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As already announced in the JOURNAL, the second International Congress on life-saving and precautions against accidents will be held at Vienna in September (9th to 13th). The Permanent Secretary of the British Section of the Congress is Mr. Samuel Osborn, F.R.C.S., Constitutional Club, Northumberland Avenue, W.C.

THE fourth congress on the hygiene of the dwelling will be held at Antwerp this year from August 31st to September 7th. The following is the programme of subjects proposed for discussion: (1) Hygiene of the emigrant; (2) colonial hygiene; (3) hygiene of ports and ships; (4) the extension of towns. Further information may be obtained on application to the General Secretary, Hotel de Ville, Antwerp.

THE Roborat Company, 23, Cloth Fair, E.C., has recently issued a catalogue relating almost entirely to diagnostic appliances and instruments other than clinical thermometers and stethoscopes. A special feature is the number of means provided for enabling practitioners to make use themselves of methods of diagnosis for the assistance of which they are commonly dependent on the co-operation of laboratory workers.

An Address ON MEDICINE AND LIBERTY.

GIVEN AT A MEETING OF THE DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY ON JANUARY 9TH, 1913.

By WILLIAM GORDON, M.D., F.R.C.P.,
EXETER.

It is, however, certain that men who begin by losing their independence, will end by losing their energy.—Buckle, *History of Civilization in England*, vol. ii, p. 186.

I HAVE to thank this society for allowing me to discuss within its tranquil, scientific atmosphere a question vital to the future of English medicine, needing the calmest and clearest deliberation, yet now forced by circumstance into the arena of political conflict. It is unfortunate that no attempt has hitherto been made, so far as I am aware, to deal philosophically with this question, and in making the attempt I must make large claims upon your indulgence.

The demand has just been made upon English medicine, in the National Insurance Act, to part with a great measure of its independence, and, in considering this demand, there are four questions which we are bound to put to ourselves:

- I. What is it that we are asked to part with?
- II. To whom are we asked to hand it over?
- III. Why has the demand arisen? and
- IV. What must be the consequences of our acquiescence?

I. WHAT IS IT WE ARE ASKED TO PART WITH?

It is now the independence of much of our practice, soon of most of it, ultimately perhaps of all of it; and here we have to consider two points.

- (a) What is the value of independence to medicine? and
- (b) What is the present value to this country of its medical profession?

I propose to show that for the fullest expansion towards perfection of medicine, liberty is essential, and that English medicine at the present time is foremost in the world.

MEDICINE AND LIBERTY IN HISTORY.

If we look back over the history of medicine, as far as it is traceable, we shall have no difficulty in recognizing that there have been four great periods of pre-eminent progress. The first was coincident with the golden age of Greek culture and culminated in the lifetime of Hippocrates, about the second half of the fifth and the beginning of the fourth centuries before Christ. The second occurred rather late in the Renaissance, and its activities centred round Padua in the sixteenth century of our era. The third followed close on the second, reaching from the seventeenth century onwards to culminate in the nineteenth, its activities centering round England. The last, which is but the expansion of the third, began within the nineteenth century, and its activities reach throughout the civilized world.

Now if we examine these periods attentively we shall find that all of them have this salient characteristic in common, a remarkable development of intellectual and personal liberty. The first period corresponds to that wonderful epoch in which human intelligence suddenly attained to heights not since surpassed, and in which admittedly one chief cause of so great a growth was the unexampled intellectual freedom which then permeated the Hellenic world. The second period formed part of that great European revival of learning which followed the flight of Greek scholars to Italy and the invention of printing. As its activities centred around Padua, it was associated with the greatest intellectual freedom of the time, for Venice was then mistress of Padua, and in every way fostered its university, that it might worthily advance the new learning. It was under the protection of the enlightened Venetian Senate that Vesalius enjoyed

those unique opportunities for the study of anatomy which enabled him, in 1543, to publish his work on the *Structure of the Human Body*—a work that broke the medical slumber of more than a thousand years, shattered the fabric of Galenical authority, and, by founding modern anatomy, made possible the construction of a new physiology and a new medicine. The third period opened with the work of another Paduan—our own William Harvey—who, after four years' study under Fabricius, the discoverer of the valves in the veins, took his degree in 1602, and twenty-seven years later published his immortal work on the circulation of the blood. It was in post-Elizabethan England, then practically working out an ideal of popular liberty unknown elsewhere, that he completed his investigations, and that, untroubled by Government interference, there followed him the succession of illustrious medical observers who may be said to have culminated in Lister.

Significant that round sea-going, liberty-loving Greece, sea-going, liberty-loving Venice, and sea-going, liberty-loving England should have centred the achievements of these three great periods of medical history.

But the third period, extended also to countries close to England, and these illustrate the same relations between medicine and liberty. In Holland, freed at the end of the sixteenth century from Spanish tyranny, Boerhaave taught and Haller began his work. In France at a later time, freed from the oppression of the Bourbons by its revolution, Bichat published his great work on anatomy and Laënnec discovered auscultation.

The fourth period is, as I have said, but the world-wide expansion of the third, and in it may be discerned a clear relation between national liberty of thought and exceptional medical progress.

Thus, in all these periods of pre-eminent medical achievement liberty has been pre-eminent also.

To complete our survey, however, of the historical relations of medicine and liberty, we must also look at those periods of history in which freedom was restricted, and try to discover what effect this restriction of liberty produced upon the development of medicine.

After the fall of Hellenic freedom, amidst the decline of Hellenic literature and art, medicine declined also. Even the anatomical revival under the early Ptolemies at Alexandria about 300 B.C. produced no such genius as Hippocrates, although the influence of enlightened rulers seems to be reflected in the work of Hierophilus.

At Rome, to which Greek medicine extended its practice, the influence of enlightened governments, with relative freedom of thought, seems connected especially with medical advance. Asclepiades flourished in the last days of the Republic, the friend of Cicero and of Mark Antony; Celsus wrote just after the end of the Augustan period; Soranus, Ruphus, and perhaps Aretæus, adorned the golden age of Trajan and the Antonines, constituting a series which terminated in Galen. Galen forms one of the most conspicuous figures in medical history, and was contemporary with Marcus Aurelius, whom he attended; but, remarkable as he was, the spirit of Hippocrates was not his, and his fatal formalism petrified medical knowledge for many succeeding centuries. "If a man were called to fix the period in the history of the world," wrote Gibbon, "during which the condition of the human race was most happy and prosperous, he would, without hesitation, name that which elapsed from the death of Domitian to the accession of Commodus. The vast extent of the Roman Empire was governed by absolute power, under the guidance of virtue and wisdom." And of the two Antonines: "Their united reigns are possibly the only period in history in which the happiness of a great people was the sole object of government."

After Galen, medical attainment rapidly fell away, and no great name broke the long slumber of thirteen hundred years which stretched to the coming of Vesalius. The dogmatic rule of the Church, admirable as it was for its time and its peculiar task, made medical advance impossible. At the same time, in the Eastern empire, medicine was merely mechanically preserved, though it is interesting to note that Alexander of Tralles, whose work has been called a refreshing oasis in the desert of Byzantine literature, was the contemporary of Justinian.

Turning from these regions of the Eastern and Western

empires, thus become sterile, to the extraordinary outburst of Saracenic civilization, we come again upon medical work of no mean order. Rhazes, the most notable of the Arabic physicians, followed on the most splendid era of the Caliphs of Bagdad. As in Moslem Spain, Avenzoar followed on the golden age of Cordova; on the other hand, Avicenna, born nearly a century and a half later than Rhazes, and in a beginning period of decline when dogma was in the ascendant, was little but a brilliant commentator and highly endowed compiler. It seems to be a singular fact noticeable in successive ages of enlightenment that medicine takes a longer time to mature than other arts and sciences. Yet, in spite of the encouragement of princes who encouraged every form of art and science, of well-equipped hospitals, and innumerable translators of Greek medicine, Arabic medical achievement, so far as we can discover, is curiously disappointing. Anatomy was forbidden, and the rule of intellectual dogmatism in all subjects was practically supreme. Thus liberty was restricted. Only Rhazes and Avenzoar seem to have ventured, in great measure, to think and observe for themselves. Similarly, rather later, in Italy, Salerno, fostered by Frederick II, who drew his culture from the Arabs but partook of their spirit of autocracy and intolerance, produced no work of enduring value.

Coming to later times, whilst medicine was flourishing in free England, in France, under the tyranny of Louis XIV, conditions were widely different. "His age cannot boast," says Buckle, "of a single medical writer whose name is now known as having made any specific addition to our knowledge. In Paris the practice of medicine was notoriously inferior to that in the capitals of Germany, Italy, and England, whilst in the French provinces the ignorance, even of the best physicians, was scandalous."

In Spain, even so late as the end of the eighteenth century, whilst intolerance of opinion still reigned supreme, the science and practice of medicine are described as having been at the lowest ebb.

Thus the lesson of history, however tested, reads the same—that for pre-eminence in medical progress pre-eminence in liberty is essential.

MEDICINE AND LIBERTY IN OUR TIME IN ENGLAND.

Turning next to the survey of our own experience of the influence of lay control, we have a fair field of observation; for there are certain departments of medicine which can scarcely be otherwise than under some measure of lay control, yet in all of them we may observe that the tendency of progress is more and more to yield to medicine the utmost possible measure of independence.

The Army Medical Service.

In the latter part of the last century, following the medical breakdown of the Crimean war, great pains were spent on the improvement of the Army Medical Service. The old regimental system, socially popular as it was, was found unsuitable for modern requirements, since the entire subordination of a medical officer to the military commandant, however able a soldier and amiable a man he might be, was often incompatible with progress. A medical service was therefore established independent of regimental military control, and a certain amount of advantage was thereby undoubtedly gained for the army. Wanting, however, the requisite military rank and title to secure a sufficiency of authority, this service was still found defective in efficiency. In the year 1898 the public necessity for the grant of military rank and title was recognized, and these were conceded by Lord Lansdowne, whilst at the same time a most important administrative change constituted a civilian medical advisory committee to aid in controlling the new corps. How vast has been the effect of these successive relative enfranchisements every one who has watched the progress of the Army Medical Service must be well aware.

The Public Health Service.

Taking next the public health service of this country. This has long been under the rule of local and personally interested authorities possessing an undue amount of power over the tenure of office of their medical officers, and the consequence has been a serious embarrassment to the promotion of sanitary improvement. Gradually,

however, by improved terms of service, by greater powers given to the Local Government Board and its medical advisers, this branch of medicine also has been working towards fuller enfranchisement. The results on the national health have been such as cannot be mistaken. Now, moderate and far-sighted thinkers are already urging the establishment of a Ministry of Public Health, with an adequate staff of medical administrators, which, by still further freeing medical science from unintelligent control, will, it is held, still further advance the well-being of the nation.

The Medical Charities.

Turning to our medical charities, I can give an interesting personal experience extending over more than twenty years. Eighteen years ago I was on the staff of three important medical institutions. In one of these the entire staff was *ex officio* on the governing committee. Scientifically and financially this institution was, and has remained since, extremely flourishing, and has admirably maintained its position in the forefront of modern work. In the second charity only two members of a large staff represented their colleagues upon the board. It was then fairly flourishing, though definitely behind the times, and since then, through friction and short-sighted administration, it has fallen hopelessly behind. The third charity had then no representation whatever upon the weekly committee, and matters were in a truly deplorable state. The charity was financially discredited, backward scientifically, and the scene of constant unnecessary friction. A few years later the entire staff were placed upon the board. Immediately a remarkable change took place in the progress of the institution. Not only did its scientific development go forward by leaps and bounds, but, owing largely to the staff, its finances were put upon a flourishing basis; and friction absolutely ceased.

Thus what history indicates, the experience of our own time in our own country corroborates.

Foreign Experience.

But we may be told to look abroad where Government interference with medicine is producing, it is claimed by some of us, beneficial results. But is this really the case? In the first place, the experiment has not yet lasted long enough for reliable deductions to be drawn. The progress of medical decline has seldom been sudden, and its beginnings are open to question. Already there are some observations which appear to be worth making. It does not seem to me, from what I and others have seen abroad, that the average general practitioner in these Government-controlled medical professions is as capable as he is in this country. It is perfectly obvious that the sanitation is behind our own, and that the nursing is not equal to English nursing. The tables given illustrate the superior progress in the country where medicine has hitherto been freest—that is, in this country.

General Death-rate All Ages per 1,000 Living.

	1910.				1910.
England and Wales ...	13.5	London ...	...	...	13.7
German Empire (1909)...	17.2	Berlin ...	...	...	14.7
France ...	18.0	Paris ...	...	...	16.7
Austria ...	21.2	Vienna ...	...	...	16.6
Switzerland ...	15.1	Berne ...	...	...	13.2

Phthisis Death-rate per 1,000 Living.

	1910.				1910.
England and Wales ...	1.02	London ...	...	...	1.23
German Empire...	1.44	Berlin ...	...	...	1.76
France ...	1.80	Paris ...	...	...	3.66
		Vienna ...	...	...	2.61
Switzerland ...	1.61	Berne ...	...	...	1.95

Far be it from me to speak disparagingly of my foreign friends, to forget many kindnesses, many invaluable privileges and priceless instruction received at their hands. I have been filled with admiration at the teaching of these men, and gladly recognize those particulars in which they are definitely ahead of my own countrymen, but here it is a matter of immediate vital importance to English medicine to compare foreign conditions with our own, and I am certain that the foreign conditions, taken as a whole, show nothing which is in favour of a fuller Government control.

I have heard a distinguished surgeon abroad point to the miserable conditions under which he worked and say, "Whilst money is required by Government for other purposes the medical department will have to wait."

Mr. J. G. Gibbon, B.A., D.Sc., in his work on medical benefit, founded on the experience of Germany and Denmark, who has no reason to approach the subject in any other spirit than that of disinterested scientific inquiry, lays it down that "detailed control in expert matters should be exercised through the organization of the doctors themselves" (p. 126). "The work of an expert can," he says, "only be properly criticized in matters of detail by another expert"—the layman's "control will prove clumsy and ineffective."

In short, however we look at the question, wherever we turn for information, we find nothing to support a claim that undue lay interference with medicine is for its advantage. *The fullest possible liberty is, everywhere and always, clearly the accompaniment of the fullest medical efficiency.*

THE VALUE TO ENGLAND OF ITS EXISTING MEDICAL PROFESSION.

Coming now to the exact standing of English medicine at the present time—on which, indeed, I have already touched—I may briefly summarize matters thus: No branch of modern medicine since Harvey can show so splendid an array of productive genius as the English. Sydenham, Hunter, Edward Jenner, James Simpson, Lister, Spencer Wells, Horsley, Manson and Ross, Wright, Bruce bring the records continuously down to our own day. The discoveries of Horsley, Ross, Wright, and Bruce are affairs, so to speak, of yesterday. English preventive medicine is admittedly unequalled in the world. Our hospitals are superbly equipped, our teaching is admirable, and its arrangements are such as to afford the greatest possible individual training to the largest number of medical students, not only in the science and art of their calling, but in the priceless sense of responsibility and of duty to humanity, making, as I have just said, the English general practitioner the best in the world. It is only in respect of where we come in contact with undue lay control, as in our public health appointments governed by interested local bodies, in our public services where lay control is excessive, in such hospitals as do not give their staffs adequate representation on their committees, above all, in club practice, where the medical man has been placed under the control of the insufficiently educated, do we discern serious necessity for reform, reform which is admittedly in every case the grant of greater liberty for the medical officers.

To sum up, we are asked to part with the freedom of the finest branch of the medical profession in the world, a demand which is not merely novel and unjustifiable, but obviously retrograde and evil.

II. TO WHOM ARE WE ASKED TO PART WITH IT?

If this vast, intricate, highly technical, intellectual, responsible body of knowledge were to be controlled by correspondingly intellectual and responsible persons, such as would probably constitute a great, all-embracing Ministry of Medicine, we might not, perhaps, expect a greater falling off in the standard of English medicine than Greek medicine undoubtedly suffered under the successors of Alexander the Great or under the Antonines at Rome. But the proposal made is very different. What we are asked to do is so amazing that I refrain from here characterizing it as I might. We are asked to place the control of medicine in the hands of committees whose majorities are drawn from the less educated strata of the community. Bear this well in mind. It is the fundamental fact in the greatest crisis through which modern medicine has been called to pass. Financial details, details of administration, are relatively immaterial. What we are asked to do is to sell our freedom to inferior intelligences, to place knowledge under the control of ignorance. In saying this I should be sorry to hurt the feelings of those whom circumstance has denied advantages which have been given to us, of many who with equal good fortune might have proved my own intellectual betters. I am one of those who would rejoice to see equal opportunity at the outset for all. But we are dealing with things as they actually are, and the

issues at stake are so tremendous that we must face facts and state them plainly.

III. WHY IS THE DEMAND MADE OF US?

The ostensible reason is to improve the medical attendance on the poor. On this subject I venture to assert that a vast amount of malevolent nonsense has been written and spoken. As a medical consultant, with a considerable experience extending for more than twenty years, I am in a position to appraise the value of the much abused club doctor. When I recall the self-forgetful, tireless good work done by him under conditions so altogether disgraceful, not to him, but to the community at large, I am filled with admiration. Defects there have been, grave defects, but how, under the circumstances, were they to be avoided? The grant of State aid to enable the poorer classes to properly remunerate their medical men so as to enable them to devote the time they desire to their cases is altogether right. But if this had been the real reason for the proposals now put forward, there would have been no necessity for keeping the preparation of the National Insurance Bill a close secret from the medical profession—a short-sighted policy which, by excluding expert advice, ensured the measure being unworkable; for the refusal to hand to the profession advance copies of the bill when its completion was announced; for the attempt to rush it through Parliament with no adequate discussion; and now to force it upon the medical profession, by methods which I will not characterize, in spite of protests from every authoritative quarter.

The National Insurance Act, when dispassionately examined in the history of its construction, the defective details of its design, and the startling mendacity of its advocates, is clearly aimed not chiefly at the improvement of the medical treatment of the poor, which it will impair and not improve, but at the advancement of a political party and the establishment of a personal predominance.

IV. WHAT WILL BE THE CONSEQUENCES IF WE ACQUIESCE IN THESE ARRANGEMENTS?

I shall consider very briefly and carefully not what the results may be, but what they must be. Medical men are, by the Act, required to place themselves under the control of committees armed with punitive powers, chiefly composed (by a majority of three-fifths of their number) of representatives of men of less culture and training than the medical man—by men, in fact, drawn from the very group which has already proved to the hilt its utter unfitness for such duties. They will be charged with work which will occupy them too fully to permit of reasonable recreation, and leaving no time for the professional reading which is necessary to prevent their falling behind the current standard of knowledge, and will be liable to punishment in their professional capacity by a body wholly incompetent to pronounce an opinion on such matters. Under such circumstances we have to ask ourselves if an adequate supply of efficient medical men can be maintained for the national needs?

The experience of the Army Medical Service affords us a test of what is likely to happen. Twenty years ago the Army Medical Service was reasonably well paid, only moderately badly treated, was at least under the control of well-educated, cultured men, and afforded interesting opportunities of travel and a share in the distinctions of military life. Yet there was a serious shortage of candidates for it and efficiency fell off. Why? Because its conditions were officially and socially unpleasant, and the pursuit of knowledge was hindered.

But the conditions of the Army Medical Service twenty years ago were paradise to what the conditions of the "panel" will be now. These conditions will be so degrading to self-respect and pride of work that energy, professional enthusiasm, and knowledge must fall off, and the question faces us, Will educated and self-respecting men enter such a service or put their sons into it? It is unimaginable that a sufficient supply can be maintained. Already the supply has fallen to an alarming degree. In the two-year period, 1911 and 1912—the period affected by the introduction of the National Insurance Bill—the entry of medical students in the United Kingdom has been about 450 fewer than in the two-year period 1909–10. And since, in the inevitable

degradation of medicine, all its branches will share alike—for any one who enters medicine must run the risk of the "panel"; no boy beginning his hospital work, can be certain of better fortune—general practitioners, consultants, surgeons, specialists, public servants either in army, navy, or public health, medical teachers and medical investigators all must clearly degrade in efficiency together. How is it possible to think otherwise? And as medical teaching begins to suffer, the profession must obviously take a further long step down.

Whatever, therefore, may be our views with regard to the control of medicine by Government under the auspices of the highest intelligences in the community, there cannot be a moment's hesitation in condemning as highly dangerous to the national welfare the present proposals. We may, I submit, only too confidently draw the following conclusions:

CONCLUSIONS.

1. There is sound historical and contemporary evidence that the progress of medicine is intimately related with liberty of thought and action.
2. That wherever lay control exceeds what is necessary, the progress and practice of medicine are impaired.
3. That the proposals now made in the National Insurance Act are so pernicious that it is the duty of the medical profession to resist them by every legitimate means in its power.

SALVARSAN IN PERNICIOUS ANAEMIA.

BY

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EVERY ONE reading the notes of the case reported in your issue of December 14th last by Dr. Hobhouse will congratulate him on the happy result of his treatment; the case taken with those reported by Dr. Byrom Bramwell might lead one to suppose that in salvarsan we had possibly a specific in pernicious anaemia; that such, however, is not the case is unfortunately borne out by the total failure of this drug in the following instance, which is still under my care in the Sussex County Hospital. Why in one case the drug should bring about an apparent, if temporary, cure, and in another totally fail to produce any improvement remains for the future to elucidate.

C. H., aged 61, stated that he had not been fit to work for two years; that he had had indigestion and jaundice, had lost weight considerably, and had vomiting and diarrhoea, headache and drowsiness. His skin was bronzed on face and hands, but there was no pigmentation of mucous surfaces, nor around the nipples. The heart and lungs were normal.

He was at first thought to be the subject of Addison's disease, but a blood examination negatived this diagnosis, and showed the condition to be pernicious anaemia. The temperature was never as high as 100° F., but invariably at night ranged between 99° and 100°; on the night following the first injection of salvarsan it was somewhat higher, but ever afterwards distinctly lower, never reaching above 99°. He was admitted on October 3rd, 1912, and the following are the blood counts:

Date.	Red Cells.	White Cells.	Haemoglobin.	Colour Index.
October 6th	1,184,000	3,050	40	1.6
October 11th	1,108,000	3,250	45	2
October 22nd	1,248,000	4,750	50	2.08
October 28th	1,332,000	4,350	35	1.4
November 5th	1,016,000	2,850	35	—
November 15th	1,088,000	2,800	40	1.9
November 27th	1,344,000	—	35	1.3
December 9th	1,152,000	4,800	35	1.7
December 18th	1,272,000	3,150	40	1.6

The first dose of 0.3 gram of salvarsan was given intramuscularly on October 13th, after which there was a