under my care. I performed the median section, but, from the depth of the perineum, my finger could only just reach within the prostate. I removed with a forceps a rounded mass of sealing-wax, having little or no trace of its original shape, covered thickly with phosphates; and several small pieces were washed out. He had no trained or other nurse to whom I could give precise directions; and, consequently, when visited in the evening, it was found that his bladder was full, for he had with much pain retained his urine all the day, having mistaken what I told him on his recovery from the anæsthetic. During his convalescence, which was complete, he passed a piece of sealing-wax through the urethra, and had an attack of orchitis. The bladder kept considerable power of retention throughout. Perhaps some of my hearers may be as ignorant as I was, before the medical man whom I met told me, that borax is a solvent of sealing-wax; and I find on experiment that it is really so.

Gentlemen, I feel that I ought not to be detaining you with my desultory remarks, put together in the short intervals of a busy time, while we have before us such an interesting programme of scientific work to get through.

Surgery claims for herself her full share of the wonderful inventions and improvements of this energetic age; and no one may foresee what wonders the next twenty years may bring forth. She is going on in nearly parallel lines with her sister, Medicine, having the same terminus to reach, viz., the relief of human suffering; and at the many points when the lines closely approximate we get the benefit of the recent therapeutical discoveries which she has made, whilst we, on the other hand, more than repay the debt by the help we are frequently called upon to give.

My old master at St. Bartholomew's, the late Sir W. Lawrence, after his first trial of Esmarch's tourniquet, said that he had certainly never expected to see the day when he could remove a patient's limb without his feeling any pain whatever, or losing a single drop of blood; but in the more immediate present, in addition to these and other wonders, we have to chronicle the bold achievements and marvellous triumphs of abdominal surgery, from which it appears that but few organs of the body are out of the reach of the surgeon's help, and that operations for the cure of maladies within the abdomen, a few years ago considered so perilous as to be unjustifiable, are now daily

done with a degree of safety and a rate of mortality more favourable than that of the ordinary capital operations not very long ago.

Wounds of the intestine, except a few rarer cases where the damage was superficial and easily reached, have hitherto been left to the tender mercies of the *vis medicatrix nature*, and a little opium. Now they are sought for and stitched up, and surgically treated like any other wound, and the responsibility of the case is transferred from nature to the surgeon. We have to record the series of operations which come under the general head of osteotomy, by which bent limbs are made symmetrical, and knock-knees straightened, and other osseous deformities of the body corrected; and we have besides ingenious improvements of all kinds in our appliances; new instruments, new ligatures, bandages, and whatever other things the surgeon requires in his daily work, far too numerous to mention.

Undoubtedly, a large share of these successful results is due to the introduction of the antiseptic treatment of wounds, which gives the operator more confidence that the wound which he makes will not, of itself, prove a source of danger to his patient; and we necessarily come to the conclusion that anaesthetics and antiseptics combined have been the chief steps by which we have reached this high point on the road to success.

During the year that now expires, since our last annual meeting, among those who have gone to their last home are one or two whose names, well known in years gone by, which I should like to mention before I sit down.

James Luke, formerly of the London Hospital, a man of high surgical note in my earlier days, twice President of the Royal College of Surgeons, of which he became a member sixty years ago, member of the Council and examiner, died at the good old age of 82. He had, of course, retired from work for a considerable time: so much so, that, probably, the younger generation of you scarcely knew his name. He was distinguished for hard and steady work as an anatomist and surgeon, and for his practical knowledge of our branch of the profession. I believe that he was the first to insist upon a small incision in the operation for strangulated hernia, instead of the older plan, which I have seen adopted, of laying open the skin, and coverings, and sac, from top to bottom, whatever the size of the rupture.

John Flint South, of St. Thomas's Hospital, another patriarch, formerly president, councillor, and examiner of the College, whose membership dated from the year 1819, had reached his eighty-fifth year. He was an accomplished surgeon of the old school, highly educated beyond the usual limits of a professional education, with strong classical and literary tastes; and he also did some good work for the advancement of the surgery of his time.

Then James Spence, the well-known distinguished surgeon, and professor of surgery in Edinburgh University, our orator when we met at Edinburgh in 1875, died at work this year, at an advanced age.

And Pirogoff of St. Petersburg, whom we all know by name, and who is recognised as one of the surgical authorities of our time, died also at an advanced age, but still at work.

Professor Busch, of the University of Bonn, who was in London last year at the meeting of the International Congress, died at the earlier age of fifty-five. He is stated to have been a favourite pupil of the famous Johann Müller, the physiologist, and the cause of his death was perforation of the appendix vermiciformis.*

Nearer home, Mr. Gore of Bath died almost at work, in his eighty-third year—a skilful provincial surgeon, of great note in our neighbourhood; and Dr. Greenhow of Newcastle, once an active member of our Association, reached the great age of ninety years. He became a member of the College of Surgeons in 1814, and was made Fellow in the first batch of Fellows created in 1843. He was a first-rate surgeon and operator.

I have not chosen these names because of the great ages they attained, but because they are some of the most distinguished of the surgeons who have been taken away during this past year; and they afford another interesting proof, were any required, that the work of the brain does not necessarily wear out the individual; and, as is the case with the learned judges and the bar, some that work the hardest live the longest.

May the time never come when we cease to hold in respect the memories of those who have passed away, after a life of hard and useful work and good service.

* Müller was transferred to Berlin University, where I had the privilege of attending his lectures on pathological anatomy. It was then currently reported among students that, while professor at Bonn, he began to practise as a physician, his first patient being a dear friend of his own, who died in spite of his efforts to save him; and the necropsy revealed, what he had not suspected—viz., perforation of the appendix vermiciformis by a cherry-stone, which so disheartened Müller that, from that time, he devoted himself entirely to the scientific part of our work.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

At the Annual Meeting of the British Medical Association,
held in Worcester, August 1882.

By ALFRED CARPENTER, M.D.,
President of the Section.

THE EARLY WORK OF THE ASSOCIATION IN PREVENTIVE MEDICINE.

GENTLEMEN,—It is a great privilege to be the President of a Section of our Association on this, the fiftieth anniversary of its foundation. On this occasion, some might think it would have been more in character, if the Public Health Section had been presided over by some distinguished *savant* who had himself advanced the study of preventive medicine by his own immediate work in the line of original research. There is, however, a fitness of things in the fact which is probably at this moment in your minds, that one who is neither metropolitan or provincial, and whose sanitary work has been mainly observational and executive, should occupy the position of President in this Section on this anniversary. The Provincial Medical Association of 1832 has now become cosmopolitan as well as British; its ramifications are co-extensive with the empire; and its members are found in all parts of the world. A large portion of this rapid growth has come to pass because its foundation was intimately associated with inquiry into the causation and prevention of disease, and the application of the principles which regulate the health of the general public. When our founder put forth his programme, there was no general Association for the furtherance of those objects, which to my mind have revolutionised the system of medicine. The prospectus which he published in 1832 put forth as a *raison d'être* "The investigation of the modifications of endemic and epidemic diseases in different situations, so as to trace their connection with peculiarities of soil and climate or with localities, habits, and occupations of the people."

I claim the object which is stated in this paragraph in his prospectus as the principal lever by which the success of his movement has been achieved. The whole of the five points contained in his syllabus could only be obtained by a combination of persons, and the mutual support which observers over large areas could afford; but not one equalled in importance that which is now known as the science of preventive medicine, and which is contained in two of the five points advocated by Sir Charles Hastings.

The establishment of this Association at Worcester in the year 1832 may, then, be fairly looked upon as the starting-point in a new campaign, which involved the prevention of all kinds of disease, and made that object of higher significance than the cure. True it is, that many pioneers had surveyed the confines of this comparatively unknown country, and had penetrated sufficiently deep into its recesses to be able to make partially known the wonders which a study of its natural history revealed; but, being a study that required combination and intercommunication at numerous places, and with many persons upon corresponding lines, to bring observation so made at many points to one focus, it required something more than the work which single individuals, however gifted, could effect. The Provincial Medical Association was just the organisation which was required for that purpose, and which, though faulty in many things, did very much to effect the object sought for.

Let us look for a moment at the substance of our founder's syllabus, and the five points upon which it is based. In the first place, it is obvious that the best means to be used for the cure of disease will be the outcome of individual experience, and that object stands first in the programme. But it is properly and immediately followed by the second and third, which together make up a large part of the questions involved in a consideration of "Public Health", and which are collective rather than individual.

As regards the remaining points, it is true that the trying circumstances which often arise in courts of justice are better borne, when we are sure of the support of our professional brethren; whilst the maintenance of the honour of the profession, and harmony amongst its members, are noble objects to be attained; but these points are much more of a personal and individual character than those which