THOUSANDS of workmen, busy every night, trying to learn new things about their trade, and thousands more giving up their jobs temporarily in order to become more efficient, doesn’t that sound like a progressive wide-awake labor force, like a population that is not going to be left behind in the commercial race of the nations? It may in truth be said that these workshops, these schoolrooms of Germany, where boys under eighteen who have left school must go to work out their apprenticeship, and where every man and woman who thinks there is still something to learn, goes to find out what that something is—are the generators of the energy and the strength which make Germany the formidable world power that it is today. Critics of the Vaterland delight in pointing out the tremendous military and naval forces which it maintains, saying, “The Government has no right to appropriate money made by the industry of the country in this way.” But hasn’t it? In a roundabout way, the Empire pays for its own defense, for the industry which helps so largely to fill the treasury owes its success, in great part, to the efficiency of the labor force, and this efficiency is due almost entirely to the broad interest and the infinite pains which the Government takes in the education and the welfare of the laboring classes.

That Germany has been able to work out such a complete system of trade education, no doubt the most complete of any modern nation, is probably due to two prime factors—the absolute control which the police department exercises, and the old, old system of apprentice-journeymen-master, which has become bone and flesh of the German industrial giant through the long centuries of its existence. This system demands that a youth serve an apprenticeship of two or three years, followed by three more years of work, during which he is known as a journeymen, until he may become a master and ply his own trade. This forms the basis of the whole scheme of trade education as it exists today. The schools now offer a substitute for the workshop apprenticeship, or enable the beginner to become a journeyman the sooner by supplementing his shop work with school instruction. Similarly, in the higher grades, they prepare the men who have worked as journeymen for the master’s examination held by the state.

Believing that labor, to be efficient, must be intelligent, and with the usual faith in the good effect of strict discipline that characterizes all German institutions, the Government conceived the idea of compelling all those who have not finished their school education to
attend school for a few hours every week until the seventeenth year is passed.

THIS was accomplished through the Continuation Schools, of which we have examples in the United States, with this difference that in Germany attendance is compulsory. These schools originated as far back as the sixteenth century, but were then known as Sunday Classes, as they were held Sunday mornings for the benefit of boys and girls who had been obliged to leave school before graduating. They were then, literally, only Continuation Schools, and as such were regarded as more of a nuisance than a blessing by teachers, parents and employers alike. They strove to do no more than continue, and in part to repeat, the work of the foregoing school years, and as many of the children had no natural propensity for learning to begin with, to teach them was no more an easy and pleasant task than for them to sit still and pay attention to things they didn’t understand and didn’t want to learn, when they were tired at night or wanted to be enjoying a holiday. By degrees, those who were struggling with these unwilling minds conceived the idea, so universally recognized now, that manual labor will interest many, where mental labor absolutely fails. They saw that these schools would become really beneficial only when they met the need of the pupils in their daily interests. By degrees, then, one trade after the other was introduced until the change from the Public School Continuation to the Trade School was complete.

In the opinion of German educators a decided step forward was made when, in the beginning of the “nineties” the decree became almost universal that attendance at these schools be compulsory for all boys under eighteen who were not studying anywhere. Up to the present time, out of forty-four cities with a population of over fifty-five thousand each, but six have not yet advanced from the Voluntary to Compulsory Schools. Of these, three are the “free cities” of Germany—Hamburg, Lübeck and Bremen—where the merchants and the exporters are all-powerful.

Although it was not until the last twenty years that this compulsory education became general, we find individual instances of it as early as seventeen hundred and thirty-nine, as for instance in Württemberg, where the edict went forth that the Sunday Classes, which were established in fifteen hundred and fifty-nine, “should be attended by all young people until they marry; so that they shall not forget all too soon what they learned in school, and that they may not get into too much mischief on Sundays and holidays.”

Herr Heinrich Germer, Direktor of the school board for Continu-
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ation Schools, who edited one of the best general accounts of trade education in Germany, writes as follows of compulsory education at these schools: "It brought life and power into the schools. The attendance increased and became more regular; the behavior and the discipline of the pupils improved perceptibly and it has won over the opposing forces among parents, employers and pupils generally, who have learned to realize that the schools are working for the greatest good of the greatest number. These schools are an important factor in raising the standard of intelligence in the labor class, in furthering the interests of trade and industry, and in improving the public welfare in every way."

OF COURSE, there are those with views contrary to Herr Germer, who manage to see all the holes and the gaps in the system, who believe that it is working against too difficult odds and achieving little. But on what is this opposition based? What objections do the employers and the laborers raise against a system that is obviously inaugurated for their benefit? In the first place, there is the uncompromising blind fear and distrust with which people generally receive any institution that is established in their interest; and then there is the universal law that things which are compulsory are irksome, because they seem to rob the individual of personal liberty and freedom. There are also the objections of both merchant and laborer. Every employer, from the manager of a huge factory who employs hundreds and thousands of men, to the shopkeeper who indulges in the labor luxury of an errand boy, must register each employee, as he is engaged or dismissed. And if any are below eighteen years of age, the employer must agree to let them take four hours of their working time every week to attend school. In the end, perhaps the merchant may lose his employee entirely if the ambitious youth thinks that he has arrived at a state of proficiency worthy of a higher salary. The laborer, on the other hand, must report at the opening of the school session in October, at the nearest Continuation School with his certificate from the last school attended, and tell where he is employed, what he is doing and what he hopes to become! He must then attend school at least three times a week when he might be doing something which he likes much better.

In the opinion of the writer the number of those strongly opposed to Compulsory Continuation Schools is, relatively speaking, quite small. In proof of this, most of the large firms pay out yearly big sums of money, either to maintain their own schools (such as those established in the factories of Krupp & Co. in Essen, Ludwig Löwe
A "SMITHY" IN THE HIGHER TRADE SCHOOL OF BERLIN: ALL THE PRACTICAL DETAIL OF ACTUAL WORKMANSHIP IS HERE,—THE RAW MATERIAL, THE BIG FURNACE, WITH A BLACKSMITH FOR A TEACHER.

THE MACHINE SHOP OF THE HIGHER TRADE SCHOOL OF BERLIN: A SHOP WHERE THE BOYS MAKE THE INSTRUMENTS WITH WHICH THEY EVENTUALLY MAKE THE MACHINES.
A CLASS IN THE TEXTILE TRADE SCHOOL AT BERLIN: EVERY BRANCH OF THE TRADE IN TEXTILES IS TAUGHT HERE, FROM THE UTILIZATION OF RAW MATERIALS TO THE MAKING OF CLOTHES.

THE CARPENTRY DIVISION OF THE HIGHER TRADE SCHOOL AT BERLIN: EVERYTHING IN THE LINE OF WOODWORK IS TAUGHT HERE, FROM THE MAKING OF A PIECE OF FURNITURE TO CARVING AND VENEERING.
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and Siemens and Halske in Berlin) or to establish trade schools with other employers, with unions or with the state and the city. Further proof lies in the fact that the boards of directors of the separate schools are made up of representatives of the varied interests. Besides the mayor and the commissioner of education, there are usually several master tradesmen, representatives of unions, trade societies, large factories and corporations. The schools are in fact, as in theory, managed by the cooperation of labor and capital, of employer and employed.

When compulsory education was introduced it did not convert all the Continuation Schools into Compulsory Continuation Schools—far from it. There are now more schools where attendance is voluntary than where it is compulsory. The latter offer a far wider range of subjects, especially in the intellectual as distinguished from the manual subjects. They are intended for those who are beyond the obligatory age of attendance, and any and all who want to acquire knowledge along various lines, from languages to hair dressing. Though the tuition at the Compulsory Schools is free, the payment of a small sum is required in the Voluntary Schools. (That is, if one takes six hours a week, one pays, say, from one mark and fifty pfennigs to thirty-six marks for the course, according to the subject and the material used.) They offer not only Sunday and evening classes a few hours a week, but daytime classes and full courses with a certificate for satisfactory work. In short, they are useful for those who wish to give more time to study before beginning to work, for those who would supplement their shop work with technical knowledge, as well as for those who have no utilitarian purpose at all.

These Continuation Schools are not Trade Schools in the strict sense of the word, or rather in our interpretation of the word. They supplement the shop work, rather than give actual training in manual labor. They aim to give the theoretical side of the subject which the laborer cannot get in the unchanging daily routine of his work, to help him understand his field better, to have a broader and more scientific view of his trade, and to awaken an interest and an ambition in him to convert and develop it into something even better. These schools aim, also, to make every member of the Empire as intelligent a member of the community as his mental caliber will allow—able, at least, to read, to write a correct letter, to do the simplest arithmetic and to have a passable understanding of the civics and economics of his Government (and, incidentally, a little insight into the monarchical viewpoint to counteract the
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socialistic which is preached in every place where workers convene). This double aim indicates that the schools have not lost sight of their initial purpose, that of giving a little more mind training to those occupied with the hands. The directors believe that this should be the prime aim of the system, for the pupils, presumably, get enough training in skill under the direction of their employers. However, if a pupil is particularly ambitious and desires to better himself manually, so to speak, he may attend any one of the numerous Workshop Schools to acquire more skill at the same time that he is attending the Continuation Schools to acquire the technical knowledge.

THESE Workshop Schools offer opportunities for the plying of every conceivable trade, from that of the cookie-baker to that of the diamond cutter. They are divided into two groups,—the lower, or those maintained and supported by the unions, corporations and other interested organizations, for instruction in one particular trade, such as a school for plumbers or masons alone, and the higher, those maintained by the state for two hundred and fifty odd trades, and known as the Professional and the Trade Schools. Of these Workshop Schools there are over fifty in Berlin alone, and in all Germany no less than three hundred. They give a little technical instruction parallel with the workshop practice (for instance, machine builders learn an essential amount of mathematics and execute their own designs). Of the city schools it is possible to say that if they have no course scheduled they make one, for no applicant is ever turned away. As the classes are never larger than fourteen in the workshops, fifteen or twenty in the drawing classes and twenty or thirty in the general classes, there is considerable opportunity for individualization. In fact, the most laudable feature of the entire system is the personal interest which the instructor takes in each pupil.

By means of the certificate which every new student brings, the instructor is able to tell exactly what the boy has studied before, and through the notices of the present employer what the nature of the work is which is now required of him and in which he wishes to improve. In a class of ten in freehand drawing (technical drawing is the most important study of all in these schools) each man was drawing something different.

In the technical courses the same principle prevails—for each man only the knowledge that is essential to his trade and his career. Pure art and pure science, if one may use the terms, are not taught at these schools, but as much of each subject as is needed in a certain line of work. For instance, a whole course in geology would be
useless for a locksmith, but he ought to know about the qualities of the most ordinary metals, their power of expansion, their malleability, their resistance and their market value. In physics he needs to know the law of gravitation, of stability, the law of solids and the attributes of heat; and in chemistry the action of certain chemicals on the metals which he is apt to be using. It is this combination of science and of technical knowledge, of theory and of practice that makes the teaching in trade schools particularly difficult.

NEXT to the question of hours in Workshop Schools, the question of training the teaching staff presents the most difficult problem. Often the public-school teachers undertake this work as a sort of side issue, but it is even more difficult for them to do this than it is for our school teachers to instruct in the evening high schools, because the German teachers have to prepare themselves first, picking out the essentials from a vast amount of material at their disposal; it is not as though they repeated the same things that they teach in the daytime. They cannot find what they would teach in books alone, but must go to factory and workshop to eke out the facts they would later pour into the minds of their charges. They must be as sure of the theoretical side of the subject as of the practical, because they are going to deal with men who have been in the trade for many years, perhaps, and they must avoid giving a smattering of information where thorough instruction is expected. For the purpose of training the teaching staff, the German Society for the Extension of the Continuation School System established a school at Leipzig; and in several of the larger cities either the unions, trade societies or the Government itself have opened classes for the instruction of instructors.

Perhaps the largest group in the Compulsory Continuation Schools is that of the unclassified workers. The problem they present to their instructors is none the less serious than that they set the police. Most of them have no especial interests, no desire to learn anything at all; they are errand boys, pages, runners and general nuisances now, and they mean to drift with the time and catch the opportunities for advancement as they float by. What does the school do with them? Take the case of the little "buttons" who opens the hotel door and has no higher ambition than to perfect himself in the gentle art of extracting tips. Does the state encourage him in this ambition? It rather tries to substitute a worthier one. He is put through a thorough course to make him a more useful member of society. He must learn how to speak and write correct German, how to do simple arithmetic quickly and acce-
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rately; he has to study the map of Berlin that he may be able to give intelligent information to strangers at his gate; he has to learn where all the city buildings are, where one may go in case of an emergency or of accident; what charitable institutions exist and where they are; he must fill his little head full of useful information about postal regulations, police rulings and everything pertaining to his city and his country. That he may be of use to his employer in case of a waiters’ strike or any other possible emergency and that he may get an insight into some profession he is taught how to set and wait on the table, what meats to buy and where to buy them and, perhaps, even how to use them when they are bought. He is also given an idea of household chemistry and hygiene as well as of book-keeping. When he is through with his three-year six-hours-a-week course, one can really expect him to be a brighter and more useful buttons, if not a more helpful, efficient subject of the Kaiser’s state.

IN THE Grade Schools in northern Germany there is as yet no manual training. In southern Germany, in the Rhine district, for example, workshops have been put in some of the schools where the children over fourteen years of age may busy themselves after school hours, under the supervision of a teacher. In Berlin a newly formed Society for Manual Training for Boys has opened similar classes in schoolrooms, and is now trying to persuade the Government to take them into the regular system. But to give any manual training in the regular school hours, other than cooking for the girls, perhaps, is something of which the German fails to see the immediate value. School means school to them—steady, earnest plodding, and to introduce anything so frivolous as manual training into its curriculum, were verily to convert it into a playroom. It is indicative of the seriousness with which the Germans regard work and the relatively small value they put in play for the child, that they are only now beginning to establish boys’ clubs, recreation centers and public reading rooms—things which the Americans have long appreciated and which they have almost overdeveloped in comparison with the Trade Schools—the working centers!

More is done in the way of manual training for the girls in the Grade Schools—in some, one entire day in the week is set apart for housework,—cooking, sewing, cleaning, marketing and so forth. In others a little of one or the other is given once or twice a week. But later when the girls have reached the working age the state does not pay so much attention to their needs. Of the twelve States that have compulsory attendance at Continuation Schools for boys, only four include girls. There are some ninety-one Voluntary Continuation
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Schools for girls in the Empire, where they may learn all the domestic branches as well as many of commerce and business, and just plain culture! But regular school attendance for three years by working girls less than eighteen years old is scarcely required. The general intelligence of women, it would seem, is not so important to the state!

And what are the results of this comprehensive system? It is hardly fair to speak of results yet, since Compulsory Schools have not been the order of things long enough to make their influence upon the community appreciable. One ought to give this system and the far-reaching Trade-Educational System as it exists today at least a generation or two to show what it can do. As no examinations are held at the end of the year, there is no way of telling how much the individual has really profited from the things he has learned, except through his own record of advancement, and that the Government has not yet undertaken to keep on file! What effect the system may have in the economics of the Empire is matter still for conjecture. If overcultivation is to be regarded as a mistake, then Germany is certainly making a big mistake. It is educating its people to a higher level; it is increasing their knowledge, and thereby perhaps increasing their sorrow. It is a most significant fact that within the last ten years, since Germany has undertaken to perfect the skill of her own workmen, she has had to import Italians from the south, Russians and Poles from the north and Hungarians from the east to do her meanest labor—to build her railroads, to dig her subways and to dredge her canals.