fication for this work as will inspire general confidence, no system of administration can be successful, and competent men will not accept a place of such responsibility and importance while their work is always liable to interruption by the agencies of partisan politics. The inadequacy and failure of the present system of control and administration are inherent in the system itself, and are inseparable from its relation to partisan change and caprice. The evil is not to be remedied by merely changing the persons who administer a system which is essentially vicious.

If the people of the State of New York have enough regard for their own interests to lead them to insist upon the adoption of a system embodying the essential features of competent direction and security from partisan interference, it will be safe and wise to acquire the whole Adirondack region by purchase. If they have not this perception of the importance of the object in view, and of the means which are necessary for its accomplishment, the forests will be left to their fate. The methods now employed are wholly useless and ineffective.

THE UTILITY OF AGRICULTURAL EXPERIMENT STATIONS.

THE Hon. W. W. Wright, in a recent address on the past and present work and future prospects of the Geneva station, New York, took occasion to uphold the usefulness of such stations. The establishment of an experiment station by the State near Geneva within the last seven years challenged a great deal of curiosity among farmers and others, and is of late creating more and more of interest. To most people it was entirely new, nothing of the kind being nearer than adjoining States; and it may be said to be a modern invention, but cannot be called a "Yankee contrivance," for England, France, Germany, and other European countries, led off in the creation of these establishments within the present century, and had expended many millions of dollars in their organization and maintenance before any of the American States had established one. New York was among the last to avail itself of these institutions, though its wealth, extent of territory, and diversified agricultural interests, would naturally have made it the first. In one sense, such a "station" is no "experiment." In its organization, management, and the results to be expected, we have only to look to other civilized countries, which have had an experience, in some cases, of nearly forty years. When the Legislature of New York passed the law for creating this station, the significant fact was before us that neither in this country, nor in any other, had these stations been established, except they had fully answered the expectations of their projectors, and had been cherished and sustained, because their benefits were so manifest that there was no hesitation about continuing appropriations for their maintenance. Agricultural colleges, and classes in universities in which scientific farming was taught, were established or endowed in New York, but they cannot be said to have been successful. The most extensive of them was totally abandoned after a few years; whereas no experiment station has ever been discontinued, or diminished in the scope of its work, or embarrassed in the want of funds, in this country or Europe. On the contrary, in foreign countries they have been multiplied to an enormous extent, and have steadily increased on this side, though not so rapidly. There must be some reason for the success of these stations, and the total or partial failure of the colleges. The truth is, they are both schools, in which there is little difference in the abilities and qualifications of the teachers, but there is a vast disparity in the number and character of the students. In colleges we teach a few hundred boys, only a small percentage of whom will become practical farmers; while the stations are endeavoring to teach the same science to a whole community of men of all ages and conditions, engaged in the business of agriculture, not alone through lectures in which the relations of science and practical farming are explained, but through the agricultural press, and pretty much all newspapers now published and circulated in this country, daily, weekly, and monthly; and these are supplemented by bulletins giving in detail appropriate facts and statistics of the greatest interest to those who desire to become better informed in a business which occupies their constant thoughts, and in most cases the labor of their hands. Through these channels the stations reach the whole agricultural community. Nobody is too illiterate to participate in this knowledge, if he can read, or understand what others read to him. Nobody is too old to learn in this "school;" and he soon becomes almost unconsciously a teacher himself, for he imparts the knowledge he has thus acquired to others, in farmers' clubs and neighborhood gatherings, in the village tavern or post-office, at the country firesides, in the fields and on the highways, in an unpretentious but none the less effective and valuable way. He tests the theories of the professors, lecturers, and newspaper-writers by his invaluable practical knowledge and common sense, and often detects the errors into which theorists are always liable to fall, and thus renders valuable service to the true interests of agriculture. It may happen in this way that men who have never learned to read or write, but are capable of managing a farm well, may become valuable teachers in a limited sphere.

The first agricultural experiment station was established in Germany in 1851, and since that time the number of stations has steadily increased, until at present the number in the German Empire alone is given as 184. Careful statistics, including nearly every country of Europe, show that if New York should expend an equal amount, proportioned to the area of our territory, we should expend one million dollars annually. If, on the other hand, it were proportioned to our population, it would require an annual expenditure of three hundred thousand dollars before we should be on a level with the countries of Europe. The first station, as has been stated, was established in 1851 at Moeckern in Saxony; five years after, there were 6 stations in existence; five years later, 15; in 1866, 30; and in 1871, 56; since which time they have been even more rapidly increased.

Those who may perhaps regard the work done at Geneva as rather of scientific than practical value will be gratified to learn what work was entered upon and continued at this first station at Moeckern during the first six years of its existence. This is given in a summary recently prepared, comprised under twenty-six different heads. We select but a few of them: 1. Feeding-trials with sheep to ascertain the best maintenance rations; 2. Feeding-trials with cows, showing effect of coleseed-cake on yield of milk; 3. Feeding-trials on fattening sheep; 4. Observations on the yield of manure of cows and sheep, and the changes it suffers by keeping; 5. Comparison of feeding-value of grass, hay, and aftermath; 6. Observations on milk-production in passing from winter to summer feeding; 7. Effect of lupines on milk-production; 8. Composition and value as food of various kinds of distillery and brewery waste; 9. Feeding-trials with cows, oxen, and calves, the proper proportion of nitrogenous and non-nitrogenous food-elements for the three classes of animals, etc.

THE ENCOURAGEMENT OF HIGHER EDUCATION.[1]

THE choice of the 22d of February for the founder's day of the Johns Hopkins University will always be recognized as singularly appropriate. Historic associations, at once local and national, determined the choice.

It is a fact not generally known that the Father of his Country, before he became President of the United States, was the president of a Virginia college. When Washington was chosen to the office of chancellor of William and Mary College, succeeding the Bishop of London in that educational honor, he assured the board of trustees of his firm confidence "in their strenuous efforts for placing the system of education on such a basis as will render it the most beneficial to the State and the republic of letters, as well as to the more extensive interests of humanity and religion." Washington was always the friend of William and Mary College, his *alma mater*. Without forgetting local institutions in Virginia, he advanced during his eight years' presidency of the United States to what may be called the national idea in university education. From that idea Baltimore to-day can derive encouragement and inspiration.

Washington's grand thought of a national university, based upon individual endowment, may be found in many of his writings, but

[1] Abstract of an address by Professor Herbert B. Adams, Johns Hopkins University, Feb. 22, 1889.

the clearest and strongest statement occurs in his last will and testament. There he employed the following significant language: "It has been my ardent wish to see a plan devised, on a liberal scale, which would have a tendency to spread systematic ideas through all parts of this rising empire, thereby to do away local attachments and State prejudices, as far as the nature of things would, or indeed ought to admit, from our national councils. Looking anxiously forward to the accomplishment of so desirable an object as this is, in my estimation, my mind has not been able to contemplate any plan more likely to effect the measure than the establishment of a university in a central part of the United States, to which the youths of fortune and talents from all parts thereof may be sent for the completion of their education, in all branches of polite literature, in arts and sciences, in acquiring knowledge in the principles of politics and good government, and, as a matter of infinite importance in my judgment, by associating with each other, and forming friendships in juvenile years, be enabled to free themselves in a proper degree from those local prejudices and habitual jealousies which have just been mentioned, and which, when carried to excess, are never-failing sources of disquietude to the public mind, and pregnant of mischievous consequences to this country. Under these impressions, so fully dilated, I give and bequeath, in perpetuity, the fifty shares which I hold in the Potomac Company, . . . towards the endowment of a university, to be established within the limits of the District of Columbia, under the auspices of the general government, if that government should incline to extend a favoring hand towards it."

Here was the individual foundation of a national university. Here was the first suggestion of that noble line of public policy subsequently adopted in 1846 by our general government in relation to the Smithsonian Institution. The existence and ever-increasing prosperity of the Smithsonian Institution are standing proofs that private foundations may receive the fostering care of government without injurious results. Independent administration of scientific institutions may co-exist with State aid. It is a remarkable testimony to the wisdom of George Washington's original idea, that Andrew D. White, who, when president of Cornell University, happily combined private endowments and government land-grants, lately suggested in *The Forum* (February, 1889) the thought of a national university upon individual foundations. This thought is a century old, but it remains to this day the grandest thought in American educational history.

George Washington, like James Smithson, placed a private bequest, so that the general government might extend to it "a favoring hand;" but in those early days Congress had no conception of the duties of government towards education and science, and unfortunately the Potomac stock never paid but one dividend. George Washington's educational schemes were by no means visionary. His stock in the James River Company, which, like the Potomac Company, he had helped to organize, actually became productive, and was by him presented to Liberty Hall Academy, now Washington and Lee University. Washington raised Liberty Hall Academy to what he called "a seminary of learning upon an enlarged plan, but not coming up to the full idea of university." He meant to make it one of the three Virginia supporters of the university at Washington. Liberty Hall, or Washington College, his own William and Mary, and Hampden-Sidney, were all to be state pillars of a national temple of learning.

Was it not in some measure an historic, although an unconscious, fulfilment of that old dream of Washington, when, a hundred years later, Johns Hopkins determined to establish upon the Maryland side of the Potomac a university? Doubtless Johns Hopkins, like George Washington, had no very definite conception concerning the world-wide relations of a great modern university; but he saw as clearly as did the Father of his Country that the beneficent influence of higher education, if properly endowed, must reach far beyond the limits of a single State.

The Baltimore public has been accustomed to see or hear some new thing every year with regard to the number of students from this city, from Maryland, Japan, and each individual State of the American Union. The following facts represent a novel grouping of students according to the great sections of country from which they come. There have been some misapprehensions in our community concerning the region benefited by this university. Our new arrangement of statistics shows that during the present year there have been studying at this institution 98 graduates from the South, 47 from the West, 26 from the Middle States, 18 from New England. It is plain that this university is drawing college-men from the same sources as those from which Johns Hopkins drew his wealth; namely, from the South and West. In the undergraduate department there are now 139 students from the South, 18 from the West, 14 from the Middle States, and 4 from New England. Plainly, most of "our boys" come from the same sections of country as our graduates. The sum total of men from the South is 237; from the West, 65; from the Middle States, 40; from New England, 22. In short, the South has more than three and one-half times as many representatives as the West, six times as many as the Middle States, and more than ten times the number from New England. The total number from all the other States combined is nearly doubled by the South. About one-half of our entire student public comes from the State of Maryland. Considerably more than one-half comes from the three Southern States which Johns Hopkins wished especially to benefit. From this brief review of statistical facts, four points are clear: first, the intent of our founder has been realized; second, the South and the West are chief sources of our student-supply; third, in these directions are the lines of least resistance and greatest influence for the Johns Hopkins University; fourth, one-half of our student public comes from other States than Maryland, — a fact indicating that the local idea is happily balanced by the national idea.

There are pleasing evidences of internationality in the life and influence of the Johns Hopkins University. Some of our professors came hither from England and Germany. Almost all the members of our faculty have studied at one time or another in European institutions. The annual register for 1888 shows twelve students from Canada, seven from Japan, and one representative from each of the following countries: China, England, Germany, Mexico, Italy, and Russia.

Of the graduates, we see Westerners called eastward to college positions, Northerners called southwards, and Southerners called northwards. The president and trustees of the Johns Hopkins University have established here a national university upon a local and individual foundation.

How can the foundations of a national university, resting upon individual endowment, be further strengthened? Simply by extension and more endowments of the same sort. A great university grows, as a great city grows, by the individual association of property investments along avenues already opened. There are men who dream of founding towns and universities apart from existing centres of population and capital; but he is a wise founder who, like George Peabody, Johns Hopkins, or Enoch Pratt, recognizes the vantage-ground of a noble city, and plants there institutions which will work together through coming ages. The principle holds with reference to individual endowments for the higher education. They always accomplish the most good when they are connected with some central foundation which gives them at once stability, unity, and individuality, as in the associated institutions of a large city.

Extension by private philanthropy is the manifest destiny of the Johns Hopkins University. There will perhaps be the individual endowment of a college; perhaps of a university library, bearing the name of the giver, like the Andrew D. White Library at Cornell University; of a laboratory, a museum, or an observatory, like those at Harvard or at the University of Virginia. Some day we ought to have an art-gallery like that at Yale. What is most needed, however, is a central academic building and library to shelter fitly the "fair humanities," — the studies of ancient and modern literature; philosophy and ethics; history, politics, and social science. Baltimore, in the course of time, will have as many foundations, bearing individual names, as there are now in the older institutions of the country. Glance through the catalogues of Harvard, Yale, Princeton, or the University of Virginia, and see the great host of private bequests, some large, some small, but all of them carefully guarded and applied to specific objects, such as the increase of the library or the support of scholarships and fellowships. There may be as much individuality in a great university

establishment as there is in a street or a city bearing a great man's name, like Washington Place or Baltimore.

This is an era of educational endowment upon a generous scale. The most recent published report of Col. Dawson, the commissioner of education, shows that the sum total of noteworthy educational gifts during the year 1886–87 was nearly five million dollars. More than two-thirds of the entire amount was distributed among nine institutions, four of them collegiate, one academic, three professional, and one technical. The institution most highly favored was Harvard University, which received from individual sources nearly a million dollars. From one man came a legacy of $630,000. Our nearer neighbor, Haverford College, supported by the Society of Friends, received $700,000 in one bequest. Of the 209 gifts recorded by the commissioner of education, 25 represent $50,000 or more, 72 were sums between $5,000 and $49,000, and 112 were sums less than $5,000. The most striking fact in all this record of philanthropy is that such a large proportion of the entire amount, fully two-thirds, was given to higher education. The year 1888 is richer than 1887 in individual bounty to institutions of learning. Nearly ten millions were given by three persons for the encouragement of manual training, etc., but there are rumors of even larger benefactions for university endowment. The collective returns for 1888 are not yet published, but it is certain that the past year will surpass any hitherto recorded in the annals of American education.

Whatever forms modern philanthropy may take, one thing is certain, universities are not likely to be forgotten. While the Johns Hopkins University undoubtedly has most to expect from private philanthropy, like that which has already built up the city, it is not beyond the bounds of possibility to hope that the State of Maryland may some day extend to our institution what George Washington modestly called a "favoring hand." At present this State, by the exercise of its taxing power, takes from the Johns Hopkins the sum of nearly $11,000, and from the Johns Hopkins Hospital the sum of $33,000, a year. From our original patrimony Baltimore County took a collateral inheritance tax of $36,000.

The exemption of college property, even the property of professors, from taxation was well-nigh the universal custom in the English colonies of North America. To this day, Maryland exempts from taxation all buildings, furniture, equipments, and libraries of incorporated educational or literary institutions, with the land appertaining to them; in other words, all unproductive property actually in use for educational purposes. This principle of exempting the property of institutions of learning is so thoroughly embedded in the constitutional, statutory, and customary law of almost every State in the American Union, that such exemption may be recognized, like the principles of Roman law, as sovereign common sense. But some American States go much further, and exempt the productive property of colleges and universities, their savings and investments, the income of which is applied to educational objects. The personal property and real estate belonging to educational institutions are exempt from taxation in each of the following States: Maine, Vermont, Rhode Island, Virginia, Kentucky, Kansas, and Nebraska, and probably in others whose statutory laws permit exemption but whose customs and policy vary.

Exemption from taxation is a manifest duty which the State of Maryland owes to an institution which is now using all the income from its productive capital, as well as its buildings, books, and apparatus, for the higher education of Maryland youth. Indeed, one might go further, and say that the Johns Hopkins is doing for Maryland what most States endeavor to secure by large annual appropriations. This institution is to-day discharging the functions of a State university, and is paying for the privilege of providing what is usually regarded as the duty of the State to provide.

The encouragement of higher education by government aid, in one form or another, has been a recognized principle of public policy in every enlightened State, whether ancient or modern. Older than the recognition of popular education as a public duty was the endowment of colleges and universities at public expense for the education of men who were to serve Church or State. It is a mistake to think that the foundation of institutions by princes or prelates was a purely private matter. The money or the land always came from the people in one form or another, and the benefit of endowment returned to the people sooner or later. Popular education is the historic outgrowth of the higher education in every civilized country, and those countries which have done most for universities have the best schools for the people. It is an error to suppose that endowment of the higher learning is confined to Roman and German emperors, French and English kings. Crowned and uncrowned republics have pursued the same public policy. Indeed, the liberality of government towards art and science always increases with the progress of liberal ideas, even in monarchical countries like Germany ,where, since the introduction of parliamentary government, appropriations for university education have greatly increased. The total cost of maintaining the Prussian universities, as shown by the reports of our commissioner of education, is about two million dollars a year. Only about nine per cent of this enormous outlay is met by tuition-fees. The State contributes all the rest in endowments and appropriations. Prussia now gives to her universities more than twice as much as she did before the Franco-Prussian war, as shown by the report of our commissioner at the Paris Exposition in 1867. In that year France gave her faculties of higher instruction only $765,764. After the overthrow of the second empire, popular appropriations for higher education greatly increased. The budget for 1888 shows that France now appropriates for college and university faculties $2,330,000 a year, more than three times the amount granted under Louis Napoleon. The little republic of Switzerland, with a population of only three millions, supports four state universities, having altogether more than three hundred instructors. Its cantons, corresponding upon a small scale to our States, expend over $300,000 a year upon the higher education. The Federal Government of Switzerland appropriated, in 1887, $115,000 to the polytechnicum, and $56,000 in subsidies to cantonal schools, industrial and agricultural, besides bestowing regularly $10,000 a year for the encouragement of Swiss art. The aggregate revenues of the colleges of Oxford, based upon innumerable historic endowments, public and private, now amount to fully two million dollars a year. The income of the Cambridge College endowments amounts to quite as much. But all this, it may be said, represents the policy of foreign lands. Let us look at home, and see what is done in our own American commonwealths.

Maryland began her educational history by paying a tobacco-tax for the support of William and Mary College. This colonial generosity to another State has an historic parallel in the appropriation of a township of land by Vermont for the encouragement of Dartmouth College in the State of New Hampshire, and in the corn that was sent from New Haven to the support of young Harvard. In colonial days Maryland had her county schools, some of them classical, like King William's School at Annapolis. All were founded by authority of the Colonial Government, and supported by aid from the public treasury. The principle of State aid to higher education runs throughout the entire history of both State and Colony.

The present generation has not been so generous to the cause of higher education as were the fathers of the State; but nevertheless Maryland, in her entire history, has appropriated something over $650,000 for what may be strictly called college education, not counting $60,000 given to the State Agricultural College, nor $40,000 proceeding from State lotteries. While this collective bounty is small, it is money given by voluntary taxation, and not taken from institutions of learning. Most of the amount was raised in times when the State was poor or heavily in debt, and when public money came with difficulty. Moreover, this financial generosity of Maryland establishes the principle for which we are contending; namely, that this State, like all other enlightened States in the world, has recognized the duty of support to higher and unsectarian institutions of learning. She has at different times appropriated $650,000 to colleges and the University of Maryland from her public treasury.

Let us now inquire what other States in the American Union have done for higher education, always recognizing of course great inequality in State population and in the taxable basis.

Virginia, whose earliest educational foundations Maryland helped to lay by her tobacco-tax, has expended upon colleges and univer-

sity over two million dollars during her history as a State, not counting the colonial bounty to William and Mary. Since the war, Virginia has given her university $40,000 a year. Before the war, she gave $15,000 a year. The original university establishment cost the State about $400,000. The State of South Carolina was Jefferson's model for generous appropriations to the cause of sound learning. She has given two million and eight hundred thousand dollars to that object. Georgia has given $938,000 for the same purpose. Louisiana has given $794,000 from her State treasury for the higher education in recent years, and, according to the testimony of her own authorities, has distributed over two millions among schools, academies, and colleges. Texas has spent upon college education $382,000, and has given for higher education two and one-quarter million acres of land. The educational foundations, both academic and popular, in the Lone Star State, are among the richest in America.

Turning now to the Great West, we find that Michigan has given over two million dollars to higher education. She supports a university which is as conspicuous in the North-west as the University of Virginia is in the South, upon one-twentieth of a mill tax on every dollar of taxable property in the State. That means half a cent on every hundred dollars. This university tax-rate yielded last year $47,272. Wisconsin pays one-eighth of a mill tax for her university, and that yields $74,000 per annum. Wisconsin has given for higher education $1,200,000. Nebraska is even more generous to her State university: she grants three-eighths of a mill tax, yielding about $60,000 a year. The State of California grants one-tenth of a mill tax, which yielded last year over $76,000. Besides this, the University of California has a permanent State endowment of $811,000, yielding an annual income of $52,000, making a total of $128,000 which the State gives annually to its highest institution of learning. Altogether California has expended upon higher education two and one-half million dollars.

It is needless to give further illustrations of State aid to American universities. These statistics have been carefully collected from original documents by one of our historical students, who are making important contributions to American educational history, to be published by the United States Bureau of Education. The principle of State aid to at least one leading university in each commonwealth is established in every one of the Southern and Western States. In New England, Harvard and Yale and other higher institutions of learning appear now to flourish upon individual endowments and private philanthropy; but almost every one of these collegiate institutions, at one time or another, has received State aid. Harvard was really a State institution. She inherited only £800 and 320 books from John Harvard. The towns were taxed in her interest, and every family paid its peck of corn to make, as it were, hoecake for President Dunster and his faculty. Harvard College has had more than half a million dollars from the treasury of Massachusetts. Yale has had about $200,000 from the State of Connecticut. While undoubtedly the most generous gifts have come to New England colleges from private sources, yet every one of them, in time of emergency, has come boldly before representatives of the people, and stated the want. They have always obtained State aid when it was needed. Last year the Massachusetts Institute of Technology became somewhat embarrassed financially, and asked the Legislature for $100,000. The institution got $200,000, twice what it asked for, upon conditions that were easy to meet.

Can the State of Maryland and the friends of the Johns Hopkins ignore the abundant testimony in favor of the encouragement of university education, not only by exemption from burdensome taxation, but by positive appropriations? If occasion arises, it will be proper and legitimate for the friends of this institution to go before the people of Maryland and say what is needed. Private philanthropy will do all it can, but public interest demands that the State should do its part by throwing off needless taxes, and settling for what it has already taken away.

Do you say that all this would lead to meddlesome interference by the politicians? That is what everybody said when a university was founded by the Prussian Government in Berlin. That is the stock argument against all State universities. But there stand to-day Berlin and all the German universities firm and untroubled upon state foundations. The whole South and the entire West are full of educational establishments by the State. Some of them, like the Universities of Virginia, Michigan, and Wisconsin, are beacon lights of intelligent and non-partisan administration. Have Washington politicians done any harm to the Smithsonian Institution? On the contrary, they have indirectly increased its economic power by appropriations amounting to nearly two million dollars. They allow the secretary of the Smithsonian to direct the expenditure of $220,000 a year. Congress allows the Smithsonian to be managed by a board of regents composed of distinguished college presidents and public men of spotless integrity. Amid all the changes in the civil service, no man has ever been displaced for political reasons from either the Smithsonian Institution or the National Museum. These facts are stated upon good authority.

What are the serious thoughts that have been emphasized in this address?

1. The Johns Hopkins is now a truly national university upon local and individual foundations.

2. This noble institution which benefits Baltimore, Maryland, and the whole country, especially the South and West, can be strengthened most efficiently by further local and individual endowments.

3. The examples of history at home as well as abroad show that States encourage universities by wise exemption from burdensome taxation and by generous appropriations, if original endowments and private philanthropy prove inadequate.

4. The development of public opinion, based upon a knowledge of present facts and upon existing relations of this university to Baltimore and Maryland, is the best way to encourage higher education in this city, in this State, and in this country.

BOOK-REVIEWS.

The Government of the People of the United States. By FRANCIS NEWTON THORPE. Philadelphia, Eldredge & Brother. 12°. 90 cents.

WORKS on the American system of government multiply apace; and, if their quality was always good, our young people would have superabundant means of information about their public duties. Candor compels us to say, however, that the treatise now before us is defective in some very important respects. Its chief fault is that it attempts too much. It undertakes to describe not only the Federal Government, but also those of the States, towns, and counties, and in addition to relate the history of constitutional government from the landing of the Anglo-Saxons in England to the present time, all in the space of little more than two hundred pages. The necessary consequence is, that, in spite of condensation and brevity of expression, no part of the work is thoroughly done. The least satisfactory part, as might be expected, is that relating to local affairs; the town and county governments differing so widely in different States, that no single description will apply to them all. For instance: Mr. Thorpe says that the school directors of the town levy the school taxes, that the selectmen make the local laws and ordinances, that the county has the care and support of the poor, and that there is a county superintendent of schools; but, though these statements may be true of his own State of Pennsylvania, they are wholly untrue of Massachusetts. As for the history of constitutional government, which occupies the introductory part of this book, that obviously requires a separate work; and the chapters here given to it are altogether inadequate. We may add that the book contains a facsimile of the Declaration of Independence, several fancy pictures of historical events, and a gaudy spread eagle for frontispiece, none of which are likely to contribute much to political education.

A Text-Book of Elementary Biology. By R. J. HARVEY GIBSON. London and New York, Longmans, Green, & Co. 16°. $1.75.

MR. GIBSON'S experience as a teacher of biology has satisfied him, that, in order to instruct the student in this most important department, the beaten track must be left, and a new departure taken. To properly appreciate it, and to benefit by its study, a student must first undergo a preliminary training in the facts and