in both of these cases were evidently developed from hypertrophied villi, which, in my opinion, cause these bodies most frequently. Those caused by trauma and separation necrosis, according to some authors, must be most rare. In fact, it is my opinion that these are more ingenious theories than demonstrated actualities.

WHAT SHOULD BE THE PHYSICIAN'S POSITION IN THE BODY POLITIC?*

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Each man, in his time, plays many parts, and the parts which should be played by our profession may well occupy us for a little while.

The logical relation of medicine to sociology has very naturally created some peculiar types of fame for physicians. Oliver Wolcott, a signer of the Declaration of Independence, who led in the foundation of medical societies and journals, is better known as a financier. Benjamin Rush, an alienist, clinician, hygienist and hospital reformer, incurred more enmity by his political conduct than he won fame by his medical science and patriotism; he was a signer of the Declaration of Independence, yet, through criticisms of the "little-great" Colonial nobodies of New England, Virginia and Pennsylvania, he created so much offense that the animosity of their descendants still pursues him, so that as yet the National Capitol has not his monument.

The quaintest instances of extra medical fame of physicians are found in Guillotin and Gatling, the inventors of the guillotine and of the Gatling gun.

It is difficult to say whether Souberbeille owes fame to being a regicide or to his genitourinary surgery in the domain of bladder calculi. He combated the crushing of calculi with as much vigor as he opposed the Bourbons; he survived the French Revolution to take part in the movement that placed Louis Philippe on the throne in 1830 as Citizen King. While Souberbeille voted for the death of Marie Antionette, he insured her better treatment during imprisonment.

It is an open question whether the fame of Erasmus Darwin, the grandfather of Charles, rests more on his medical treatise, *Zoonomia*, once so great a favorite in the United States, or on his poetry, still extensively quoted. Keats, who was better known as a poet than a physician, unlike Darwin, never actively engaged in practice. Many physicians who have been as eminent in other fields as in medicine might be mentioned, as, for instance, Huxley, Virchow, Weir Mitchell, Hammond and, not to be negligent, our own Bullard.

THE PHYSICIAN IN PUBLIC LIFE.

We have found that knowledge of medicine adds to the efficiency of those possessing it. That it is compatible with many things else—law, preaching, literature, painting, poetry, natural history, exploration, astronomy, invention, both in the arts of war and peace, and adds dignity, honor and usefulness to a man in any profession. But a physician who knows nothing and does nothing but his professional work, is ordinarily a poor physician, and is more likely to be at outs with the whole community. Narrowness of interest creates narrowness of mind, and no vocation needs broader-minded grasp than medicine.

Every physician should have some hobby or recreative

employment or study, outside of the mere lucrative side of his profession. Every practitioner of medicine should do more or less politics, and I use politics in its broad sense, that is, to augment the strength and resources of a nation or state and to protect its citizens in their rights and to preserve and improve their laws. In this sense the physician may do much politics without being in any sense a party politician, for there is a positive and vital relationship between medicine and the scientific principles underlying social conditions and phenomena. Whenever medicine has touched politics, politics has been bettered, but whenever corrupt politics has touched medicine, medicine has been smirched.

The relation of social conditions to disease is a topic that is becoming more and more insistent, with the reflections that are the natural accompaniment of advancing knowledge, and it is incumbent on the physician to give more attention to the public health.

For a physician to neglect personal attention to civic and political problems is selfish and unjustifiable. His educational advantages, his specific knowledge of sanitary requirements, his trained judgment, his self-restraint and poise in responsible situations, his familiarity with the vagaries of human nature, and the respect shown him by his fellow-citizens, make him eminently qualified for executive work, and even leadership in civic affairs.

The man of education, brains and capability owes a certain part of his day to the community in which he lives, and to the associations with which his personal success and happiness are due. If he does not give it, he is not doing his full duty to mankind. The greater the advantages he possesses, the greater the call to serve his fellow-man. Few men, as a class, have a greater personal capacity than physicians. Therefore, few owe more to the state.

The physician should aid personally in the endeavor to raise the standard of health, education, art and honesty in the region in which he resides. Time may be required to convince his community that sanitary plumbing, pure water and compulsory vaccination pay. Men of lower ideals may deny that official dishonesty and public indecency sap the vigor of a village, town or city, and inevitably lead not only to higher taxes, but also to diminished personal safety. These truths may be inculcated while carrying on his daily professional work, and he will find that his life is more valuable to his fellow-man than that of the physician who, from laziness, carelessness or timidity, neglects his civic duty, under the pretense that his professional work is too exacting to permit such diversion of energy. The physician's work for the state must have, to be successful, the same quality as his work in medicine. Courtesy and sincerity, honesty and courage, earnestness and intelligence are as essential in the one as in the other. He must be willing in both activities to labor without thought of personal reward.

The membership of physicians on school boards is an undoubted advantage to the public. First, physicians are better able to co-operate and work with the local boards of health, and are, therefore, better able to demand proper sanitary conditions in school buildings and grounds; second, because of the nature of their work, they are better able to comprehend the necessities of the scholars in regard to seating and desks; the tinting of the walls as affecting eyesight; the necessity for correctly lighted rooms, and that the wall boards should not be black. The physician is in a position to insist

* President's address at the Thirty-fourth Annual Meeting of the California State Medical Society, 1904.

that the curriculum shall be somewhat elastic, as all children have not the same mental development or capacity. No one is in a better position to judge of the evil effects of child labor, not from the sentimental, but from the physical standpoint, and, therefore, he will be in a position to ask for compulsory educational laws, and see that they are lived up to.

There is a feeling abroad, occasionally expressed by physicians and newspaper writers, that there is overpressure in the schools to such extent that children are falling by the way or are made invalids for life. There is another opinion, expressed quite frequently by opponents of the new education, that teachers are doing too much for their pupils, and are thereby helping to create a race of degenerates. "Soft pedagogics" is the term sometimes given to designate the process. Widely divergent as are these criticisms of the present practice in the schools, there is perhaps enough truth in both charges, to put teachers on their guard in respect to the demands they make on their pupils. Viewing the matter solely from the standpoint of health, we may agree that hard, intellectual work of the right kind, done within proper limits of time, can in no way be injurious to children. It must be as healthful for them to exercise the brain actively as it is for them to exercise the legs actively. It is not hard work that is harmful or repugnant to the normal child, so much as work which is not suited to his needs and powers. Of course, a discrimination must be made between the natural tendencies of the child and those tendencies which have been imposed on him; the former may lead and point the way of the best training, while the latter may indicate the course to be resisted. What is needed for health's sake is not necessarily to lessen the work of the children, but to lead them to work in such a way and at such times that the largest results in mental strength and alertness will be gained with the least fatigue.

Some study cheers and invigorates, while another palls on the mind and wearies it to the point of stagnation. No one will say that the former is nearly so harmful physically as the latter. The two states of mind needed for the physical as well as for the mental well-being of pupils are interest and freshness, the former depending largely on the subject and the way it is presented; the latter on the time in which the recitation or study is carried on.

SANITARY ADMINISTRATION.

In America, we know sanitation and social progress as the power that condemns rookeries; restricts builders; regulates hours of labor and the age of laborers; builds hospitals, public baths and lodging houses; sets aside great areas for parks and playgrounds; establishes sanitariums for consumptives; inspects factories and mines; defines dangerous trades and prescribes territorial limits to those that pollute streams or air; compels vaccination; certifies physicians, dentists, druggists and barbers; quarantines the sick on land and sea, separating mothers from children; condemning property, if need be; rejects immigrants; enters lodging houses, and even dwellings, to determine their sanitary condition; prohibits the adulteration of foods and medicines and penalizes the sale or offer for sale of impure foods for man and beast; presumes to name certain fuel as unfit, and spends millions for waterworks, sewage farms and the support of health departments.

No one community has carried out a consistent and

thorough program, but no community has failed to accept the principle that the public has the right and the duty to remove and to prevent disease or conditions that generate disease. We may differ in our theories of disease, or in our belief as to the exact time and place where the public funds shall be used, but we are of one mind that private wealth, private ignorance, private comfort must be of secondary importance, when and where public health is at stake.

Sanitary administration offers a very direct and most efficacious means of reducing the inequalities that even the most conservative capitalist will concede to be incident to our present system of distribution. The meanest wage-earner has already come to associate his health with his capital; his lodge, his creditors and his insurance company are emphasizing that relation. None is so mean as not to wish a higher standard of life. Nothing is easier to demonstrate than that wide and clean streets, playgrounds, hospitals, public baths, tenement and factory inspection help to raise his minimum standard with no sacrifice to himself. In no other field have conservative thinkers and communities taken such advanced ground; conversely, no other field offers so little theoretical opposition or so little prejudice. No other field of administration can demonstrate so quickly and so readily on the platform or by actual test, that there is taxation which benefits without burdening the majority.

In watching contagious diseases in the public schools, it is a great advantage to have the medical inspector directly under the control of the board of education, and not under the board of health, since only about one-seventh of the cases of contagious diseases in the public schools are reported by the health department. Chicago has a rule that when pupils are out four consecutive days, they are excluded until they have been inspected by the proper authorities. They are not accustomed to admit children on the certificate of the attending physician, because such certificates they consider utterly valueless, for the reason that physicians can not easily refuse giving certificates, their livelihood being at stake in many cases.

THE STUDY OF HYGIENE.

It is believed that American philanthropists, whose purses have so often and so generously opened to advance the causes of human knowledge and welfare, have failed to appreciate the opportunities which have lain before them in promoting the cause of sanitation. Every school, college and university should have a carefully developed course of hygiene. Every parent who sends a son or daughter to these places of education has a right to expect that this fundamental subject of life and health shall not be neglected. Competent teachers are needed to instruct the children and youth of the land in the practical business of living wholesome and healthy lives. Sanitary engineers are needed to build sewers and waterworks, drain lands, and lay out and clean cities in accordance with modern principles. Sanitary architects are needed to build healthy dwellings, hospitals, schools and factories, so that the great class of people who are unable to look out for themselves, shall be suitably cared for. Medical officers of health are needed who shall be familiar with the most recent developments of preventive medicine, and who shall be thereby equipped with the best methods of investigation and removing the cause of epidemics. The family physician should be given knowledge, which, as President

Elliot says, shall make him the guardian of his clients in the prevention of disease.

University students are but rarely compelled to study sanitary science, and it is entirely possible for a graduate receiving the highest honors to know next to nothing of the laws of health, on which his very existence depends. But if school children, teachers and university students find a lack of proper facilities for the study of hygiene, what is to be said of the training of that important class of officials charged with the responsibility of guarding public health? As a rule, no training whatever is required of health officers by law, and no provision is made by municipality or state for their instruction.

Excepting Vermont, and in a few other states, it is impossible for health officers to obtain any preparation for their work, except such as they may themselves elect in special courses of instruction in the latest practices in sanitation and preventive medicine. The requirements which must be satisfied before the English degree of D.P.H. is conferred, indicate the character of the training, which, in the opinion of the committee of the American Public Health Association, it is needful for this class of experts to obtain. As at present constituted, the requirements of the English diploma in public health stipulate that the candidate must be a physician, and have had six months' scientific training in hygiene, including sanitary law, sanitary administration, laboratory instruction in sanitary chemistry, bacteriology and the study of preventive diseases. In addition, he must have served six months as an assistant to a medical officer of health.

Dealing with disease is much more complicated than dealing with crime. Our individual danger is ten times greater from epidemic than from murder, robberies, accidents and fires; yet, as a rule, our police and fire departments excite our admiration, while our squad of health inspectors more often arouse our anger and opposition.

Physicians are said to be deficient in business instinct, training and methods, but much depends on the individual. There are many so-called business men who seem to know but little about business, if we would judge by the number of failures and those who go out of business.

The entrance of physicians and scientific men into deliberative assemblies must do good, for the increasing accuracy of science can not fail to make its impress felt in shaping legislative policy. Sanitary and hygienic problems are of ever-increasing importance in national life, and physicians have the general training which makes their views on these subjects of much weight. The interests of commercialism and science may seem antagonistic, but in the broadest sense they are not.

VITAL STATISTICS.

It should be almost unnecessary to recount to a society of physicians the numerous reasons why an accurate registration of vital statistics is absolutely essential to the proper sanitary administration of a state. Vital statistics, and especially correct mortality statistics, are fundamental to a progressive public-health administration. It is as unsatisfactory to attempt to conduct a public-health service, either of a city, a state or a nation, without reliable statistics of mortality based on the immediate registration of all deaths, as they occur, as it would be to manage a large business enterprise without some adequate system of bookkeeping. To know

the influence of modern methods of sanitation and prevention of disease on the public health, the statistics of deaths must be accurately known. The progressive health officer must be on the alert to watch the movement of mortality from important diseases, and he can only judge of his success at restricting the same by studying variations in mortality and in sickness.

Reliable records of births are almost of as much importance as are those of deaths. The state owes it to the individual citizen that an accurate record shall be made of his birth and his death. Such records are indispensable for many legal purposes. As regards birth records, there is hardly a relation in life, from the cradle to the grave, in which such a record may not prove of the greatest value. For example, in the matter of descent and inheritance; in the relations of guardians and wards; in the disability of minors; in the administration of estates; the settlement of insurance and pensions; the requirements of foreign countries in matters of residence, marriage and legacies; in marriage in our own country; in voting and in jury and military service; in the right to admission and practice in the professions and many public offices in the enforcement of laws relating to education and child labor, as well as to various other matters in the statutes. As the country becomes more densely settled, and the struggle for existence sharper, many of these matters which have hitherto been of minor significance, will take on a deeper meaning and acquire greater importance.

Nearly every state in the country has attempted to establish a satisfactory system of recording vital statistics, yet up to the present time less than a dozen have adequate laws for the registration of deaths alone, and I believe that there is not a single state, and probably not even a single city in the United States, that has to-day a complete registration of births. This should receive the attention and the active support of every physician in the state, and especially the consideration of our members and our county societies. I therefore recommend to this society that a committee of three be appointed on vital statistics, to co-operate with the Public Health Committee of the American Medical Association.

The executive business of medical schools, hospitals and societies devoted to medical subjects is what may be, and frequently is, termed medical politics. Here the physician has frequent opportunity of showing his skill in carrying on business enterprises, and may exercise the talent of leadership. His success is probably equal to that obtained by men of equal ability in any one other walk of life. He may lack the training of one brought up in an office or bank, but his stock of general information, his knowledge of human nature, his judicial mind, and his habit of scientific accuracy, will soon enable him to equal, if not outstrip his non-professional colleague, in executive grasp and precision.

MORE THOROUGH TRAINING FOR PHYSICIANS.

What is essential that the standard of the medical profession be raised and that the physician become a more potent factor of usefulness in the community? Of the students attending professional schools in 1900, 50 per cent. of the theological students had an academic degree; 20 per cent. of the law students and only 7 per cent. of the medical students. Ordinarily, the degree of preparation one has on entering a professional school, represents the character of work he will do in that school. One can not expect to secure physicians wise and

comprehensive in diagnosis, keen to discriminate, able to weigh evidence and to relate every fact to every other fact, unless the students who enter the medical colleges are themselves well trained. In professional studies the beginning determines the end, and the end also determines the means and the method; he who is not a good student when he enters the professional school, will not ordinarily be a good student when he leaves it; and if he is not a good student when he leaves the professional school, he will not be a skillful physician when he begins his professional career. The medical profession, as already indicated, is important not only to the individual life, but also to the life of the whole community. The physician should become a public servant, as well as a servant of individuals. He is now set not simply to cure the ills of one member of the human race, but also to keep all men from being sick. He is a trustee for the health of the community. He should be the apostle of health and healthfulness. He is an unofficial member of some unofficial board in every community, and in not a few communities he is a member of the properly constituted board of health. The age of specialists has come, but every general practitioner must, in a sense, be a combination of all the specialists. So wide a range of functions, each of which is of peculiar importance, as important at times as is human life itself, makes very evident the proposition that the physician should have the most liberal, the most profound and the most disciplinary of trainings before he enters on his professional studies. And further, Americans should be in touch with the best methods of the most advanced nations, and our standards should not be lower than those of European countries.

It would be a distinct advantage to American life if the students who have stepped from the farm or the grocery store into the medical school, would return to their farms or their counters. Discipline, as well as culture, training as well as intellect, represent elements which every man who dares to offer himself as the savior of people's lives should possess. One great need of American life at the present time is better trained doctors. The more thorough their training, the better fitted will they be to assume their obligations as citizens in the higher fields of civic usefulness. The mind which has already been sharpened by the methods of one science, takes a keener edge, and that more quickly, when it is put on the whetstone of another science, than does a mind which knows nothing of science, for all sciences are cognate, their methods, though different, are allied. Our profession has been the mother of most of the sciences, and her children are ever coming back to help her. In our art, all the sciences seem to converge—physical, chemical, biological methods join hands to form the complete clinical method.

If the proper organization of physicians existed, a health officer, Democrat or Republican, doing a city such service as to reduce its death rate from 23 to 1,000 per year to 15 to 1,000 per year for successive years, or fighting the dangers of a pest epidemic, would not be turned out of office for partisan reasons, as was recently the case in the city of Buffalo and in our own city of San Francisco.

Very recently, Reed and Lydston have clearly pointed out the fact that medical men have fallen from their high estate of bygone years, and are no longer looked up to and regarded as the leaders in every community. That much of this change in public attitude toward members of this profession is due to the dissensions

within our own ranks, there can be no doubt. The influence which the physician of fifty years ago possessed, has dwindled to a mere shadowy suggestion of influence possessed by the doctor of to-day. Instead of in any way controlling the quality and standards of the medicines supplied for our use, we are now become very largely the exploiters of such material as the manufacturer cares to place on the market. Instead of having that representation within legislative chambers which would insure proper protection of the public welfare, we have little or no representation and comparatively no influence. One of the keenest and ablest law-makers in the land has said that the medical profession could secure any legislation which it demanded, state or national, if it only knew exactly what it wanted and could agree in making the demand.

PHYSICIANS AS LEGISLATORS.

The time has come when we must recognize our duty to the body politic; our duty to the people whose servants we are; our duty to our patients; our duty to ourselves and to our progeny; our duty to the coming generation by taking that place in the affairs of the state and nation which good government, good sanitation, good health laws and proper protection of the public welfare demand. The "Doctor in Politics" must become an established fact and must become a recognized necessity. It is time that at least one representative form every state in the Union should be a member of the medical profession, and that there should be a good number of physicians seated in the Senate. We have too long been like the foolish man in the parable, who buried his talent, carefully wrapped in a napkin. Let us dig up these talents of potential strength and influence and invest them as they should be invested—in the political part of our duty to the people we serve. Let us at once begin to work for that place in our state and national legislatures which the care of the public welfare demands that we should have. To sit quietly back and see inefficient or morally bad men elected to legislative offices and making laws which are worthless or positively and actually injurious to the public, is to neglect that part of our duty which is most essential. The plea that the physician is too busy to take any part in politics is an empty phrase. No physician is too busy to drop a word here, a request there, a hint with another patient, a suggestion to a friend, as he goes about his day's work; and when that day's work is accomplished, and the hints and requests and suggestions are considered, he will realize that much has been done with comparatively little effort.

There are two essential requisites, however, in the perfection of the physician's influence and position. First, he must ever be a better physician. A higher standard of preliminary education must be required, and the resultant product of our medical schools must possess a far higher average of general as well as medical education. I would recommend that our committee on medical education consider carefully this matter, and place itself in close communication with the similar committees of the American Medical Association and of other state associations, to the end that the matter may be carefully and earnestly gone into and the proper recommendations eventually made. It must not be forgotten that a physician of fairly good average education to-day is relatively far below the standard which he would have held, with no more education, fifty years ago. The general average of edu-

cation has increased faster than has the standard in our own profession.

THE NEED OF ORGANIZATION.

The second essential to proper advancement and political recognition is organization. We must have a well and a harmoniously organized medical profession before these many things can be brought about. We must work for the good of all, sinking local feeling, petty ambitions, personal differences and animosities, and sticking close to the central organization and central purpose. Each and every one of us must jealously guard the honor of our profession and the solidity of our organization. Every eligible physician in every county of the state should be a member of a county society and should work with and for his fellow-members. The actual conduct of any enterprise must necessarily fall on the shoulders of a few in committees or boards. But the work of the individual member in aiding such committees is invaluable. When your committee says to you "Write to So-and-so a request to take action on such a matter," it is only after knowing what the full conditions are and what can best be done by your help. Do what you can, remembering that it is always the weight of influence which counts, and that if every member of the society acts, we shall bring to bear the weight of more than 1,500 of the most influential class of men in the state.

If there is, in your county, a physician whom you know is not a member of your county society, make it your business to see him or write to him and urge that he immediately apply for membership. Do not wait for the trustees or the council to do this work, but do it yourself and do it at once. An inconvenient location should no longer be regarded as an argument against joining the society, for members now receive the publications and are kept in touch with each other and with the work that is being done. And further, even if a physician is located in a place so distant and inaccessible that he could not attend the meetings of the society, he could add to its importance in the community by the weight of his influence when it is needed. No man knoweth the day nor the hour that such influence may be essential to the successful termination of some issue intended for the good of all.

The California State Journal of Medicine has done excellent work in prosecuting this work of organization, and I commend to you and to your delegates the importance of continuing it in the policy which it has adopted. To the trustees of the council I would earnestly urge the necessity of making every endeavor to even more energetically prosecute the work of organization, and to consider ways and means for working on the physicians residing in counties where there are county societies, yet who remain non-members of such organizations. The time is here; the work is ready and waiting; our duty is writ plain for every man to read; let us then be cowards no longer; let us turn to the work and do it; let us take that place in the affairs of state and nation which it is essential we should take.

School Athletics.—It is certainly time to supervise school athletics more closely, says the *Boston Medical and Surgical Journal*. The possibilities of injury are many, and the manifestations of overwork or overexertion may not be apparent for months or even years. If present conditions continue, they will inevitably bring discredit on the interscholastic games.

Special Article.

THE ARMY MEDICAL DEPARTMENT.

I.

A HISTORICAL SKETCH.

The Medical Department of the United States Army had its beginning on the 27th of July, 1775, when the Colonial Congress at Philadelphia voted a medical establishment, or, as it was then called, "an hospital," for the Army. Prior to this enactment the surgeons of the forces before Boston had been appointed by the colonels of regiments, with the wise proviso, however, on the part of the Provincial Congress of Massachusetts that they should be examined by a medical board named by the Provincial Congress. Of course, among these surgeons there could be no cohesion or effective co-operation, and, as General Washington wrote to the Congress at Philadelphia, affairs were in a very unsettled condition. "There is no principal director nor any subordination among the surgeons; of consequence, disputes and contentions have arisen, and must continue until it is reduced to some system."

The first department consisted of the director general and chief physician, four surgeons, twenty surgeons' mates, an apothecary, a clerk, two storekeepers and a nurse to every ten sick. It may be of interest to mention that the pay of these officers was as follows: The director general, \$120; the surgeons, \$40; the surgeons' mates, \$20; the storekeepers, \$4, and the nurses, \$2 a month.

Dr. Benjamin Church of Boston was elected director general, and he was given the appointment of all the personnel of the hospital, except the surgeons' mates, who were appointed by the surgeons. Dr. Church had a reputation for culture and professional skill, but was a few months after his appointment detected in treasonable correspondence with the enemy, deposed and thrown into prison. He was succeeded by Dr. John Morgan of Philadelphia, a man of much energy and administrative ability as well as professional skill. He soon gained the friendship and support of General Washington, and these he always retained.

With the extension of the theater of war, the number of surgeons was increased, and Drs. Skinner and Shippen were named chief surgeons for the northern department and the forces on the west bank of the Hudson. The organization was, however, too loose to secure efficiency or concert of action. The relations of the regimental surgeons to each other and to those in charge of the general hospitals were entirely undetermined, and the department surgeons refused to admit the authority over them of Dr. Morgan. There was beside no well-arranged system of medical supply, and in consequence there was much suffering, and complaints multiplied. As has happened since, more than once, Dr. Morgan was punished for the very shortcomings for which he had in vain asked Congress to provide a remedy, and he was dismissed in January, 1777. Congress the next year exonerated him from all blame, but did not reinstate him.

A complete and elaborate organization of the medical department, modeled on that of the British army, was adopted in April, 1777, and Dr. William Shippen was elected director general of the new establishment. Deputy director generals were provided for the northern and southern departments, and under these a physician general and surgeon general in each district, "whose