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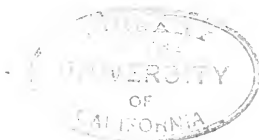
OUR CHILDREN, OUR SCHOOLS, AND OUR
INDUSTRIES

COMMISSIONER'S SPECIAL THEME
ANNUAL REPORT 1908

BY
ANDREW S. DRAPER, LL.B. LL.D.
Commissioner of Education

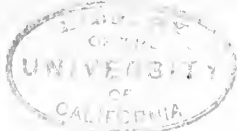
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OUR CHILDREN, OUR SCHOOLS, AND OUR INDUSTRIES

It is putting it not a whit too strongly to say that it is quite apparent to all who think about it that we must have much more accurate and up-to-date vital statistics; that we must have public records of what children there are among us, and their ages; that all children of school age must be more completely accounted for in the schools; that the compulsory school age must at least be extended to the completion of the elementary schools; that provision must be made for public vocation or trades schools, and also for schools of a general character which meet the continuing needs of young people in the stores and shops and factories; that these schools for the industrial masses must operate at times which will allow pupils to engage in regular employment, but employers must plan for the regular attendance of young employees upon the schools at certain hours; that the schools must keep hold of all pupils until they have received a training which will fit them for some definite employment; and that the different parts of a more extended school system must balance each other more exactly and support the industrial as well as the professional activities of the country.

The recognition of the need of all this grows out of manifest moral, industrial, and economic conditions that are widely prevalent among us, and out of a growing knowledge of what other peoples, harder pressed and more painstaking than we, have done to meet the conditions which are now asserting themselves here. It grows out of our clearing vision that simple and balanced justice, as well as the progress and happiness of the people, and the strength and poise of the nation, alike make it necessary to give to the wage earning masses, and to the common industries, such equivalent as we can for what the present schools are doing for the wealthier classes and for the professional and managing vocations.

The recognition of the need is opening the door to a decisive educational advance in America; and the time seems ripe for a review of the reasons for it and for a serious discussion of the plans and arrangements for it.

Looking backward

In the beginning there was no thought that the common schools should do more than teach the "three R's," the mere elements, which would enable one to gain the knowledge vital to citizenship. Farming was the very general employment. Many of the trades

were followed on the farm. There was no thought of leaving the farm. Boys were happy in the thought of having a farm and following their fathers from whom they learned the business of farming. In the towns there was a system of apprenticeship by which boys were bound out to tradesmen and artisans for a term of years to give service in return for instruction in a trade. There was no employment, and little schooling, for girls outside of the home. The girls in every home were made expert in the household arts by their mothers and by the ordinary needs of the home, and they were not unhappy about it. Few boys and no girls went to college. The college was the instrument of the relatively rich, and provided rather exclusive instruction in the higher classical and culturing studies. It can hardly be said to have prepared for the professions and certainly it did not train in professional knowledge and skill. There was no connecting link between the college and the common school, which stood for the masses. The early English system persisted as it persists in England still. They are having a row about it over there now, and seem likely to have a yet larger one. A system of academies which was really a system of fitting schools for the colleges, developed in the better towns. Even the academies connected but very little with the elementary schools. They were half elementary schools themselves; the other half managed to connect with colleges and had to condescend to them. They lived on tuition fees and were patronized by the well-to-do who could afford it and were ambitious to have their children go beyond the elementary branches. They participated in the exclusiveness of the colleges, but the stern need of support obliged them to adjust their work to the needs of all who would send pupils to them. This is not saying that they lacked in excellence. They did not. But they were essentially private institutions and they had an individuality of their own. They were not only wholly apart from the common schools; there was much aloofness. It was an exceptional and a most progressive community that associated an academy with the common or elementary schools. Accordingly there was no educational outlet for the children who completed the elementary schools. If a son of the poor got into an academy there was some shock about it; and if he broke into a profession it was because the fence was low and he had some unusual qualities in his outfit.

This could not long be, and the public high school system came. It came very near supplanting the academies in the older states; and it kept them from ever being in the newer states. It took their place as college feeders; the colleges came to be glad to condescend

to the high schools also; indeed, their work of itself developed many colleges. With it all, the colleges have multiplied and the best of them have become great universities. The public high school system became the strong connecting link between the elementary schools and the colleges. Every effort was made to have the connections close and smooth. The road from "the kindergarten to the university" was made continuous and easy. The colleges and universities were broadened in their work and liberalized and popularized in their character. The scientific interests made a great fight against classical exclusiveness, and slowly got the better of the old Romanlike resistance. At all events, science broke in. Professional expertness came to have a scientific basis and came to require a higher scientific training. The universities came to have professional schools, and got the laws changed so that students headed for the professions found it to their advantage, or were absolutely required, to go to them. Mechanical and agricultural schools and colleges grew up, and often in association with the older literary colleges and universities. The ideal of a university came to be one that could supply the best instruction *in any study*. There was economy in producing stronger all-around scholars, and in training for the professions, for managerial capacity in business, and for leadership in public life, through grouping all manner of schools about the same campus. The aggregations developed marvelous spirit and attractiveness. Then came the days of competition and imitation; of fraternities, and debates; of athletics, of gymnasiums, and tracks, and games, and intercollegiate contests; of ribbons, and songs, and bands, and mascots, and awful yelling. It pretty nearly set states aflame. It would be unfair to imply that the rivalry and the noise were all that attracted youth to high school and college. Far from it. They not only taught more things, and more things in which there was human interest, but they taught them in infinitely better ways. Moreover, they taught them to both sexes. All in all, the multiplicity of actual work, and the glow and enthusiasm of the environment, certainly attracted the ambitious youth. There are very considerable areas in the country now, where every boy and every girl in the elementary schools thinks of the high school, and every one in the high school debates the matter of going to college. The stronger of both sexes feel injured if denied the advanced learning.

That is not all. The influence of the teachers of all grades is exerted to send all of the children to the grade above, along the road that leads to the university. They are told of the equal rights

of every one and of the increased resourcefulness and efficiency, and therefore of the better chance, which is provided by the higher training. Acting upon the American spirit and temperament, the result is quick and strong. On the whole it is well. Sometimes it is pathetic, for it often leads parents to sacrifice more than they ought, and sometimes it directs youth into places already well occupied and for which they have no special adaptation. It is saying nothing against the students most concerned, and nothing against the claims of the universities, to say that there can be no doubt about the fact that many get into them who would be better off in the end if they would put the qualities they have into other work, when they are without the factors which are requisite to success in undertakings which practically exact university training. There is serious question about many going to college who do go.

It ought to be seen that, in view of the spirit, the democracy, the political philosophy, and the temperament of the people of the United States, this is much more likely to be so here than in countries where there is distinct cleavage between industrial and social classes, where families live in the same way for generations, and where all of the political philosophy, and all of the government plans and policies are set against one's getting above the class and the kind of work in which he was born. It is saying nothing against our temperament, and spirit, and political philosophy, to say that it leads a great many youth into places or kinds of work for which they are not best adapted. In American schools, particularly the secondary schools and above, every one is told that he is lacking in every desirable quality if he is not hitching his wagon to a star. That is all right enough if there could be some discrimination about the kind of star that it would be well for the particular individual to try to harness up with. The true standards of value concerning positions and fitness for positions are often but poorly understood. There are many failures through misfits. In the indiscriminate scramble for places which will enable one to wear fine clothes and live in a great house or at the clubs, some get into places they can not fill, many who manage to make a living in such places would be far happier and make a better living in other places, and many more lose their best chances in life by a mistaken race after a fleeting vision when substantial opportunities are actually and easily within their reach.

There would be quite as much of this as we can well afford if the educational system did not lead so exclusively to professional employments and to the quasi professional positions and the man-

aging positions in the business and industrial vocations. As it is, there is so much of it that it is actually making us poor.

Nothing leads to craftsmanship

But that is not all. Any hand work that is found in the elementary school—and on the whole it is very little—is sustained on the theory that it is a desirable accomplishment, an intellectual quickener, rather than that all the world must work, and that work with the hands must be much more common and quite as reputable as work with the head. Instead of leading to a trade it prepares for the manual training high school, if there is one, and that leads to the technological college, if it leads anywhere, and that to one of the engineering professions. Nothing in the common schools leads to a trade.

The manual training high schools are too elaborate, too expensive, in a way too dilettante, to lead to anything other than one of the industrial professions; often they do not even prepare for training in one of these. They are much more like schools than shops, whereas they should be more like shops than schools. In buildings that have nothing of the appearance of a shop, they have machinery, tools, equipment, atmosphere, theory, and practice, which differentiate them widely from the shop. They are managed by men who are more teachers than workmen, when they should be managed by men who are at least quite as much workmen as teachers. Often the machinery and tools make an interesting show without being needed or effectually used, because there is not a skilled workman to use them. Many a time a principal or teacher pleads for an appropriation with which to buy machinery, tools, and other equipment, without any definite theory, or plan, or end, in view. If refused, he would feel outraged and become a martyr. If given, he studies the catalogues and sees the agents for the purpose of spending the money in ways that will look well and make an impression upon the people, who always love an object lesson and are often susceptible and superficial about industrial training. Real tradesmen and workmen discriminate; and they are amused by what they see. There is not enough substantial result to it. I know very well that this is not always true, but quite as well that it is often true.

It is true also that the overwhelming influence of American technical schools, from lowest to highest, is quite as much in the direction of turning out men for professional and managing employments as is the influence of the purely literary and sci-

entific schools. Of course it is for professional employment in one of the industrial professions and for managing positions in one of the leading manufacturing industries, but it is none the less for a professional and managing vocation. *It does not train workmen.* It is saying little against the system to say that it is one-sided, in the effort to bring up the other side and develop a system that is better balanced.

The unskilled labor in American cities is trained but very little in the American schools. It is now derived very largely from the less favored countries of the old world. American children are taught that they must hold themselves above unskilled labor. It is, however, no uncommon thing to find young men and women in industrial and domestic service in this country, who were better trained in elementary knowledge of reading, writing, and mathematics, as well as in the simple arts which make for ordinary efficiency, before they came to this country, than the young people of similar age and social plane are who have always lived here. They are happier and of more value to the country for it. It is due to the fact that the elementary schools of the lands from which they came had much less to do than our elementary schools have, and were required to do it more exactly; and to the further fact that those schools had in mind the training of youth for work, rather than for professional or managing employments, or for mere accomplishments. It is the fact that our unskilled labor does not come out of our own schools, joined to the fact that the skilled labor that we have is so largely trained not in the schools but in a very haphazard way in the shops, that is disturbing the equilibrium of our factories, impeding our industrial productivity, and raising so much criticism upon the unbalanced curriculum of the schools.

The lines in all the schools above the elementary schools, are set hard and fast for professional employments and for managing positions in industrial employments, not only through the continual stirring of the ambitions which are buoyant in American youth, but also through the large provision for the literary and scientific training which is naturally incident thereto, or is actually required by such employments. In the high schools, the colleges, the professional schools that are independent as well as those related to the universities, in the business and commercial schools or independent schools of every kind, in the universities, and even in the technical schools of every grade, the whole scheme is set to turn out professional men, and managers, and captains of something or other, *rather than skilled workmen.* It is so, too, in the elementary schools

where the lines are set at all. *From the bottom to the top of the school system the eye is on the school above, and the school above leads to a professional or a managing employment rather than to a trade vocation.*

If the manual training in the high schools or the separate manual training schools of secondary grade, or the little industrial drawing or other simple industrial work in the elementary schools, be advanced in refutation of this statement, it is insisted that they do not refute it. The little industrial work in the elementary schools has been looked upon as a diversion, or as a preparation for the manual training in the high schools, and the enthusiastic advocates of manual training in the high schools have been content to rest their interest in it upon its all-around culturing and educational value, meaning thereby its value to intellectual virility and energy, rather than upon the fact that it would make a more skilled craftsman and therefore an individual of more character and a citizen of more strength in the case of the man who works by himself alone and not as one of an organized force, and with his hands alone and not through the use of a complicated machine. The technical schools are of course to be encouraged, but the very interests of capital will encourage them, and, at the most, when we think of their bearing upon men and women, they tend to make the human a part of the machine, or they lead to one of the engineering professions or to the captaining of workmen. From first to last, there has been little about the American educational system, and there is now little about the American industrial system to dignify and uplift craftsmanship, or to multiply and train the physical qualities of the individual man.

Wholly apart from the one-sided tendencies of our educational system, the fact is that if any mechanical tendencies which a child may have are neglected until he gets into the high school, they are never likely to come to much anyway. And the further fact is that so long as manual training has to be dominated by the method and atmosphere of the school rather than of the shop, and managed by one whom the capable workman regards as a sort of dilettante theorist rather than by one who likes to wear a blouse and overalls and actually does fine work with his hands, it is not likely to stimulate the best character in workmanship nor to turn out any considerable number of justly self-satisfied and abundantly desirable workmen. It may in part fit men for the work of the engineering colleges, which may make engineers of some of them. And in some of the engineers there will develop the qualities which will make for leader-

ship in great constructive enterprises. But it all leads away from independent craftsmanship. In a general way the same thing is true—perhaps more is true—of the commercial courses and the commercial schools. Doubtless they inspire some and aid a few to enlarge their efficiency, but it is surely within the fact to say that the ratio of captains, or even of finished business men, they produce is, from an educational standpoint, discouragingly small.

In saying this it is not intended to urge that the literary, and professional, and commercial, and technical schools of all grades are worthless or not worth all they have cost. On the contrary, they each minister to a class and are, generally speaking, invaluable. It is only intended to urge that they are one-sided, that they meet the needs of the situation only partially, and that their theories and plans and methods are such that it is impossible for them to meet it completely. They are so ample in numbers and good in character that they are turning out quite all of the professionals and captains that the country requires, and are beginning to do it quite as thoroughly as is being done anywhere in the world. Not much beyond the natural growth of these institutions seems now to be necessary to the professional life of the country. This can not be said as to the factors which contribute to the *industrial* life of the nation.

Nor is it intended to imply that the public schools are not doing the work they are arranged to do, in an efficient manner. On the contrary, again, the buildings average far better, the equipment is many times better, the courses are more complete and more logically related, and the teachers much better prepared and certainly no less conscientious, than ever before in the history of the country. It is only suggesting that, in the interest of the common people and of the country, the kinds of schools must be multiplied, that the educational scheme must be broadened, that attendance upon schools must be longer and more universal, and that the work of the lower schools must have much more bearing upon the labor of the masses.

Reflections upon this subject have led me to seek exact information, and I confess, with some humiliation, that it surprises me. The situation is even worse than I supposed. I have assumed that practically all of the children who do not go to the high schools do finish the elementary schools. That is not the fact. It is clear that the larger number do not finish the elementary schools by the time they are fourteen, the age at which the law says they may leave school to go to work, and that this provision of the law very commonly leads parents to think that the time has come for them to go to work, notwithstanding the fact that they have not finished the

lower schools, and notwithstanding the other fact that there is little renumerative work which they can do. There is often more of a break in attendance between the fifth and sixth grades of the elementary schools than there is between the elementary schools and the secondary schools.

The following table will show the attendance in the elementary schools, by grades, in the cities named, commencing in 1899 with the class that finished the course in 1907. The cities are not selected. The list includes all cities of the State from which the data could be obtained without labor which was not insisted upon. There is no reason to suppose that the omitted cities would materially change the deductions.

	FIRST YEAR		SECOND		THIRD		FOURTH		FIFTH		SIXTH		SEVENTH		EIGHTH	
	1899	%	1900	%	1901	%	1902	%	1903	%	1904	%	1905	%	1906	%
Albany.....	I 765	100	I 213	68.7	I 183	67	I 138	64.5	I 324	75	989	56	573	32.5	528	29.9
Amsterdam.....	402	100	317	78.8	342	85.1	316	78.6	241	60	226	56.2	167	41.5	117	29.1
Buffalo.....	6	100	6	100	6	100	6	100	5	772	83.2	4	968	58.3	3	779
Cohoes.....	544	100	425	78.1	461	84.7	395	72.6	228	41.9	183	33.6	145	26.7	122	22.4
Corning.....	137	100	129	94.2	119	86.8	114	83.2	85	62	87	63.5	83	60.6	72	52.6
Elmira.....	838	100	623	74.3	608	72.6	535	63.8	438	52.3	414	49.4	370	44.2	276	32.9
Fulton.....	316	100	304	96.2	294	93	397	125.6	248	78.5	189	59.8	156	49.4	128	40.5
Geneva.....	162	100	99	61.1	96	59.3	91	56.2	105	64.8	93	57.4	81	50	83	51.2
Gloversville.....	536	100	359	67	399	74.4	328	61.2	314	58.6	258	48.1	214	39.9	151	28.2
Hornell.....	217	100	163	75.1	168	77.4	183	84.3	165	76	148	68.2	162	74.7	133	56.7
Hudson.....	161	100	125	77.6	113	70.2	125	77.0	114	70.8	117	72.7	85	52.8	91	56.1
Jamestown.....	524	100	430	82.1	410	79.4	428	81.7	465	88.7	469	89.5	270	52.7	245	46.8
Johnstown.....	260	100	243	91.4	237	89.1	218	82	190	71.4	174	65.4	142	53.4	114	42.9
Little Falls.....	189	100	117	61.9	129	68.3	138	73.0	98	51.9	85	45	64	33.9	43	22.8
Lockport.....	302	100	325	89.8	300	82.9	270	76.2	233	64.4	204	56.4	187	51.7	150	41.6
Middletown.....	550	100	475	86.4	408	74.2	340	61.8	249	45.3	228	41.5	208	37.8	178	32.4
Mount Vernon.....	589	100	482	81.8	519	88.1	420	71.3	413	70.1	370	62.8	348	59.1	262	44.5
Newburgh.....	652	100	493	75.6	465	71.3	412	63.2	401	61.5	372	57.1	254	39	212	32.5
New Rochelle.....	426	100	419	98.4	366	85.9	277	65	210	49.3	153	35.9	89	20.9	51	12
Olean.....	286	100	267	93.4	281	98.3	264	92.3	219	76.6	167	60.8	166	58	148	51.7
Poughkeepsie.....	462	100	367	79.4	351	76	342	74	333	72.1	281	60.8	235	50.9	156	33.8
Rensselaer.....	276	100	208	75.4	197	71.4	193	69.9	177	64.1	120	43.5	153	55.4	99	35.9
Rochester.....	3	100	2	66.7	150	51.4	2	66.7	I 881	47.8	I 727	43.8	I 513	32.8	I 328	31.2
Rome.....	306	100	278	90.8	202	66	197	64.4	I 159	52	I 146	47.7	I 170	56	I 94	30.7
Watertown.....	678	100	472	69.6	402	59.3	379	55.9	333	49.1	295	43.5	270	39.8	177	26.1

The totals and percentages are as follows:

GRADE	NUMBER OF PUPILS	PER CENT
First	21 410.	100
Second	17 524.	82
Third	17 028.	79
Fourth	15 918.	74
Fifth	14 395.	67
Sixth	12 464.	58
Seventh	10 152.	47
Eighth	8 517.	40

The attendance by years in New York State high schools has some bearing upon our discussion. In the present year it is as follows:

		PER CENT OF ALL
First year pupils	39 122.	45
Second year pupils	25 145.	29
Third year pupils	14 474.	16
Fourth year pupils	8 560.	10
Unclassified pupils	1 769.	..
Total	89 070	

Boys, 37,429; girls, 51,641; graduates in 1907, boys 2424, girls 6793.

It is interesting to know what the corresponding figures are for the United States. For the year 1904-5, the last at hand, the total attendance upon high schools in the United States was 876,050. The percentage by years was, first year 43%; second year 26%; third year 18%; and fourth year 13%.

I confess that it startles me to find that certainly not more than two fifths and undoubtedly not more than one third of the children who enter our elementary schools ever finish them, and that not one half of them go beyond the fifth or sixth grade.

It is hardly less surprising to find that only about one third of the pupils who go to the high schools remain beyond the second year, and that only about one sixth of those who enter remain to graduate.

It all indicates that the lives of children are being wasted, that there is a sad lack of definite aim and purpose about it all, and that our educational plans do not rationally meet our conditions.

Neither schools nor work for children

As the schools have developed on the literary, scientific, and professional sides, the indenturing system has practically disappeared. Few boys are now apprenticed to a trade. Indeed, many of the trades have either disappeared, or so changed as to render the apprenticeship system impracticable. The increase of machinery, which does the work of many men, has led the older workmen who work with their hands to resist the training of boys for *their* work in order to avoid more competition in their work than is imperative. *It is even true that there are many less apprentices in the trades than the rules of the labor organizations approve.* This leads to a shortage of skilled workmen, and to the complaint by manufacturers that they can not get competent workmen. People also complain that the schools do not fit children for any ordinary duties in the stores and offices and factories. It also keeps children from getting work of any kind when they leave the ~~elementary~~ schools. If they get work it amounts to little, and too often leads to nothing. All of the conditions taken together almost force children to keep on in the school system and go on toward the professional and managing vocations which are more than full, and for which they lack adaptation; or else be out of any kind of work for several years. As a fact, masses of them are out of school and also out of work for a long time, if not for all time.

I shall not leave the entire responsibility for this either upon the parents or the children. Some of it must fall upon the provisions of the law; some of it is chargeable to the inefficiency with which school attendance and child labor laws are enforced; and some of it must be attributed to the overloading and the slowness of the schools, and in some measure to the want of alertness and energy in school administration. Parents face hard problems concerning the family support, and are much influenced by the fancies of the children. The children can not know what leaving school means to them. Neither the control of the home nor that of the school over children is what it once was. Both homes and schools are awfully profligate of boys and girls. The break comes at a critical time in the physical life of the child; the time when he most needs control, restraint, guidance, and cheer; the time when he most needs to be occupied, to be shown the need and the method of application to serious work, and to be directed into some work, never mind what it is, which he can do completely and be happy in the doing of it. Instead of that he is often running wild at this time; frequently

impolite, mannerless, and sometimes impertinent; forgetting the things of value he has learned, learning what he ought not to know until he is older, if at all, and developing uncontrollable, unambitious, and inefficient, if not vicious, qualities, which are more than likely to preclude him from ever becoming very much of a man.

Does some one say that this is too highly colored, that it is not true of many, and that it is pessimistic? Rational optimism never shuts its eyes to the truth. What I have just said is literally and completely true of more than half the children of our people. And if true of only a much smaller number, it would be well worth my attention and my protest.

There is fault in the law. It should require that children finish the elementary schools, or at least remain in them or in a trades school to the end of their sixteenth year, before they go to work. It might well gather them into the schools before the eighth year, and it might well require us to make attendance more regular and more resultful.

There is fault, much fault, in the plan and in the work of the schools. If they do not have too many studies — about which I am not without skepticism — they certainly consume too much time upon some of the studies they do have. There are too many grades of books in the same study. The thing is drawn out regardless of time and, almost, of interest, and certainly of educational efficiency. The day of reckoning is hardly anticipated at all. For example, there is almost enough time of the child put upon such a study as geography to enable him to learn a foreign language, when the fact is he will learn all the geography it will ever be necessary for him to know in a few minutes when it is desirable for him to know it.

But that is not all, and perhaps it is not the most. There is altogether too much so called "psychological science," too much fanciful exploitation and illustration, too much *method* and dress parade in the teaching. The cold and sad fact is that men and women whose knowledge of physiology is utterly repudiated by our experts in physiology and whose reasoning is ridiculed by our leaders in logic, are assuming with entire confidence to teach physiological psychology in the schools. If the professors in the colleges enjoy it, and their students will stand it, perhaps we can let it alone, for they have the means of correcting it within their own number, but it is high time to protest when primary teachers are led to believe that they are bound to know all about this mass of superficial stuff and that they must inflict it upon the children in the elementary schools.

The reason why so many children leave the elementary schools

before finishing the course is not so much because their parents need their labor, or because the law says they may, as because there is too much wandering around in tall grass, too much time wasted in the merely incidental accompaniments of schools and of teaching. It is because the work of the schools is behind the ages of the children. It is because the work which we set to be done by a woman teacher in the fifth grade and the way we expect her to do it can no longer be tolerated by a boy passing into his fifteenth year.

The hard fact is that we ought to get children well started earlier and push them along from one grade to another more rapidly than we do, and I entertain no doubt but that we ought to do the work we do in the elementary grades, or such parts of it as are fundamental and potential, in at least one less year than we take for it. In any event, if our elementary school system is to continue to do about the work which is now assigned to it, it must make a point of getting children to the end of it by the time they finish their fourteenth year. It is monstrous that two thirds of the children of the State do not go through the elementary schools. If great numbers of them do it at all they will have to do it by the time they are fifteen. Long before that their minds should be directed toward definite *work* which they may do, and may like to do; and when that time comes, they should be put to doing it and helped to do it exactly and well, to the end that they may have some pleasure in it. To that we will now direct our attention.

Good citizenship dependent upon workmen

I hesitate not a moment in saying that good citizenship and the thrift and morals of the country are quite as dependent upon the mass being trained to skilled work with their hands, as upon a class being advanced in scientific knowledge or in professional accomplishments. The greatness of the nation is contingent upon bringing the truths which science unlocks to the life, and particularly to the vocations, of the people. But that can be done only where a people is inured to *work*; where they have, and love, *vocations*.

The successful workman is a happier man and a more reliable citizen, a much larger factor in giving strength and balance to his country, than the unsuccessful or the only half successful professional man. It adds little to one's value as a civic unit that he be elaborately trained in theory, or in science, or in skill, if his training has been at the cost of his balance; if he knows one thing at the expense of many other things which every good citizen is bound to

know, and of that balance which every good citizen is bound to have. And it makes little addition to the strength of a nation that some of the people have the highest learning, even that the advanced schools and the professional life are overcrowded, if the masses have not love and capacity for *growing things* and for *making things*.

The scientific habit and the zeal for exact knowledge and the superior work of the gymnasia and of the universities, caused Germany, thirty years ago, first to note the educational difficulty which we are beginning to realize. It was this which led the young Emperor to say to the Berlin Conference on Secondary Education, in 1890, "The course of training in our schools is defective in many ways. The chief reason is that since the year 1870 the classical philologists have laid the chief emphasis on the subject-matter of instruction, on learning and knowing, not on the formation of character and the actual needs of life. . . . The demands made in the examinations show that less stress is laid on practical ability than on knowledge. The underlying principle of this is that the scholar must, above all things, know as much as possible; whether that knowledge fits the actual needs of after life is a secondary consideration. . . . The chief defect in our schools is the lack of a national basis for the instruction. . . . Our schools have undertaken a task beyond human strength, and have, in my opinion, caused an overproduction of highly educated people,—*more than the nation can bear.*"

There will be those in this country who will say that this was the expression of royal exclusiveness, even of royal apprehension lest the liberal education of *the masses* should make for democratic rather than monarchical reign. It is the fact, on the other hand, that the Emperor was obliged to withstand that objection, raised in the inner circles of his court, because no less an authority than Prince Hohenlohe, the Imperial Chancellor, in the memoirs just published to the annoyance of the Emperor, reveals opposition by the nobility on the ground that to change the labor of the German people, in whole or in part, from agrarian to manufacturing industries was to promote democracy and endanger monarchism. Of course the Emperor had no thought of inviting a tide which would engulf his throne. He was not lessening liberal learning, but he was trying to bring industrial power into vital relations, and therefore into equilibrium, with it. He was enlarging the material, and therefore the military, strength of an empire which is encompassed by rivals, if not foes, on every side. It is much to his

credit that he was doing it with discrimination and without fear; that he could foresee the imperative basis of German power; and that he was able to establish that balance between material and intellectual wealth which would enlarge, and has enlarged, both in the German Empire.

Lack of industrial training in American schools

There is nothing which now appeals to the popular fancy in America so much as "industrial training." The newspapers are full of it. Every public audience responds to it quickly. The authorities of charitable and penal institutions are trying to install it. The school boards are all in favor of it but hardly know how to accomplish it. They do something about it because they dare not do nothing. They do not do much because the pedagogical mind is not very clear about policies and plans, because the professional and capitalistic classes are too often uninformed, uninterested, or selfish about it, and because the labor organizations are skeptical about its ultimate effect upon the scale of wages. The confusion and uncertainty are widespread.

Nor is this all. Up to this time the American spirit has made "industrial training" a very different thing in the American mind from what it is in the minds of other peoples. In our mind it is, in part, culturing, an aid to industrial or engineering leadership, something that will lift one to a place above that of the ordinary workman. Accordingly, we have installed it at the top of the educational system and left the bottom to take care of itself. In the minds of other peoples it means craftsmanship, the training of the masses in good workmanship. Accordingly, they have entrenched it at the bottom of their educational systems and left the top to meet its own needs. The top is more able than the bottom to get what it needs. Whatever the motive or the logic, Germany is educationally more democratic than the United States.

We have never to any extent undertaken to provide vocational training, or even any direct preparation for craftsmanship, in the public elementary schools. Here and there in the cities, kindergartens, or a mixture of kindergartens and the first primary grades, have been established. It was done only after private kindergartens had proved their worth. There have been movements for the extension of both free-hand and mechanical drawing, on the ground that we must give art its opportunity and prepare for the manual training work in the high schools. In very few places have we gone farther in the lower schools.

In the city of Cleveland, fifteen years ago, some phases of mechanical and domestic work were introduced into every grade of all of the elementary schools, and I am informed that it still continues. In the four lower grades it consisted of sand molding, clay modeling, paper folding, outlining with the needle, construction through the use of cardboard, and all phases of elementary drawing. The aesthetic taste was incidentally commenced to be developed by combining colors and arranging objects. In the fifth and sixth grades simple geometrical forms, derived from the study of paper and clay forms in the grades below, and cut in wood by the use of the knife, rule, square, compass, and pencil, were given the boys, and simple needle work, involving the principal stitches in plain sewing, was given the girls. This was done by the class at their desks, under the direction of the class teachers after they had been instructed at grade meetings by the special supervisor. In the seventh and eighth grades the boys were given light bench work, and the girls plain cooking, and for that purpose were sent from each of several buildings at appointed times to central rooms specially prepared, and to teachers specially trained for the purpose. The system operated smoothly and was enthusiastically received in the schools and in the city. There was nothing new about the work itself, but the adaptation of it to all the grades in a large city system was doubtless unprecedented in the country. It certainly attracted much discussion and comment, and some official and pedagogical protest. At the National Meeting of Superintendents at Richmond, Virginia in 1894, after a supervisor in the Cleveland schools had presented a paper describing it, one of the most experienced and progressive school men of the country went directly over to the apprehensive and subdued superintendent from Cleveland and asked "Is there anything you *don't* propose to do in the primary schools?" But the industrial conditions in Cleveland were unusually favorable to it. Moreover, it taught no trade. It led to no particular craft. It was more in the direction of general accomplishments than of specific efficiency and skill. This much was true of it, however; it formed some basis for the work of trades schools, as well as of manual training schools and technological colleges. Yet the skepticism expressed at Richmond has been widely and well entrenched. Even the very simple phases of preparation for industrial vocations which aroused it have found little more than theoretical and halting acceptance in American elementary schools.

If there is an apparent inconsistency between my demand that the present work in the elementary schools shall be lessened by elimination or concentration and my suggestion that the elements of industrial training be added, let me say that the things of which I complain are continuing, are present every day in the week and in every hour of the day. They are not only not important; they are a positive hindrance to the expeditious and exact training of the powers of the child. The things that I propose would occupy at the most only a couple of hours in the week; they are really diversions; they recognize the pedagogical principle that it is quite as important for the child to do as to think; and they lead toward efficiency in a condition which he is likely to occupy, and will be an advantage to him no matter what his circumstances in life. The taking out of what I propose to eliminate and the putting in of what I propose to include will both be to the intellectual and dexterous advantage of the child. There is no real inconsistency. And if the one thing is done there will be abundant room for the other.

Above the elementary schools, industrial and vocational work has been given larger opportunity. In a great many of the high schools there are courses in manual training, and in all of the larger city systems there are manual training high schools. No one claims that this has much bearing upon craftsmanship. At the most it can relate to only a small part of the children who go to the public schools, and as to them, it is for intellectual quickening or preparation for one of the engineering professions, or for the training of men to direct other men who work with their hands.

In recent years some special vocations, like stenography and typewriting, and other things relating to office work, have found their way into the public secondary schools. Three or four public vocational schools, of secondary grade, supported by a municipality or partly by the municipality and partly by the state, like the Washington Irving High School of New York City, The Textile School of Lowell, Mass., the Central High School of Commerce of Philadelphia, and some of the evening high schools of Buffalo and New York City have been established. But their very names prove how far they are from the training of the masses in workmanship.

Many of the universities, particularly the land grant and tax supported universities, have great engineering schools, but their work all leads essentially to the industrial professions rather than to craftsmanship, although doubtless the sense which they drill into the heads of their students concerning the honor which belongs



to the man who can do fine work with his hands, and likes to work in a blouse, is adding somewhat to the attractiveness of skilled labor.

Private business schools which, for profit, have undertaken to train pupils in simpler mathematics, bookkeeping, stenography, business forms, and the like, have been a great help to many for a long time. Many of the Young Men's Christian Associations have established schools of this kind, and some of them are beginning to include trades schools in their scheme. Several correspondence schools have attracted thousands of pupils and developed the existence of a widespread desire for self-improvement. In New York City one company of financiers, merchants, and real estate men, and another company interested in house furnishing and decorating, and yet another interested in the building trades, and still another interested in the automobile trade, and doubtless many others, have set up schools or lecture courses for the special training of competent assistants. Some of the great manufacturing or construction companies, like the Westinghouse Electric Company and the Baldwin Locomotive Works, have set up schools of their own. They have prepared schoolrooms, employed efficient teachers, and laid out very considerable courses of work in order to train men for their own service. They take young men on trial for perhaps six months, and if they show some proficiency and aptitude, and will bind themselves to remain and follow their work for a term of three or four years, they enter into written agreement with them to that effect, and during the period they work in the shop they are under instruction and receive moderate pay upon a schedule which gradually advances as the apprentice may be assumed to grow in competency.

But all this, if it illustrates anything, shows the general lack of preparation for vocational employments in the United States, and the disconnected, very often unsubstantial, and ordinarily self-interested and sporadic movements to overcome the difficulty, rather than any general plan for meeting a very wide and very imperative demand.

I have been speaking in a general way of vocations common to boys, but the situation is no less urgent as to girls. While the old apprenticeship system has been gradually disappearing, and boys have been going from the country to the cities, and machinery has wrought such changes in men's work, the old-fashioned kind of housekeeping which trained girls to expertness in the household arts, has been disappearing also. Vocations which were formerly open only to boys are now open to girls, with the result that by the

tens of thousands they know nothing of good home making, and, worse than that, they are proud of it. It is bad enough for an attractive young miss to be unable to make a loaf of bread, or broil a steak, or use a needle; the limit is passed when a college makes her such a little idiot as to think it is smart to boast of it. The schools are not so responsible for this as the mothers are, but perhaps the schools ought to join with the mothers in the effort to cure it. And aside from the employments of women relating to the household, the business employments which women are entering in such great numbers may well concern the schools. And moreover, the principle that all educational opportunities, or their unquestioned equivalents, are to be extended to girls and boys alike, is to have acceptance and expression in all parts of this country.

Therefore, we may sum up this phase of our theme thus: The public school system has had but little thought of craftsmanship, by which the greater part of the people must live, and upon which the moral and intellectual health of the people and the greatness of the nation must depend; the work of the schools has led almost exclusively to mere culture and to professional and managing employments; the efficiency of the teachers has been measured by the number and training of the pupils they sent to the grade above, and thus the pupils have been led to think that the grade above was the goal of life; and the grade above has led to literature and the sciences and to professional and managing vocations. This has taken a great many into situations for which they were not adapted, and has overstocked the professions; has resulted in too many partial or complete failures, and is operating both to the industrial and intellectual disadvantage of the country.

American aims

It is clear enough that we will not only have to reckon with German industrialism, but also that we may learn much to our advantage from the German system of education, and I shall therefore not hesitate to draw as many comparisons with Germany as I may. We must distinguish a difference in aim and purpose, however, and can do it none too clearly, nor too soon. It is a difference which is of national concern to us. The German purpose seems to be to train boys and girls so as to add to the physical and therefore to the military strength of the empire. The American purpose is to train boys and girls so as to enable them to make the most of themselves. Our ideal seems the noblest, but as yet the Germans are widely and more uniformly realizing their ideal better

than we are ours. Of course, in the one case, the training for national strength incidentally makes useful and potential men and women; and of course, in the other case, training for the highest possibilities of manhood and womanhood incidentally makes for the greatness of the nation. But a national policy which gives every man his opportunity ought to make a larger percentage of productive, and therefore happier men, and in the end, an infinitely more versatile and potential people, if it can be carried out in ways which will not give youth a beclouded outlook and lead to too many misfits between adaptation and opportunity.

It can not have escaped our observation, moreover, that one who starts out for a professional or managing vocation and fails, never takes up craftsmanship afterwards and succeeds; while a good craftsman sometimes develops into an excellent professional man, and very often develops into the very best kind of a manager of his craft. And it is worse than idle, because it is justly productive of false standards and of ill-will, to put one to managing any business or any work, who has not learned the business by exploiting its processes from the bottom up to the place which he has come to occupy. Right there is one of the essential weaknesses of our American business life. Through our ambitions, through a rather hazy notion that we can hold any place we can get into, and do anything we can get a chance to do, through fortune or favoritism coupled with a fallacious logic about preparation, men get into positions where they exercise control over other men who really understand the details of the craft or the business better than their overseers do. It all illustrates the vital need of broader training for craftsmanship at the foundations of the craft and in the early years of the youth's life, if all are to have an equal chance, and if boys are not to advance to pitfalls because handicapped with superficiality.

In this connection it may be truly said that in the State of New York there is now less difficulty about the constitution of the professions than about organized commercial or industrial effectiveness. No one can get into the professions of law or medicine without four years in the secondary school, four more in the professional school, a professional degree from an institution authorized to confer it, and passing the State professional examination; while one can, and often does, get to a high position in a bank, or a department store, or a factory, or a railroad, without any educational requirements or any practical experience; and if he has dabbled in economics, the theory of accounts, and the like, in college,

under a professor who never had any practical experience, and never accomplished anything in business, he is deemed to be specially prepared to manage the whole thing. It illustrates again the fallacy of our standards and the readiness with which American spirit and ambition is permitted to start at the top, when it should be required to start at the bottom, of great businesses. It explains also the cause of so many misfits, accidents and failures.

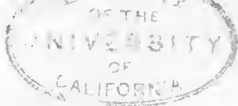
But on the other hand, it should not lead us to overlook the fact that mere experience without the study of fundamental principles, and a knowledge of the history of related subjects, is not so very much better. One course makes for conceited superficiality, and the other for conceited narrowness. There is small difference. The true course, if we are to provide the best possible training, is through practical experience associated with scholastic and scientific training, through the association of real business with the work of the schools. If we are to do it for some people, and would be just, we must do it for all people.

What are we to do?

While the schools are providing every conceivable kind of instruction for the head workers, the hand workers leave instruction altogether when they leave the elementary schools, and that is commonly before they are prepared for work or are mature enough to plan for themselves. What little has been done for these has been isolated and unsystematic, and done by private enterprise. Thus the public school system is one-sided,—unjust to the greater number and inefficient in meeting an overwhelming phase of the nation's educational need. To be consistent we must do less for the head workers, or more for the hand workers. We will not go back. All, not some, education is a passion in America. We will go forward.

But just how? It is a large matter. It means much more expense—but that is the least of it. It involves a large new chapter in our educational theory, a serious study of other educational systems, radical changes in schoolhouses and courses, the training of a different class of teachers. Before that can be commenced, or while it is being done, there will have to be much discussion, a great deal of missionary work, a consolidation of sentiment, and many new laws. The people of the schools may well have a plan, and one that is well fortified by theory and by fact, if they can.

It is but just to ourselves to say that the problem seems less difficult in other countries because the social cleavage is more dis-



tinct, children expect to continue upon the plane in which they were born, and the masses expect to work with their hands. Moreover, the governments are beginning to see that the strength of the nation depends upon training workmen, and the outlook of the government settles things. We do not worry about the strength of the United States. We take that for granted. We are for giving every one his chance, and for helping every one to make the most of himself. The course of other nations leaves out individual possibilities. It cares little for the individual as such. It neither reckons with nor promotes such an ambitious, buoyant, confident, aggressive national temperament as is common in the United States. Nevertheless, our course is producing a temperament which is top-heavy with self-satisfaction, and doubtless needs more ballast in the hold. We would not lose our optimistic temperament if we could: we will restore the balance.

If we compare with Germany we shall do it with the best of them so far as training for hand industry is concerned. There is no other great nation where education is at once so scientific, so balanced, so effective, and so free—scientific through research and the habit of taking pains—balanced because the educational system has come to be a pyramid with industrialism at its base—effective because the habit of sending children to school with regularity is universal—and free through the clear appreciation of the fact that the arbitrary power of the state is entirely consistent with the purest democracy in learning.

England has trades schools of all kinds and in great numbers. But England has no continuing, consistent, and coherent system of schools, beginning in the street and leading either to a profession or to a trade, and offering the opportunity of selection at some definite point upon the road. The aristocracy prepare for exclusive and literary colleges in private and exclusive schools. The children of the masses have to go to elementary schools which are not free in the sense that our schools are free: they get a very excellent training in elementary English: if they go farther they finish in trades schools that are more shoppish than schoolish, and possibly the better for it. But the lines are arbitrary and hard: there is little individualism and no choice. English education has a hard time getting over the idea that, without regard to the personal equation, some men are to rule and others are to serve; that the English school above the elementary must train the English "gentleman;" and that the elementary school must train the child of the masses in ways that will make it clear to him that his business in life is to serve.

One of the most illuminating members of the English Educational Commission, which recently visited this country under the patronage of Mr Alfred Mosely, said in his report that the difficulty with the English elementary schools was that pupils left them without any desire to learn anything more. The social cleavage takes hold at the very beginning in the schools, there is no system of middle schools and therefore no connection between the higher and the lower schools, and the lines are so rigid that they hinder the best results in both the upper and the nether classes. The English nobleman has no thought of permitting his personal comfort and his political control to be disturbed by allowing the "serving classes" to know too much; and the English nobleman will come to be less a nobleman, and the British nation will come to be, relatively speaking, less a power, unless there is a radical change about it.

France began the systematic training of hand workers long years ago, and the result is quickly apparent in the trades, industries, and arts of the French people. There are hundreds of trades schools in Paris and thousands throughout France. They are highly efficient; they turn out artists and craftsmen of the very first order; it is apparently very easy for France to make a most attractive exhibit in the international expositions. But it does seem as though the system is both arbitrary and narrow. It is so absolutely directed from the center, so oppressed with ministerial regulation, so oppressed with apprehension about a real democratic advance, that it develops mere craftsmen and artists, rather than free, all-around men and women.

Practically all of the children of Germany, boys and girls, rich and poor, high and low, up to about their fourteenth year, go to elementary schools, established, supported, and directed by the state. The teacher is a professional, the course exact, the attendance universal, and the expectations of the state are very completely realized. The idea does not yet prevail that girls should go beyond the secondary schools. At about ten years of age the boys and their parents are expected to determine whether they will fit for a trade or a profession. If for a trade, they go at fourteen either to a shop as an apprentice, or to a trades school. If for a profession, they go to a "gymnasium," which is a school of two kinds, of which one is more literary and classical and one more scientific than the other, and the boy takes one or the other according to the profession he has in mind. He enters the gymnasium at ten or eleven and gets out at nineteen or twenty, and then has been carried to about the middle of our college course.

The secondary schools separate again into schools which train for the literary and the scientific professions on one side, and for the commercial and technological professions on the other, while the lower trades schools lead straight to manual workmanship. Following the secondary commercial and technical schools we find them again branching into what may be called the industrial professions, which involve a masterful knowledge of the finest materials, the finest workmanship, and the finest completed goods; the commercial schools, which involve a like masterful knowledge of the ways to develop and manage trade; and the engineering schools, which involve an equally masterful knowledge of the construction of public works. And there is no difficulty in keeping along these industrial lines until one finds himself in the universities or the highest technical schools, where the world knowledge of the subject is present, and one can get to the very mountain peaks if he has strength, endurance, and persistence which are equal to the undertaking.

Our concern just now is with the primary and trades schools. There is some classification of pupils, even in the primary schools, according to the means of the parents, for tuition is exacted and it is larger for some studies than for others, and the instruction from the beginning has some reference to the situation and purposes in life of the pupils. There is little reason to doubt, however, that the instruction for all pupils is equally exact and painstaking, or that the spirit is exceedingly democratic, and that all pupils have equal opportunities to perfect themselves in the business which they elect to follow.

The children who have remained in the primary schools, thereby practically signifying their purpose to become what, for clearness and convenience, I designate by the term "wage earners" and who finish at about fourteen, then go to "continuation schools," which are of many kinds. The greater part teach the trades. These schools do not take the whole time of the child, but perhaps eight or ten hours each week, often in the evenings, and commonly so distributed as not to interfere with other regular employment. Attendance at the continuation or trades schools is compulsory, and employers are required to so arrange matters that employees may attend them.

As I am not attempting a description of the German system of schools I shall go no farther except as to trades schools, but it must already be appreciated *that German schools are provided for every conceivable purpose in life, that nothing excuses from attendance,*

and that the schools keep possession of the child up to the sixteenth or seventeenth year. Beyond this it must now be seen that the overwhelming idea is that those who will make good craftsmen shall not be encouraged to make poor professional men, or forced to attempt to manage men before, through actual experience, they show a capacity to do so. Or if this is not wholly so, it is essentially so as to the poorer people who can not afford to be misled or to indulge in a speculation which involves the hazard of useful and therefore successful and happy lives. And it seems as though it does not stand in the way of one's ultimately gaining any position to which his capacity may be adapted.

One who would well understand the German trades schools will not expect to get instruction from me, or in this way. The literature of the subject is coming to be available, and it will have to be studied by one who would be informed. A description here must necessarily be very superficial. Yet, enough may be said to arouse wider inquiry. The schools seem to extend to every possible vocation. It is clear that there is much flexibility, which results in the adaptation of schools to local industries. There may be scores or hundreds of them in a city, and they will be doing the kind of work demanded by the industries of the place and the thought of the people. They are essentially shops, but the book knowledge needful to a general understanding of the work is not neglected. Still they are essentially shops, the buildings constructed like shops, and the equipment and atmosphere leaving no doubt about the purpose to train youth to earn a living with their hands. They are evidently sustained and guided by the allied trades, and do not seem to incur opposition because they multiply workmen. It looks as though it is accepted that their number, extent, and output will, like the trades themselves, respond to the economic laws of demand and supply. Indeed, it is clear that while the town commonly meets the expense, it is sometimes done by commercial bodies and trade organizations. Sometimes the state supplies the entire expense, but oftener it provides a subsidy equal to one half or one third of the cost.

We must distinguish between the "continuation schools" and the "trades schools." The former do not confine their work to any single branch of trade or industry. They attempt to provide instruction in fundamental industrial knowledge. Their main branches are German, arithmetic and drawing. They are essentially for youth who have been obliged to go to work, who have begun to feel the need of more teaching, and who have a general rather than

a specific aim in view. They are held largely in the evenings and on Sundays. The reading, the arithmetic, and the drawing are all adapted to industrial or commercial ends. In many cities continuation schools are being changed into trades schools. There are continuation schools for girls as well as boys. These are necessarily more specific in work; they teach sewing, darning, mending, knitting, cooking, ironing, and other domestic arts. Religious instruction is often, if not commonly, associated with them. Continuation schools seem very like the evening schools in our cities, with the difference perhaps that they seek competent artisans, rather than day school teachers, to instruct them, and this of course gives them the atmosphere and purposes of industrial schools to a much greater extent than is true of our evening schools.

Attendance is commonly compulsory. In 1902 Prussia had 1684 continuation schools with more than 200,000 pupils. Bavaria had 274 such schools, Saxony 44, Wurtemberg 251, and Baden 170. It must be remembered that these are the lowest grade of schools with very distinct industrial ends. They follow immediately after the common and universal primary schools. But they do not always teach a particular trade.

The trades schools are distinguished from the continuation schools in that they do *teach definite trades*. They are of all grades and kinds, from the school that teaches simple joinery to the one that provides the most exact instruction in the making of china or the weaving of fabrics. The curricula of these schools of course depend upon the end in view. The Germans have much of what we have but little, namely, the "capacity for taking pains." They train for exact and definite workmanship in their trades schools. And they do not neglect the bookish side of it either. They apparently realize, as we do not, the need of keeping one's head and hands in equipoise. One may be an ordinary workman in a simple trade, with but a simple knowledge of what is in the books, but one can not become an expert and reliable craftsman in an intricate trade without a head which contains a very good understanding of the history, philosophy, extent, accomplishments, and ambitions of the trade. And one who has that is likely to have a great deal more, and to be a balanced and influential citizen.

The relations between the separate trades and the corresponding trades schools are close. That is important, indeed, it is imperative. It may as well be said at once that organized labor in America must aid in the upbuilding of trades schools in this country, or we can not hope for very substantial results. We will recur to this sub-

ject at a more appropriate place. It is sufficient just now to point out that in Germany the trades schools draw upon the trades for sympathy and direction, and they give back to the trades in fresh and ambitious blood, in spirit and capacity, in the pleasure and enthusiasm of superior ability to develop intricate and fascinating work. *If we can not do this, we may as well face the fact that Germany will in the end outrun America in industrial prepotency, and therefore in national productivity and power.*

The German industrial schools are established under all manner of auspices—by guilds, trade associations, towns, or individuals. Tuition is ordinarily charged, but it is small, and smaller for Germans than for others. The state often encourages these schools with money, and always with word of mouth and guidance. The Emperor embraces frequent opportunities to stimulate them. The Court has to follow the Emperor—the present Emperor anyway. The nation is thoroughly convinced that money spent in trade instruction is well expended. As a result schools have sprung up in great numbers everywhere, but they are flexible enough to adapt themselves to the business interests of every locality.

Here is a partial list of the kinds of schools in operation: artistic darners, artificial flower makers, toy makers, bakers, barbers, basket makers, blacksmiths, braziers, bookbinders, cabinet makers, carvers, cooks, carpenters, confectioners, dressmakers, dyers, embroiderers (hand and machine), engravers, gardeners, glaziers, goldsmiths, horseshoers, knitters, lace makers, leather workers, locksmiths, masons, milliners, paper hangers, painters, photographers, potters, printers, rug makers, saddlers, spinners, stonemasons, tinsmiths, tailors, trunk makers, watch makers, wagon makers, wheelwrights.

In Germany the idea that woman's sphere is home-making has not been much broken in upon, and accordingly the trades schools for women, of which there are many, relate to the domestic arts about which women are specially concerned. This has all developed in the last thirty years, and largely in the last fifteen years. It has grown out of the international expositions. It has proceeded not only from the sagacity of German statesmanship, but from the quick and decisive influence of imperial sagacity and power upon German life. Doubtless there are some in America yet who are opposed to it on that account; who are opposed to everything, good or bad, which flows from the doings of a monarchical government, no matter how constitutional it may be; but surely the time has come when the controlling judgment of this country will not be so foolish as to refuse to adopt or adapt whatever in foreign policy may seem good for American life.

There has been, and there is yet to some extent, a very unfortunate sentiment in America that efficiency and aggressiveness in government is, of itself, monarchial, and therefore undemocratic and Un-American; but the better thinking of the country is coming to realize that while the general opinion of the country must determine its policies, still an officer of the state may commend and recommend policies; and that when policies receive the sanction of common sentiment, and then of law, an officer of our democratic government is expected to carry them out just as forcefully and completely as the officers of a monarchial government would do.

What the Germans say of us

Germany sent an educational commission to the St Louis Exposition in 1904 with instructions to study the school exhibits at the exposition and quietly investigate the educational system of this country, and then report with particular reference to the bearing of the educational systems of their country and ours upon German and American industry and trade. The commission pursued its work very quietly. It did not seek the lime light; it did not proclaim its route of march by the use of a military band; it circled the educational conventions; it did not have itself invited to dinners and make speeches at us; in some way it even escaped the alert and aggressive attentions of the press. The commission's report may be alike interesting to German and American readers, but it is not altogether satisfactory to American complacency.

It declared that America is abundant in resources, filled with energy, exceedingly quickwitted and resourceful; that a vigorous people is possessed of such mighty and largely undeveloped physical resources, and has such splendid advantage in coast lines and commercial situation, that undoubtedly it will have to be reckoned with in the trade and commerce of the somewhat distant future; but that the United States is so seriously handicapped with manifest disadvantages, of which Americans are unconscious, that no American industrial competition at any early day need be taken seriously by the German nation. They said these disadvantages make a buoyant confidence without sufficient underpinning for it, a "feeling of complacent satisfaction with everything American," an expectation that, without much planning, and without much philosophical study, or concerted action, or definite plan, or co-operative efficiency, everything will come out all right whenever the need of it arises. They emphasized the entire absence of provision for public schools supplying systematic instruction in craftsmanship.

and asserted that this lack is sufficient to overcome any natural advantage in resources or geographical situation. This commission was not constituted exclusively of teachers, but of teachers, merchants, manufacturers, economists, publicists, and constructionists. They were thinking much of German trade and they advised their people not to be disturbed about any American interference with it at an early day.

That is certainly enough to make the children of our "Uncle Samuel" sit bolt upright and look all around the horizon. Our ideals are not those of Germany. We are not primarily concerned about breaking down German trade. We have nothing but good will towards our flaxen-haired and interesting German cousins. We are not apprehensive about the physical strength, or, in other words, the war power, of our nation; and we are not going to bend our educational and industrial policies very exclusively to that end. All of that will take care of itself, notwithstanding the self-satisfaction and complacency which the German commission saw clearly and reported correctly. But we *are* concerned that every American child shall have his or her chance; that that chance shall be at least as good and great as the chance of any child in any nation upon the earth; and that there shall be nothing in the policies of the country to mislead any child about his chance. We do believe that the greatness of this nation, the political attributes of its citizenship, and the measure of its influence upon the thought of other nations and upon the good of mankind, depend upon making all that can be made of every son and daughter of the Republic; and we do know that the physical and moral strength of men and women depend upon their having and loving work, and that their having and loving work depend upon their being able to do it well, more than upon any other factor in human life.

Resources and accomplishments

The President of the United States has just called a national conference of the governors, members of Congress, and other public men of all the states, to meet in Washington in May next to initiate general measures for conserving the nation's resources. The movement is none too early. A rational people may make much of slender material resources. Doubtless the lack of territory, of fertility, of woods, and mines, and animal life, are factors in the intellectual development, the moral fiber, the balance and steadiness of a people. Very likely the boundless material resources of the United States have contributed to our self-complacency, to our in-

difference, to the confidence that whatever situation we get into, we will get out of it when we must. Of course, the very richness of the land, in the hands of a people who lack nothing in physical strength and whose wits seldom go limping, has made it quite possible for the nation to prosper and advance without exact industrial training, and even without making the most of everything we have. Certain it is that we have been almost as prodigal of our resources as of the time and future of our children. It is a strain upon the character of a nation, as of an individual, to have a superabundance of the world's goods. We waste more than would sustain the same number of people in any other country in the world. It has already impressed its influence upon the qualities of the nation, and one of its most decisive results appears in the fact that, while we are trying to do more different things without definite aims in education than other nations are doing, or than our own fathers did, we are really doing much less than other nations are doing, or than our fathers did, to make the most of our possessions, and of ourselves through the training of our children for care, skill, and assiduity in the labor of the hand. And it goes without saying that, as more and more people live in our territory, as the land is more and more used and exhausted, and particularly as the more general and exact industrial training in other lands turns, as it is turning, the balance of trade against us, a decisive new departure must be taken, both in the production and economic use of materials, and in the extent and competency of our labor, if we are not to let the steadily growing rivalries in the commerce of the world force us to a lower place in the world than the one which rightfully belongs to us.

The United States Census Bureau has given me a statement of the exports in domestic manufactures from Germany and from this country in the same years, beginning with 1880. It is as follows:

FROM THE UNITED STATES	FROM GERMANY
1880..\$102 856 000	\$152 967 000
1890..\$151 102 000	\$381 612 000
1897..\$277 285 000	\$569 640 000
1900..\$433 852 000	\$715 776 000
1906..\$686 023 000	\$1 079 520 000

The point of these figures is that the ratios of increase are not so very far apart, notwithstanding the fact that Germany is an old, densely populated country, whose economic conditions have not

much changed in thirty years, while the United States has marvelously expanded in all of the factors of industrial productivity, unless it be in craftsmanship, in that time. In other words, it looks as though the Germans had completely met our natural advantages in resources, machinery, and markets, by multiplying the number of their skilled workmen, and adding to the kinds of manufactured products which find world markets. This ought to be suggestive to a people who are quite conscious of their industrial and business wits. It is doubtless true that neither wits, abundance of materials, machinery, waterpower, coal, artificial protection through tariffs, nor engineering schools, without a schooling and a manner of life which seeks to make every individual man or woman a producer of something worth having, can long save us in competition with a country which, regardless of its philosophy and aims, uses the common power to make the most of the labor of every child of the Empire.

Shall we have public trades schools?

The American public has really done nothing about training the children of the wage earners in industrial vocations. We permitted the very name "industrial school" to become used almost exclusively by institutions of a penal or disciplinary character. The manual training schools are not vocational schools. They relate to general intelligence or culture, or else to the highly technical or semiprofessional vocations, for which the children of the masses are not fitted, as a rule, by inheritance, environment, or the influences of the home. A number of very excellent trades schools have been established by benevolent citizens, but, while some of these have been measurably successful, Americans do not take very enthusiastically to institutions which in whole or in part rest upon charity. The people are too much accustomed to the sense of proprietorship in the public school system to become very ardent over an institution which is not *public* enough to be dedicated to the common interests without conditions or reservations. To be acceptable to the public, it must in a sense belong to the public, and be managed by public officers as a trust, for the advantage of all alike.

Doubtless the American schools which come as near as any to the trades schools of Europe, are those which have been established by a few of the great manufacturing works to train workmen for their shops. No one can justly criticize these from the standpoint of the manufacturing employers. It is their own matter: they not only

have the right, but are to be commended for doing it: people may use what they offer, or let it alone. In the absence of some general system of trades schools they are clearly warranted in doing, doubtless find it necessary to do, what they can to prepare boys for their own service. The movement only exemplifies the dearth of industrial training in the country, however, and relieves it only at a few points and in an altogether inadequate measure. It is unacceptable to the labor organizations, because they think that such schools are created and operated in the particular interest of the employer, and not in the general interest of the employee, and more particularly because they think such schools provide ways for defeating the aims and methods of organized labor.

From the viewpoint of general educational policy, the labor organizations have the better of the contention. Such schools are unquestionably within the rights of the large employer. He can not be expected to organize and operate a school upon a basis and with the ends of a public school, or a school in which all, or all of a general class, have equal rights. Certainly he does not, and quite as certainly the school which he operates can not, meet the educational and industrial, and therefore the moral and material, needs of the country in any appreciable degree. We must find a scheme which will involve public proprietorship, and be managed in the interest of all the people, or at least all who may have common interests in any trade, before it will become an effective American institution.

Can we develop such a plan of procedure which will meet with the cooperation of employer and employee, of the capitalist and of organized labor? It is a vital question. I have confidence that we can. Capital may be expected to oppose in some measure any extension of the public school system involving a very substantial increase in cost, but capital can not withstand the justice of the demand that, if there is any way of doing it, the public shall supply to the children of the wage earners something equivalent to the literary and professional instruction provided for the children of the better-to-do classes in the high schools and colleges. Nor can capital withstand any movement looking to the training of workmen, to the recognition of competency and industry, and to the moral and material advantage of American workmen.

I have no right to speak for organized labor, but what I have known of American workmen and what I have recently read from many of their authorized leaders, combine to make me believe that they would not be so fatuous as to deny the utmost of oppor-

tunity to their own children only because there would be more and better trained workmen, if they could have confidence that what was to be done would be free from selfish exploitation, rest upon a truly educational footing, and be guided by the common advantage of all of the interests concerned.

And since writing the foregoing I have learned that the whole subject is under careful consideration by the authorities of the American Federation of Labor, with a manifest purpose to determine the attitude which the labor organizations ought to take concerning it. The labor leaders often speak of their apprehension about schools assuming to turn out finished craftsmen and thereby making a "short cut to workmanship," and place their skepticism about industrial schools of all kinds upon that ground. There ought to be no apprehension on that account. There is a universal and imperative law which regulates the acquisitions and demands of craftsmanship. The higher technical schools and trades schools can not expect to turn out finished craftsmen any more than the law schools and medical schools can expect to train finished lawyers and physicians. But they can train boys and girls so that they will have the possibility of becoming finished craftsmen, just as the law schools train young men so that they may become strong lawyers and the medical schools train boys up to the possibilities of becoming scientific and skillful physicians and surgeons. And it has come to be as apparent that craftsmanship is dependent upon technical and trades schools as that learned professions are dependent upon professional schools. And if craftsmanship is dependent upon such schools, then the children of craftsmen are dependent, and all of the higher interests of the country are dependent upon the schools.

The American Federation of Labor, at the recent meeting in November, refused to commit itself to an attitude of antagonism to technical and trades schools, and directed its executive council to examine "established and proposed industrial school systems so that it may be in a position to inform the American Federation of Labor what, in the council's opinion, would be the wisest course for organized labor to pursue in connection therewith."

There can in the end be but one outcome, and I have entire confidence that the wisdom of the labor organizations will lead them to an attitude which is at once sane, patriotic, and promotive of the best good to the children of the masses.

We have now seen how very slight are the relations of our schools to our industries; we have looked into the relations which

other peoples have established between their schools and their industries; and we are up to the question whether we shall train the children of our wage earning masses for the crafts and other vocational employments and for the household and womanly arts; in a word, whether we shall have trades schools, and if so, upon what sort of a plan.

It seems to me that the moral argument for the advance is irresistible. There can be no room for doubt about the moral obligation of the people to do as much for the children who can best work with their hands, as for those who go to the high schools and engage in professional, commercial, and managing vocations.

The higher institutions have nothing to fear

The experience of Germany shows that the higher institutions would have nothing to lose, but much to gain, from the development of vocational schools. When the Emperor, notwithstanding all that had then been done to develop mono-technic schools, admonished his people that they were still turning out too many "intellectuals" and too few "industrials," he was aiding the universities, and particularly the higher technical schools, quite as much as the trades schools. It is ordinarily so in education. An advance at any point makes for an advance at all points where there ought to be an advance. Thirty years ago there were only 17,500 university students in Germany. Ten years ago the number had increased to 30,000, a growth of less than fifty per cent in twenty years. Now there are 45,000, an advance of more than fifty per cent in ten years. Naturally the largest increase is in the higher technical institutions. The number of these was 4000 in 1891, 13,000 in 1903, and 20,000 now. But the higher literary, scientific, and technological institutions, the institutions leading to professional and managing employments, are all overcrowded, though not more so than the professions to which they lead. So, I repeat, we need have no fear of injuring the higher schools or the higher institutions which train for professionalism or for idle culture, by training our masses for industrialism.

Have no fear for the future of the higher learning in the United States. Its only danger is in the inadequacy of the elementary and fundamental training. Our people of means and culture like the higher things of life too well to leave any room for doubt. The university, the college, the professional and technical school, are as well established in America as the rock at Plymouth. They are established in all parts of the country. The advance of the university is quite as marked in the newer parts of the country as in the older. Best of all, an American type of university is coming out of it all,

and happily it is able to see that the application of scientific learning to the vocations of living people means more to the world, and does more for itself, than the exclusive study of the ages gone, for the mere discipline and the culture there is in it. And happily too, this is making for the kind of elementary training that is vital to the progress of education and the unfolding of a nation's life in necessary equilibrium.

The spirit and enthusiasm of the American temperament are to be reckoned with in the training of our youth. Yes, in the training of our people from the beginning to the end. There need be no fear of any lack of generals. If we train and guide the crowd, the leadership will then take care of itself. If we undertake to favor, only or mainly, the materials of which leaders are made, we are likely to be fooled about it — for it is generally the unexpected that happens in the matter of leadership; and we then surely withhold from the masses what is their and the country's due. All experience shows that the real captains in all lines of human activity have come out of the crowd that worked with their hands. The love and the capacity for drudging work are the fundamental basis of leadership in all employments, whether of the head or hand, and any educational system which fails to recognize the fact, which does not honor the blouse shirt and the clean smut of honest labor, is at once misleading the innocents and moving directly towards the defeat of its own ends.

Two state movements

It would be unjust to make no reference to distinct efforts in two states — Massachusetts and Wisconsin — to meet the situation. In Massachusetts a commission appointed by the Governor, pursuant to an act of the Legislature, in 1905 studied the matter and reported in favor of the creation of a permanent commission whose duty it should be to promote discussion of the matter and effect the organization of trades schools in the towns of the state. Such permanent commission was provided for and appointed in 1906. Prof. Paul H. Hanus of the Education Department at Harvard University is the president. The state provides rather liberal aid for such industrial schools as may be established under the auspices of the commission. The reports of the two Massachusetts commissions are substantial contributions to the literature of the subject. The movement shows much careful thinking and some caution about doing. It seems to me that a serious mistake is made in committing the organization and administration of industrial schools to a special commission and not to the public school authorities of the state and the subdivisions thereof; and it seems to me also that the commission

falls into fundamental error in looking to the founding of higher technical schools, teaching no one trade, to the exclusion of vocational trades schools, if it is intended to meet the situation which seems to me most urgent and most dependent upon public direction and support. But that is obviously because of the prevalent industrial situation in Massachusetts.

The Wisconsin movement is evidently intended to deal more exactly with the situation we have been discussing. The last Legislature in Wisconsin added nine sections to the school law authorizing cities, or school districts embracing a city, to establish and maintain schools "for the purpose of giving practical instruction in the useful trades to persons having attained the age of sixteen years, as a part of the public school system of the city," placing such trades schools under the supervision of the school boards, and empowering the school boards to provide buildings and equipment, and employ teachers, and "give practical instruction in one or more of the common trades." Each trades school must have, however, an enrollment of at least thirty pupils. An important, and undoubtedly a salutary provision of the law, is that the school board shall appoint an advisory committee of practical craftsmen to cooperate in laying out and carrying on the work of the trades schools. The scheme is to be supported by levying a tax, not exceeding one half of one mill, upon the assessed valuation of the city, the proceeds of which can not be used for any other purpose. The school board is authorized to act upon its own initiative unless twenty per cent of the electors file a protest against the proposition after notice has been given, in which case the question must be submitted to an election of all the voters, and the majority must rule. Here, too, are some details which we would have to debate, but on the whole, the plan seems to meet the situation very well indeed. It is certainly filled with very great possibilities.

In each of these states the movement grew out of keen popular interest in the subject. The manufacturing conditions in Massachusetts make the training of operatives very urgent for both the people and the industries of the state. In the Wisconsin cities, particularly in Milwaukee, the teaching of particular trades has been strongly urged. A "School of Trades" was opened under private auspices in Milwaukee in January 1906. It seems to have met a manifest need very successfully. The feeling grew quickly that it should be a part of the public school system of the city, and therefore Milwaukee influences which were interested in this school procured the enactment of the law. Since then the "School of Trades" has become a part of the Milwaukee public school system under this

law. The one half mill tax authorized by the statute yields more than \$100,000 in Milwaukee. I am advised that as yet nothing more has been done in the state, but that is not significant, for the time has been short. It is also said that no schools have yet been organized under the Massachusetts law, but that something in this direction is under consideration in several cities.

Such enactments in a state extend discussion and give opportunity to the thinking of the people. They are incapable of harm: if not desired, nothing results: if they will not work, they are ignored or modified: if they meet the needs of the situation, they break out the roads of progress.

Something or nothing

If the time has come and the conditions are ripe for the movement we have in mind, let us try to organize it upon a plan that will work, and in the working will produce continually enlarging results for all the children, all the schools, all of the industrial, and therefore all of the moral and intellectual, activities of the country. Nothing can come from a plan that fails to reckon with all of the interests concerned, that does not call to its support the aid of both employer and employee, or that is incapable of results amply commensurate with the labor and the cost. If we should have to compromise logic, efficiency, coherency, and completeness out of it in order to avoid issues, either with capital or organized labor, let us assume that we are not yet ready, and, notwithstanding the continuing and increasing disadvantages, let us wait until we are.

To be successful, this movement must sustain organic relations with the public school system. It can not succeed unless it is to articulate with that system. To articulate with it, it must be under the same management. It must rest upon just as substantial a footing as the other parts of that system. It must appeal to the civic pride, the pedagogical sense, the practical experience, the democracy, and the enthusiasms of the country. Then it must have a share in the passion of the country for education, and it must be part and parcel of the system of common schools, which is enshrined in the hearts and the usage, the constitutions and the laws, of the land. It can not be shunted off to state commissions and local boards, which are out of legal relations, and possibly out of sympathetic relations, with the established educational organization of the people. To be resultful it must get from, and it must give to, the public schools. That, of course, means that there must be nothing about the movement which does not accord with the fundamental basis of the common schools, and it also means that there must be some

modifications in the present plan of the schools in order to give it a comfortable and useful place. I am not at all sure that that may not be done with quite as much advantage to our common intellectual education, as to our industries.

To be successful, it must not make the mistake of ministering to the highly technical and highly organized industries, carried on in great factories, so much as to the mechanical trades which may appeal to the independence and satisfy the ambitions of the individual. It must, of course, do what it may for the employees of the factories, but it must know that that will have to be very general, and will have to apply to general intelligence rather than technical efficiency, because the work which has to be done in a factory, which relates to a single feature of a complicated process, will have to be learned in the factory itself. The main point of the proposition must be the development of *workmen* rather than of professionals or managers, and the vital basis of it must be the inherent right of every American child to his chance to make the most of himself in the industrial, as well as the intellectual, life of the country.

Only harm and humiliation can come from dodging issues with organized labor by declaring that we do not propose to teach any trades. There is not much else that we are not trying to do. I am for doing that; or for making what little we can of our unsystematic system of night schools, and not pretending that we are doing anything very important. The better attitude is that our children are not learning trades, that it is vital that they shall, that it is their right, that it is necessary to the country, that the schools must teach them if they are taught, that the schools may now teach them better than the workmen, that the burden ought not to be left to the workmen, that the schools can not assume to train all children to be finished workmen any more than they can train all children to be finished physicians or engineers, but that the schools can bring most children up to the plane of trained beginners in all of the arts and crafts, with entire confidence that in time the greater part of them will be more efficient workmen and more intelligent, and therefore better, men and women, and that this will not menace, but will promote any legitimate or existent interest of organized labor. With confidence in the intelligence which determines the ultimate attitudes of the labor organizations, having entire sympathy with their purposes if not with all of their acts, we may meet them upon their own grounds and develop the details of a plan which ought to gain wide, if not universal, approval, because there is no ultimate and logical reason for dissent. But that can never come by avoidance, or through makeshift or compromise.

Recommendations

Then my suggestions and my tentative plan may perhaps be stated as follows:

1 Insist upon more complete and always up-to-date vital statistics. Know of the existence of every child, and when he is of school age have him accounted for.

2 Require attendance at seven years of age, instead of eight, and let it continue, in elementary school or trades school, to seventeen, but excuse from attendance before eight, at the parents' request, on the ground of immaturity, and also excuse from attendance whenever the work in the elementary school and trades school is completed, or after fifteen if the child is regularly at work.

3 Establish schools for teaching trade vocations, the work to begin at the end of the elementary school course, and continue for three years.

4 Let the trades schools be open both in the day time and evening.

5 Establish continuation schools, to be open mainly in the evenings, where the work shall be of a general character, suited to the needs of youth who are employed through the day and are not doing the work in the trades schools. In other words, make our evening schools more general and better. Let the work in the continuation schools go perhaps half way or more through the high school course, but with less formalism about it.

6 Shorten the time in the elementary schools to seven years. Take out what it is not vital for a child to know in order to learn or to do other things for himself. Assume that he will learn and do things on his own account if he has the power. Strive to give him power, and expect that through it he will get knowledge. Stop reasoning that mere information will give him power. Stop the dress parade and pretence about teaching, which consume time unnecessarily. Push the child along and aim to have him finish the elementary school in his fourteenth year. When he is fifteen send him to the trades school whether he has finished the elementary school or not.

7 Assume that if the child does not go to the high school, his school work may end with his seventeenth, and not in his fourteenth, year.

8 Put into the elementary schools, from the very beginning, some phase of industrial work. Up to the last year or two let it be work that can be done in the schoolroom, at the desks, under the ordinary teachers, and will occupy two or three hours a week. This might proceed from folding paper, molding sand, modeling clay, outlin-

ing with a needle, to the simple knife work in wood, plain sewing, knitting, and the like. In the last year or two send the classes to central rooms specially prepared, perhaps to the trades schools, for more complex wood work, cooking, etc. Always emphasize the drawing.

9 As the child comes to the end of the elementary schools, expect him to elect whether he will go to the high school, to a trades school, or to work.

10 Wherever he goes, expect that the schools will keep track of him until he is at least seventeen. If he goes to the trades school, expect him to get into the possession of the fundamental knowledge and something of the skill of a trade by his seventeenth or eighteenth year. If he goes to work in a store or factory, expect him to come to the continuation school till his seventeenth year is completed. Have him and his parents understand that he is responsible to the schools until he is perhaps eighteen years old.

11 Set up trades schools in spacious, but not necessarily ornate, buildings. Start the particular kind of trades schools that the business of the town and the interests of the trades call for. Let it be understood that wherever there are a sufficient number of children to learn a particular trade, there will be a school to teach it to them. Let the trades school partake more of the character of the shop than of the school. Hold to books, somewhat, particularly books which the pupils will be glad to read by themselves, carry mathematics a little farther, lay emphasis upon work with a pencil; let the main part of the work be with the hands; and let the atmosphere of the place be free and comfortable, so that young people will like it. Let the teaching be done by real artisans, who are intellectually balanced and can teach, rather than by teachers who can use tools only indifferently. Above all, have teachers who are not afraid of youth, and so are not under the necessity of brow-beating and badgering them a great deal, but rather who command respect because of what they are, and can lead the way to the pleasure of really doing things.

12 Keep the trades schools open afternoons and evenings. Have their pupils attend from four or five hours to as many hours a week as the pupil can give. Let the training be individual and let the progress of the pupil depend upon himself and upon the time he can give; but allow him to engage in other work for pay if he must.

13 Modify the child labor laws so they will articulate with the plan, and enforce them. Require employers to regulate their affairs so that employees may attend continuation schools or a trades school at least four or five hours per week.

14 Let the trades schools be supported by the town, but give them sufficient state aid to encourage their organization and dispose them to conform to the needs of the situation.

15 Meet any demand on behalf of girls as well as on behalf of boys.

16 Make it quite possible for one in a trades school to go to a manual training high school, and vice versa, but be careful to avoid the inference that one is to prepare for another. Let it be understood that each stands upon its own footing and leads to very different ends.

Higher technical schools

Coming to a conclusion, it occurs to me that my desire to emphasize the need of mono-technic or trades schools for boys and girls who are not to work in stores, offices, or factories, but should be prepared for independent work, dependent upon their individuality and their own hands, may have led me to seem to be indifferent to the interests of the higher technical schools and of the industries which depend upon the cooperation of many workmen and the use of machinery.

I would not have it so. Of course, much of our industrial productivity, and therefore much of our manhood and womanhood, is to depend upon the conditions in the large factories; or, in other words, upon the relations of the man and the machine. The tendency of the machine is to make one man's labor as good as another man's. That tendency can be met and overcome only through education and individuality. And it must be overcome or we shall produce only vast quantities of coarse and low-priced goods, when our commercial success depends upon our ability to turn out fine and high-priced goods. We are not meeting the tendency as we ought. Perhaps it is but just to ourselves to say that this is essentially the land of invention and of machinery, and that we have more to do to keep the operative ahead of the machine, than other countries have. Then we must *do* more. Beautiful china and fine fabrics are dependent upon it, and we are not abreast of Britain, or France, or Germany, or even of China or Japan, in fine pottery or fine weaving. And there is more than the fineness and the quality of products at stake: the fineness, and the character, and the happiness, of men and women are at stake. It all depends, in the last analysis, upon the general education and the special training of operators and operatives alike. And that must be done in the elementary and secondary schools, in special technical schools, and in the factories themselves. It can not come through royal decree. It must come through the favor and the pressure of the gradually

unfolding public opinion of the country. But it can never come if we persist in the hallucination that we are possessed of the world's knowledge and proficiency already. Instead of being indifferent to the manual training schools or the high-grade pluri-technic schools, I think they are our main instrumentalities for making us aware of our industrial deficiencies, and for pointing our industrial masses to the marvelous value of art sense, of the natural sciences, of economics, of manual skill, of ambition and assiduity, of intellectual progress, and of character, in workmanship and in life.

But all said and done, the higher technical school is already upon its feet at the points where most needed. The necessities of capital promote it and the favor of fashion is lavished upon it. And the need of the trades school, or the appreciation of the basis upon which it can thrive, or the obligations of the common life to it, are as yet nowhere accepted in America; and therefore it claims the most emphasis.

Agricultural education

There is no less need of the applications of general knowledge and special skill to the agricultural than to the mechanical industries. But agricultural training rests upon a wholly different footing and must be promoted by wholly different methods from those which must be used to extend and uplift industrial craftsmanship. At an early day I hope to discuss the basis and the methods of a definite training in the proficiency which will enable people who live on the farms to get the most for rational life out of their lands. It is spoken of now only to show that it is not forgotten.

Conclusion

We have exploited the fundamental principles of our democracy in our politics and in our religion much more completely and satisfactorily than in our education or in our industries. The application of those principles to our training and our work of hand is now to be pressed to conclusions.

It is a matter of great moment to the country and to what the country stands for in the world; and it is a matter of preeminent concern to the State which has the largest population and is first in finance and in publication, as well as first in the commercial and manufacturing activities of the Union.

The people of the State have the power in their hands. They have millions of boys and girls to raise aright. Nothing is clearer than that results turn upon the training. They have business to promote. The outcome is determined by the course that is taken. Our children and our work are interdependent. One interest must help

the other if we would grow in the elements which make a commonwealth great. It is becoming more and more obvious every day that, whether we would wish it so or not, a steadily increasing weight of responsibility must rest upon the schools.

The usefulness of our society to the individual depends upon the character and the efficiency of the units who comprise the mass.

The worth of the individual to the state, on the other hand, depends upon the common acceptance of the principles of the Golden Rule, as well as upon the ambitions which are inspired by the common thinking and the prevalent anxiety and aptitude of the people for work.

Whether the work be intellectual or manual has nothing to do with the right of the toiler to respect and regard.

Individual success and the growing strength of a people must come, if it comes at all, through steady application by growing numbers, through increasing competency, through sound living, and through the slow accretions of goods and of esteem.

It would be an appalling and pathetic mistake for a people to think that subtlety and greed can become the basis of either personal or national prosperity.

If it seems an unnecessary and rather repellant preachment to reiterate these truisms here, let me remind you that immoral exploitation, the illegitimate use of the common power, and the abnormal fortunes which have resulted from overreaching, which has found its opportunity in the lack of legal restraint and the abundance of abnormal conditions, have raised serious doubts in the minds of multitudes as to whether they are truisms or not.

Economic conditions have forced combinations. The disappearance of individual responsibility in the corporation and the labor union, has wrought havoc with old-fashioned thinking and with moral fiber.

The time must soon come when the man in the corporation shall be stopped from using the common power of the people to oppress rather than to aid the people, and when the man in the union shall be stopped from using the organized strength of his fellows to do the least he can for his wage, and from debasing himself through subtle antagonism to the people for whom he works, or a heavy shadow will rest upon the pathway of the Republic.

It is to be accomplished by the logical evolution and application of law, and by a system of education which offers equivalent opportunities to all people and to all industries.

It is to come through the stern refusal of special privilege and the ready recognition of the right of special profits for special

assiduity, special thrift, special skill, special ingenuity, or special risks, on equal terms to all.

It will come through the ample protection and encouragement of the corporation or labor union in all legitimate operations, and in the complete rejection of all propositions which impinge upon the fundamental rights of men or are prejudicial to the interests which are common to us all.

The corporations are being taught rather strenuous lessons just now. There is some danger that the new found fact that the process is good politics may carry it too far. The officer who misbehaves deserves the punishment more than the corporation.

The man in the union, and all the rest of us, both in this generation and the next, must be aided more completely by the schools, and to do that some radical changes in the basis, the thought, and the plan of the schools seems imperative.

The child must have his chance,—an equal, open, hopeful, chance. But he must not be misled. His chance is in work. It is in his becoming accustomed to discipline, to direction, to industry, and to persistence, before he is sixteen years of age.

The chance is lessening rather than enlarging through too much sentimentality in the schools. I do not think our young people are more immoral,—I think they are more moral, than the young people of the last generation, or the one before that, were, but I think they are distinctly more irresponsible, falsely polite on occasions, and distinctly impolite and often impertinent the rest of the time, than their predecessors were; that they have more information and less power; and that it is due to the weakening control of the home, and to pedagogical philosophies which are either fallacious or are unwisely applied, as well as to work which is undesirable or too much attenuated, in the schools. Let us resume some old-fashioned notions about work, about the child as well as the teacher doing his part of the work, and about the direction and the control of children.

Even though we regret the fact, I am confident that the chance of the American child depends upon the school supplying opportunities for his physical, as well as his intellectual, faculties, which were formerly supplied outside of the schools. He must have a wider range of things to do, he must be allowed to choose when he can; and he must then be required to do what he undertakes.

His training must be more exact and definite. He must be trained in a vocation and taught that he must uplift his craft and help his craftsmen, while he allows no one less worthy than himself to rob him of the benefits of his individual skill, or of his fundamental right to use it in the way which will bring him the most

advantage. He must be distinctly told that he can not have the profit which belongs to other men through their knowledge, skill, and thrift; that shiftlessness can bear none but bitter fruit; and that there is no probable chance and nothing in the thought of his country which will make it otherwise.

Our schools can not long continue to give an advantage to a minority, nor to give more aid to the intellectual than the industrial interests in our life.

The schools will have to keep the teaching even with the child's age; will have to adapt the teacher to the sex, circumstances, and purposes of the child; will have to meet the demands of every kind and grade of industry; and will have to continue their oversight and aid until habits are somewhat established, and the ability to perform a definite work is reasonably assured.

If, coincident with all this, capital is encouraged to venture and provide work for loyal and capable workers; if the dividends be but a just return for the investment and the risk, and the wage be gauged by the character of the service, and the skill and reliability of the worker; if employers will concern themselves about the safety, comforts, and general welfare of employees, and if employees will appreciate the risks and responsibilities of management, and study the interests of employers; if the work of the day is kept within reasonable hours or specially compensated; if there are public facilities for self-improvement when the work of the day is over; if there is combined effort to make the homes as good as may be; if children are not allowed to work when they should be in school; if women are not permitted to labor when and where they should not; and if men who can work are made to work or allowed to want; if amusements can be made decent, healthful, and at moderate cost; if drink can be held in check, and politics be told to go hence; then wealth, and health, and happiness will abound in the land.

Let us bring about as much of it as we can for our State. To that end let us not be afraid of new plans. Let us not think that the trend of events ought *not* to be. Even though we depart from the thought and the practice of the past, let us work out the foundation principles of our democracy in our education, and let us make our knowledge and our training potent in our industries. And let us make our industries contribute not only to our wealth and to our strength but to our manhood as well. Then we shall assure the free American chance to every one, and we shall give a new interpretation and a new power to the essential factors of our common life.



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