

reach of their working-place by means of the rather slow tramway service (for the enormous increase of the tramway service and the resultant concentration from the suburban towns upon the city has, of course, resulted in tram-congestion and slowness of service). Exactly the same type of house, but without the stucco front and the gorgeous balconies, and with not one "garden-house" but two or three Höfe (inner courts), one behind the other, greet his eyes in the north and east of Berlin. The darkness and the airlessness, and the dust and the noise are multiplied, and he will ask himself whether on the whole the clean streets can make up for the gloomy interior. It is hardly too much to say that the flat-system of Berlin and other great German cities has been tried and found hopelessly wanting. The cause of it we shall consider presently, but our presumptive visitor, bearing in mind the character of all kinds of Berlin habitations, and contrasting them, if he will, with those "long, desolate rows of uniform blocks of little houses" which depress the foreign visitor as the train bears him into London, may do well in this light to consider the following figures regarding the dwellings of Berlin and London respectively.

In Berlin and Charlottenburg at the beginning of the century over half the total number

of dwellings were yard-dwellings. There were then in Berlin 24,000 cellar dwellings with about 120,000 inhabitants, and there were about 90,000 attic dwellings (that is fourth floor or higher), and their inhabitants numbered about one-fifth of the entire population of the city. At the time of the last official enquiry there were in Berlin roughly 30,000 single heatable rooms occupied each of them permanently by six or more people. In most cases they were also small rooms, for the rule is that "the smaller the dwelling the smaller the air space of each room." It may be added that in Berlin the average price for one heatable room was rather more than £11 per annum, and the price in the suburb of Wilmersdorf for one unheatable room was £13 per annum.

In London (1905) six per cent. of the population lived in "dwellings" of one room: in Berlin 41 per cent. lived thus, and an additional one per cent. in rooms which could not be heated at all. In London 15 per cent. lived in dwellings of two rooms, in Berlin 33 per cent. In London 46 per cent. lived in houses having four or more rooms, in Berlin only 12 per cent. Further the average weekly rent paid by the German workman in towns was in the aforesaid year nearly 25 per cent. higher than that of the English workman (*Vorwaerts*, July 2, 1912,

Board of Trade Enquiry, London, 1908-1911). It is not therefore surprising to learn on the authority of the Prussian Minister of the Interior that the birth-rate in Prussian towns is rapidly decreasing; in Berlin the decrease is greater than anywhere else in Germany. The problem was thus stated by the *North German Gazette* in its official commentary (June 23, 1912): "It is only necessary to consider the housing conditions in our great towns, where many house-owners make childlessness or a small family a condition of the lease, to understand the difficulties which face a family with many children at every turn. It is clear that the housing problem, as difficult as it is important, bears a great share of the responsibility for the decrease in the birthrate."

Berlin's special problem, that of the "barrack-flats" and the growing desire to return at any rate in some measure to the small-house system, especially for workmen's cottages, is due in great part to the unsound land speculation which has developed with the growth of the city. The value of land in Berlin has increased since the foundation of the Empire approximately 200 per cent. on an average, that is from about ten shillings per square foot to thirty shillings, and a great deal of this increase is due to speculation upon the continuous growth of the city. Building-

land is driven to a price at which normal building conditions can no longer pay, and even outside the periphery it becomes necessary to crowd the maximum number of families paying rent upon the same plot of ground. The police and the building-laws place a limit upon the number of floors which may be constructed and oppose a sane veto to the oft-repeated proposal to institute a system of sky-scrapers on the model of New York, but it is left to the municipalities to check the evil which already exists.

Speculation was not checked at the outset by legislation, partly because municipalities were still obsessed by the doctrine of *laissez faire* (for example, the otherwise very advanced building provisions of Chemnitz in 1885 prescribe that each house must have a courtyard, but they do not state how big the courtyard must be!), and also by the fact that the Town Councils were, and have remained democratic only by contrast, and not by constitution. The speculative element has and had a large influence on the Councils. Town councillors, as already mentioned, are elected on the three-class system, which gives members of the first or richest class from fifty to one hundred times the voting power of the poorest or third class.

The study of the problem is a very special one, and can be no more than suggested

within the compass of this chapter. To some extent it is possible that the evil will provide its own remedy. "The trees will not be permitted to grow up to heaven," says a German proverb, and it is not unlikely that the process of development of Berlin will receive a check just because ground is becoming so dear that employers can scarcely any longer consider the construction of factories in the neighbourhood of Berlin. In fact, in recent years there has developed a tendency for factories to be removed altogether from Berlin to districts where ground is comparatively inexpensive, but communications reasonably good. The development of Berlin will doubtless be in the direction of a trade and business centre, but probably not along industrial lines.

The cities themselves, not only Berlin and the great industrial towns of Westphalia, but the majority of large German towns, have adopted three means to regulate the housing problem; first by developing a system of municipal house-agencies; these existed at the end of 1909 in fifteen large towns, whereof Stuttgart, Barmen and Elberfeld published their own house-lists; secondly by house or lodgings inspections, which as a municipal undertaking is yet too new for there to exist any body of evidence as to its results. Charlottenburg has recently commenced an

inspection of small dwellings on lines characteristically thorough and unsensational. At the beginning of the present year the Prussian Diet passed on first reading a bill providing for the establishment of such inspectorates, called in the law "Office for housing accommodation." Berlin and Charlottenburg have already arranged for female inspectors, whilst at Worms and Halle female inspectors have already presented their first annual reports. The Worms report observes that the personal influence of the inspector in persuading the inmates of small dwellings to "keep the windows open and the sinks clean," is of prime importance.

In the main, German States have only followed at considerable distance institutions and regulations for the inspection of dwellings developed in England after the establishment of sanitary inspectors in 1875. Hesse was the first to introduce female inspectors, and Bavaria introduced early a central Government inspectorate. The Kingdom of Württemberg made the establishment of local inspectorates compulsory for all communities (towns and villages) of more than 1000 inhabitants.

The third method is, of course, the municipal purchase of land, and either the direct or mediate construction of suitable workmen's dwellings, and the exclusion thereby of the

reckless ground speculator. In general the Governments of the German States encourage and perhaps do their best to assist this form of municipal undertaking, but it would appear, as has already been observed, that Berlin is not given all the assistance that she might be entitled to expect in her efforts in this direction, and the Treasury, which owns much of the land in the neighbourhood, has on more than one occasion shown a spirit which the Berlin city fathers have described as oppositional. A large section of open ground belonging to the War Office and formerly used as the principal military parade-ground has recently been built over, but there were disagreeable discussions at the time of the sale, in which the War Office was made to appear in a light which could hardly be described as socially beneficent.

It is impossible here to enumerate or even to sketch the various efforts made by German communes to provide cheap and healthy dwellings for the working-class of their population. The Governments themselves make efforts to provide to some extent for their own employees. For example, the Prussian railway administration spent over two millions sterling in six years for this purpose: the imperial Home Office spent nearly as much, the Mining Department spent one million, and so forth. Building societies

receive encouragement in their efforts to provide suitable dwellings, and their expenditure is on the increase : the insurance departments and committees are constantly extending their efforts in the same direction, and the figures of the imperial Statistical Office give the amount spent by them on those lines between 1900 and 1906 as approximately £40,000,000.

Many German towns have built two-family houses for their own and also for local workmen, not in municipal employ : Breslau, Kiel, Frankfurt, Mannheim, and many others could be mentioned in this connection. Düsseldorf has invested nearly three-quarters of a million in land which it employs largely for the purpose of workmen's dwellings, either constructed by the city itself or under the most scrupulous safeguards by lessees. Metz also builds workmen's dwellings on its own account, Duisburg has about fifty State-built cottages for families with many children. (One of the oldest municipal foundations for workmen was the Cité Ouvrière, of Mülhausen, in Alsace, commenced in about 1853 with the assistance of Napoleon the Third, but the buildings have since fallen into speculative hands, and no longer fulfil their original purpose.) Large private firms also provide in many cases for their own employees, prominent amongst these being Krupp, with

nearly 5,000 homes occupied by some 30,000 inhabitants, the Baden Aniline Factory and others. The total number of workmen's dwellings thus provided by private firms is estimated at about 200,000. Frankfurt-on-Main has developed the so-called Erbbaurecht, a principle which enables the State to lease the land belonging to it for certain classes of building, and for a definite number of years (usually 99). No purchase price is paid, but a yearly rent is charged. The lessee can sell his lease in the ordinary way, but the State profits by the increase in ground-value.

A fourth method of controlling the housing problem is that now widely adopted by German municipalities of imposing a tax, which really amounts to a fine, upon suitable building land left unbuilt in the hope of a rapid rise of ground-value, and further of imposing taxation representing a fair proportion of the increase in value between one sale and the next. This taxation was instituted much less for the purpose of municipal revenue than for the discouragement of pure land-and-building-speculation.

The above notes must suffice to suggest the lines along which German cities are attempting to cope with the evils of overcrowding, and of the concurrent evils resulting therefrom. Mention must, however, be made here of the efforts in various German cities to erect

series of dwellings for single girls and young men, with central kitchens or restaurants, and other suitable adjuncts. The idea is not especially German in origin, nor has it as yet found its fullest development in Germany, though very favourable specimens of such structures and institutions may be found in Berlin and elsewhere. Finally there should be mentioned the garden city movement, which came from England to Germany, and has its best illustration at present at Hellerau, near Dresden.

CHAPTER VI

GERMAN EDUCATION

It has already been observed that education is not one of the departments which the Empire took as its own province. Nor has the Empire yet provided any norms or general standards upon which the individual States should base their educational systems. Hence the large measure of uniformity which does actually prevail is not to be credited to the Empire, but either to the intelligence of the individual States, or perhaps even to that mysterious agent "the force of circumstances." The very low proportion of illiterates amongst the men called up for military service (less than three per thousand) is sufficient evidence that elementary education is nowhere neglected in Germany, although a uniform scheme is not provided. For comparison it may be added that the proportion of illiterates amongst recruits is in France about fifty, in Austria 210 per thousand, and in Russia more than seventy per cent.

Strange as it may seem, elementary educa-

tion is the one form of education in Germany in which attention is paid, one might almost say, primarily, to the formation of character, which is notoriously the weak point in the higher branches of German education. But the character which the German elementary school teacher strives to form is by no means that of "upright, manly independence"; it is rather the character of a patient and obedient link in a chain. Obedience and discipline are the two moral lessons of the elementary school, as indeed they are nearly sure to be where the teachers are Government officials and are part and parcel of the machinery erected, at any rate in Prussia, for carrying on the business of the State as the most important sphere of human activity. Teachers in Prussian elementary schools are badly paid, their social position is not a high one, and the restrictions are considerable, but they are in general a conscientious body of men, in the vast majority of cases they are fitted by temperament and natural aptitude for their task, and they are of course specially trained.

After leaving the elementary school at the age of fourteen, the future elementary school teacher has to go through a five to seven years' course in one of the "preparatory institutes," where he remains three years. The cost of the preparatory

course is only 36s. 6d. per year, but the student has to provide for his own lodging and food. Prussia has sixty State establishments and thirteen municipal. At about the age of seventeen, after passing the qualifying examination, the future teacher goes on to the seminary, which is usually a residential school or college, and provides a three-year course of instruction, ending with practical teaching under the guidance of an expert. In Saxony the whole six or seven years' course takes place at the seminary, and the preparatory institute is abolished. The State bears the expense of the seminary instruction, amounting to rather less than £30 for each candidate. The highest income attainable after thirty-one years' service as elementary teacher is about £200 per annum.

Elementary education is, of course, free, the State itself paying about one-third of the total cost, whilst the remaining two-thirds are borne by the local school authorities, that is to say ultimately by the communes, though school-upkeep and maintenance is one of the few burdens consistently laid upon Prussian landowners and squires. It is scarcely necessary to review at great length the character of elementary education in Germany. The school age is from six to fourteen almost everywhere in the Empire, and attendance is, as in England, compulsory. Recently, owing

to complaints that there is not sufficient attention paid to the difference between town and country children, a measure of specialization has been introduced in Prussia even into elementary education, the third or highest class in the elementary school being provided with means to acquire theoretical knowledge applicable to agricultural and rural callings generally. It should be added that this has been done chiefly under pressure from the landowners, who believe that it may prove one means of stopping the flight from the land or in plain language of providing farmers with reliable and obedient farm labourers.

Prussia is of course one of the pioneers of municipal enterprise in the provision of forest open-air schools for sickly children, schools for the blind, deaf, and other forms of early invalidity, and such special provision is on the increase, though it is extensively left to municipal enterprise. The average hours of attendance in the lowest class of an elementary school are twenty per week; in the middle and upper classes the hours rise to thirty, including six hours of science and two of gymnastics and handicraft. The school is generally supervised by the local clergy, and religious teaching plays an important part, possibly with the underlying idea that this should serve for that formation of moral

character lacking in the general features of the teachers' control.

The religious question is not less acute in Germany than elsewhere. In parishes with mixed confessions there are what are called *Simultan-Schule*, that is schools where religious instruction is given by teachers professing the Catholic and the Protestant religions respectively. The Catholics are constantly endeavouring to increase the number of these schools and the Protestants continually strive to secure the legal abolition of those already existing. Considering that religious instruction occupies four hours a week in the lower class and five in the two upper, it will be seen that there is plenty of room for dispute. It should perhaps be added that the State officials, particularly the *Landräthe*, have a right of veto in the appointment of school-inspectors, and are otherwise vested with considerable influence in the school world.

It is at the point where the German child passes out of the elementary school at the age of fourteen that the great work of German education in general may be said to begin. It has long been clear that elementary education ending at fourteen is inadequate and unsatisfactory. As in other countries so in Germany the tendency of children released from school thus early has been to drift into occupations bringing money to their

parents early, but offering to the children themselves nothing resembling a career and actually unfitting them for competition with children whose training is continued longer. Hence Hamburg, Saxony, Coburg-Gotha, and other States introduced a system of compulsory attendance at continuation schools long before Prussia took the matter in hand. Württemberg made such attendance obligatory up to the age of eighteen before the Prussian Government had even suggested that attendance up to that age might be desirable. Prussia, however, did mark a new departure by placing the control of the continuation schools in 1884 no longer in the hands of the Minister of Education, but in those of the Minister of Trade and Commerce. This date may thus be said to mark the commencement of the era of specialized business training which is now so highly developed in big German towns.

The continuation schools are, however, not intended to serve the purposes of specialization, hence the classes are still usually in the hands of the elementary school teachers, and the subjects of the six-hour course are mainly confined to German, arithmetic, geometry and drawing. Since 1891 local authorities are empowered to inflict punishment for non-attendance at continuation classes, but it is stated that attendance in country districts

where continuity is more than usually necessary still leaves much to be desired, the fact being that compulsion is difficult to reconcile very often with local conditions. Saxony and Württemberg were amongst the first to introduce commercial and agricultural courses, which are now widely developed in both countries, as well of course as in Baden, where continuation schools and special courses are perhaps best organised. The two Mecklenburgs, reactionary in this as in all else, have only just begun to introduce continuation schools on an organised plan. Bavaria is best provided with commercial schools, whilst Baden and Prussia appear to pay most attention to the domestic and farm training of girls and teaching of handicrafts to boys.

By the side of the elementary schools there exist a class of schools called "middle schools." These are erected in Prussia by the local authorities, and are intended to give a rather better education than is possible under the three class system of the elementary schools, whilst not attempting the work of the higher grade schools. They are usually of five classes, the numbers of children in each class being limited to fifty (there are as many as eighty children in some classes of the elementary schools). A middle school must teach at least one foreign language, and "where local conditions make it desirable

the middle school is also to provide instruction in agriculture, forestry, mining, shipping, commerce, and trade." In the Hansa towns, the middle schools (which are almost everywhere controlled by a rector) teach both French and English and sometimes Latin. Special examinations must be passed by the teachers, and the salary is in all cases higher than that of the elementary school-teachers. Children attending these schools pay small fees, and this is perhaps really one of their *raisons d'être*. It should be added that brilliant scholars of the elementary schools have the opportunity of gaining a sort of scholarship which enables them to attend the high schools free of cost, and thus eventually to reach the university.

The high-school course in Germany is necessarily much more complicated than the elementary, and much less easy to explain to the English reader, since it differs to such an extent from the public school and university system in England. It will be best perhaps to enumerate the different forms of German high schools, and then to call attention to the difference in the aims and attainments of these and English public-schools. It should be premised that on the whole the same system prevails throughout the Empire. The names of the different kinds of schools vary a little and the school-course may show local differences,

but speaking broadly it is very nearly true that a family with young boys transferred from east to west or north to south could find a school of the same type, and with the same course of study as the boys had been accustomed to attend, so that their school-course would suffer very little interruption from the change. From this it will be gathered that the high schools are Government institutions with a course of study prescribed by the educational authorities, and not left to the management of each particular high school. Further, the schools are non-resident.

In Prussia the following are the names given to the various schools :

Classical Course—1. Gymnasia, nine years' school-course ; 2. Progymnasia, six years course.

Semi-classical (with Latin)—1. Real gymnasia, nine years ; 2. Real progymnasia, six years.

Modern School (without Latin)—1. Ober-real-Schulen, nine years ; 2. Real-Schulen (also Höhere Bürger-Schulen), six years.

In addition to these there are a certain number of schools not directly under State control ; their scheme of education does not differ fundamentally but in most cases these private schools are confessional in character. There are about six hundred gymnasia and progymnasia in the Empire, about 200 real

gymnasien and real progymnasien and about 400 oberreal-schulen and real-schulen. The total expense of their maintenance, as far as it falls on the States, is said to be roughly £5,000,000 per annum. The distinction between the courses may be easiest suggested by tabulating side by side the course of study in the full classical course and the full modern course ; the other courses fall midway between the two. The difference in numbers of boys attending the two courses, classical and modern, is now very little : the tendency is for the modern schools to increase the number of their scholars at the expense of the classical schools, and this appears to be especially the case in West Prussia and the Rhineland.

The full courses last nine years, usually from the ninth to the eighteenth year. The short six-class courses last only seven years.

In addition to the hours enumerated there are sometimes extra hours for special subjects, and there is about two to three hours' preparation or home work. The theory that the German schoolboy works longer hours than his English contemporary is scarcely maintainable. In an English public school in a form corresponding age for age to the middle form of a German gymnasium, the hours would be about twenty-eight per week in class or form, and twenty-one hours'

GERMAN EDUCATION

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NUMBER OF HOURS PER WEEK

GYMNASIA

Subject.	Lowest Class (VI)	5	4	3 ^a	3 ^b	2 ^a	2 ^b	1 ^a	1 ^b
Religion	3	2	2	2	2	2	2	2	2
German and German History ..	4	3	3	2	2	3	3	3	3
Latin	8	8	8	8	8	7	7	7	7
Greek	—	—	—	6	6	6	6	6	6
French	—	—	4	2	2	3	3	3	3
History (General)	—	—	2	2	2	2	3	3	3
Geography	2	2	2	1	1	1	—	—	—
Mathematics	4	4	4	3	3	4	4	4	4
Science	2	2	2	2	2	2	2	2	2
Writing	2	2	—	—	—	—	—	—	—
Drawing	—	2	2	2	2	—	—	—	—
Total	25	25	29	30	30	30	30	30	30

MODERN SCHOOLS		NUMBER OF HOURS PER WEEK									
		Lowest Class (VI)	5	4	3 ^a	3 ^b	2 ^a	2 ^b	1 ^a	1 ^b	
Subject.											
Religion	3	2	2	2	2	2	2	2	2	2	
German and German History ..	5	4	4	3	3	3	4	4	4	4	
French	6	6	6	6	6	5	4	4	4	4	
English	—	—	—	5	4	4	4	4	4	4	
History (General)	—	—	3	2	2	2	3	3	3	3	
Geography	2	2	2	2	2	1	1	1	1	1	
Mathematics	5	5	6	6	5	5	5	5	5	5	
Natural Science	2	2	2	2	4	6	6	6	6	6	
Writing	2	2	2	—	—	—	—	—	—	—	
Free-Hand Drawing	—	2	2	2	2	2	2	2	2	2	
Total	25	25	29	30	30	30	31	31	31	31	

“preparation” corresponding to the German home-work. Many, perhaps most English public schools, recognize the “private tuition” hours, usually at extra charges and for special purposes. They may amount to two or three per week. But the German school-boy is usually harder driven whilst at work. The English scholarship system may perhaps be held to drive a certain proportion of English public schoolboys equally hard, but the German boy has two incentives which drive him from the very outset. First of all, he cannot attend any university course or technical high-school course without possessing his certificate of maturity from his school: hence the “professions” are closed to the sluggard because the university or technical high school graduate has an absolute monopoly of them, as well of course as of all Government civil appointments. Secondly, only the possessor of a State-regulated certificate of maturity is entitled to serve his time in the army as a “volunteer,” that is for one year instead of two in the infantry or two instead of three in the cavalry. Furthermore, such “volunteers,” who obtain very definite privileges during their time of service, are eligible after their service with the colours to the corps of lieutenants of the reserve, that is to say they are called up for their subsequent training no longer as privates but as officers. Quite apart

from the professional advantages which invariably result from being taken away from a civil career for a full year less than other competitors, the title "Lieutenant of the reserve" provides in a country so overwhelmingly given up to the military hierarchy as Germany a social position, the lack of which is from the outset a very grave handicap.

The scholarship impulse in England is very largely financial: the driving motive is "unless you get a scholarship I cannot afford to send you to a university." The impulse is thus only a temporary one and the prestige of success is comparatively short-lived. The German impulse is the desire to avoid what is usually a clearly recognized handicap lasting through life.

It follows necessarily that the German school system, however throughgoing the instruction and grounding may be and despite its acknowledged merits as the basis of a general education in the narrowest sense of the word, is not and by its very nature cannot be a system based upon the building up of character; it is not educational in the best sense. English public schools may and do turn out many "weeds," they do facilitate the "ice-jam" of lazy and hulking incompetents in the lower middle forms, but those who are not weeded out by the ordeal are better, man for man, than the average product of the German

system. The German system, to put it another way, levels all to an average, almost to a uniformity. The English system turns out some lanky weeds and some stunted growths but it also turns out some, even many, first-class plants of a kind much less frequent in Germany. There is a corollary to this proposition. An English head-master who did not at least try to select his staff with a view to their influence on the character of the boys who are to come under him would be condemned universally as false to the system and to his calling. The German school authorities are glad enough, no doubt, to get a teacher whose influence is likely to be good but they are more inclined to be satisfied if his influence is not bad. The first consideration is his ability to teach his subjects according to scheme.

The governance of the schools is in the last instance in the hands of the Minister for Education: there is also in each Prussian province a medial authority called a "provincial school-college," that is a school board consisting of officials, whilst the Provincial President has two educational advisers attached to his staff. These various officials control the finances and general management of the schools, give orders for the examinations and have a general right of inspectorate, except where the schools are municipal, in which case the rights are held by a municipal

commission. The staff consists of a director, who may give as much as sixteen hours' teaching per week, and a number of first-class teachers giving from twenty to twenty-four hours' teaching per week and eligible for the title of professor. The salary of a director is from £300 to £400 per annum and of a teacher from £130 to £250. These salaries, however, of course carry pensions.

One of the most useful publications in Germany, the "miniature library on choice of a career," expends a chapter of its scanty space in warning German lads against selecting teaching as a career: the reason is that of those who do become teachers very many are not in the least born teachers but such as have become used to the atmosphere of the school in their nine years, and have besides followed the formal course which is compulsory for teachers, that is the gymnasial course leading to the faculty of philology at the universities, so that they drift into the teacher's profession automatically as being the natural outlet from their gradually specialised educational course. One may be pardoned perhaps for pointing out that in this matter extremes meet. It is a subject for complaint that in too many instances English school teachers are men who have drifted into a profession which does not suit them because on leaving the university they have been left stranded without a purpose

in life and with only a very general idea of what they should do next. The question what to do next is too often answered by the formula, "Apply to a scholastic agency." It has been argued *ad nauseam* that the German system, which practically compels specialisation at the university and often earlier, avoids this danger. It does nothing of the sort. It simply crams into the teaching profession a number of men who having been taught along the lines laid down by the State for a future professor or first-class teacher naturally drift along into teaching as being the line of least resistance and on the whole the shortest cut to a miserable pension. Socially, to put the matter mildly, Germany has yet to recognize the teacher's as one of the honoured professions. She is at least as far as England from adopting the apostrophe of Juvenal,

Di, majorum umbris tenuem et sine pondere terram
Spirantesque crocos et in urna perpetuum ver
Qui præceptorem sancto voluere parentis
Esse loco:

After eight or nine terms at the University during the philological course of the academic teacher, the student has to spend a year at a seminary, where he is instructed in the practice and theory of pedagogy. Then there is yet another year without salary, and before the candidate has obtained a permanent appoint-

ment he is usually thirty-three or thirty-five years old and has incurred an educational expense of about £1000. Even when the future teacher has passed his final State examination in pedagogy and is qualified to accept an appointment his troubles are not at an end. He is at the disposal of the provincial directorate of schools, who may dispatch him here and there over its district as locum-tenens at small salary, or if he prefer he may ask for work as volunteer, in which case he at least saves travelling expenses. *Furor est post omnia perdere naulon.* "A crotchety, jejune faddist," says the little guide I have mentioned, "is expected to educate our lads to become free men, pillars of the State, lights of the world."

If the German becomes, as it is complained that he increasingly does, a mere wheel, and if more and more the nation appears to accept the doctrine that the individual exists for the State machine, not the other way about, it would seem that no small portion of the blame therefor must be laid to the account of the German school system.

The fees for higher education are so moderate as to be within the reach of a much larger percentage of boys than the public-school education in England. For the classical course the average fee is approximately £7 10s. per annum. In the modern schools it is

£5 10s., but in neither case do these fees include books or stationery.

Concerning the general results on the individual of the high-pressure system there is much dispute. It is asserted, for instance, that as a result of the system seventy per cent. of the lads become short-sighted and that forty per cent. are ultimately rejected as unfit for military service. It is also painfully true that child-suicide is disproportionately frequent in Germany. The Berlin papers report on an average not less than one a week throughout the year and in by far the greater number of cases the report runs, "The child committed suicide owing to having received a bad report, or owing to having failed to pass the terminal examination, or having failed to secure promotion." It might reasonably be suspected that some of the fault lies in these cases with the German parents and not entirely with the system.

The higher education of girls is neither so thoroughly organised as that of boys, nor is it to anything like the same extent in the hands of the State or of the municipalities. The fees vary from three to six pounds per annum, and the course is nominally a nine-year one. The tendency, however, in Germany as elsewhere is to conform the courses approximately to those of the boys' schools, and this tendency of course makes itself more promi-

nent in the more advanced stages of education. There are some gymnasia for girls in Berlin, Leipzig, and elsewhere with four-year courses and a fee of about £12 per annum.

Germany is as yet no more than on the way toward a State recognition of the increasing extent of feminine competition in public life. There are between 30,000 and 40,000 women-teachers under State control in Germany, but the majority of these are teachers of the elementary schools. So far as the education of girls is concerned it would seem to be true that the Governments within the Empire are chiefly concerned to prevent girls drifting from the elementary schools into factory or shop-work, and statistics published by the Bavarian Government appear to show that continuation schools for girls, with instruction in household management, the care of children, and domestic economy, have the effect of reducing the "rush to the counter."

The essential difference between the education given at a German university and that given at one of the old English universities is that the German course is not even regarded as the completion of a general education. It is a special education for a special purpose, and the tendency is for specialisation to increase, as is shown by the growth of the technical high school system (which is perhaps

really better translated university technical graduate course) and also by the fact that whereas there is rarely any difficulty in obtaining money for the establishment of a new chair in some highly specialised and technical branch there are repeated excuses made when there is a question of filling a vacant chair in one of the classical subjects.

Unconsciously, perhaps, the State is here again following the tendency already seen in connection with school education, to subordinate the individual and his character to the welfare or the supposed welfare of the State. "Man is a productive animal," takes the place of Aristotle's dictum about the *Politikon Zoon*. From this it also follows that the German university life tends more and more to lose its social character. The picturesque student of Heidelberg, Jena, or Göttingen with his sabre slashes and his dog and his mug of beer was, perhaps, always a parody of life at a German university. Now he has ceased to be even a parody of a social institution which may have corresponded more or less to the social life of Oxford or Cambridge. It is not, of course, true that this social life has vanished or that the parody thereof is no more to be met in Heidelberg, but it no longer sets its stamp upon the whole. The State might almost be said to use the universities (which of course are State institutions)

for turning out specialised parts of its own intricate machinery: the technical high schools serve at any rate very largely to turn out the machinery of other departments of human activity, for, as we shall see, the rapid progress of Germany in the domain of industry is partly due to the fact that the German readily falls into his place as a wheel and does not easily strike out for himself.

It is the smooth working of the more delicate parts of the German industrial machine which is one of its most prominent characteristics, and this may be due to some extent to the fact that the parts are ready for adjustment when they are delivered from the technical high school. But specialization almost always involves delay, and the delay is accentuated partly by the Government control exercised over so many branches of public life, with all the apparatus of certificates and examinations, and partly, of course, by the system of military service. We have already seen that the German high school teacher is well on into the thirties as a rule before he obtains the first salary that can be described as a living wage in the sphere he is compelled to occupy. In other professions the same feature prevails, and this in turn makes for specialization. Unless a man comes ready fitted and trained to his job, he must of necessity fall behind in the race,

because coming so late to his life's work he has no time to learn it when his work has begun. That this system produces a scientific class of workmen is, of course, fully proved, and scientific workmen make for rapid national progress. But it is at least a matter of dispute whether the individual profits by the system. Collegiate life, then, as it is understood in England, does not exist at a German university, and that which is called the "hall-mark" is left to be prefixed by the schools. If these, too, fail, as they tend to do, it would seem that something which is valuable to the individual must be missing altogether. The effects on the manners of the nation are, to speak politely, sufficiently apparent.

We shall now note briefly the various faculties at the universities, of which there are twenty-four, including the Military Academy, and excluding the new University of Frankfurt-on-Main, which has only just received the royal permission for its foundation.

The statistics show that there were in the winter term, 1912, 2,852 students taking the theological course, of which no more need be said, since its purpose is sufficiently evident. Over 11,000 were taking the course of jurisprudence, the most important of the four original faculties. The juristic faculty is the gateway not only to the Bench and the

Bar, but also to the civil service, the diplomatic service, and so forth. The course lasts usually three and a half years. After passing his first examination the candidate for the Bench becomes a Referendar, usually a purely honorary title, which is held for four or five years unless the Referendar be a candidate for the diplomatic service, in which case the period is shortened to two years. In any case the candidate for further advancement along any of the lines opened by the juristic faculty must satisfy the authorities that he is in a financial position so to live as to cast no discredit during this unpaid period upon the profession he proposes to adopt. (It will be seen that though university fees are low, there is heavy expenditure to be met before the graduate can pass from the university to the practice of his chosen profession.)

The faculty of medicine, which needs no explanation, showed nearly 14,000 students, of whom 600 were women. The course of study required for practice as a doctor in Germany is both long and expensive: the university fees are nearly double those of the juristic faculty, but the course is rather shorter. The candidate studies anatomy, physiology, botany, chemistry, physics and zoology. After passing his examination, called the *tentamen physicum*, the student takes

up a practical course of lectures and observation at the hospitals. This course lasts about five years, and is followed by a rigorous State examination, which is so lengthy that at the smallest universities it takes not less than eight weeks, whilst at the greatest and most famous it may take from six to nine months. There follows the "doctor" examination, which probably lasts not less than eight weeks, and the young doctor who has then passed this final test is permitted to give his services to a hospital for a year without remuneration. His army service consists of six months with the army medical corps. Thus under favourable circumstances the doctor may be ready to start a practice at the end of seven or eight years. Unless he now has some small reputation and a considerable capital to help him along, he may spend some ten years as assistant surgeon at a hospital or from three years upwards, if he is specializing.

The philological course, as has already been mentioned, is the course for teachers, and it lasts about five years. The statistical tables give about 13,000 students, and there are about as many studying the special branches, which are included in the lists of students under the general title of "philosophy," etc.; that is to say, mathematics, chemistry, agriculture, pharmacy, dentistry.

It is clear, however, that some of these must include simply students attending a special course of lectures on a special subject. Such courses cannot, of course, be described as faculties.

In conclusion, it may be desirable to add a note regarding the management and staff of German universities.

The German student has one inestimable advantage, namely, that the professors at the German universities are by no means only theorists. The supervision exercised by the State over its universities ensures that where practical science is required a practical scientist shall teach it. Hence to some extent the old world complaint of the aloofness of the lecture-room is made baseless, and the combination of practice and theory, the wedding of science and technique, which is the basis of German material progress, is introduced into the universities as it is into the technical high schools. An inventor of importance is usually sooner or later the expounder to students of his own discoveries. It is also clear that the system whereby university professors are exchanged by universities makes for uniformity of opportunity throughout the Empire without the necessity for an imperial norm. On the whole university professors are not highly paid. A professor in ordinary, if he be of great national importance and

highly respected, may in Prussia be in receipt of an income amounting to about £600; the average salary in Prussia is about £350, to which should be added the lecture fees, which in certain instances may amount to another £100 per annum.

Complaint is made that, despite the general cheapness of German universities, the teaching they give is not made accessible to the poorer classes. To some extent this is, of course, true, but efforts are made to enable poor students to take courses free of charge under what is called the "poverty-certificate." University extension courses are also increasing, and as elsewhere have been found justified by results.

The majority of the German universities are now open also to women, and there are considerable numbers of unattached female auditors as well as the regular students. Strangely enough, "misogyny" amongst university lecturers, once rather common, is by no means extinct. Certain well-known lecturers at Berlin University, and elsewhere, still refuse to lecture before a mixed audience.

We now turn to that feature of education in which so far at least as Europe is concerned, Germany was the pioneer and is still the model, the teaching provided in the technical high schools. It is no longer necessary to explain the purpose or the character of the German

technical high schools. Most of the high schools date back for seventy years, and they have borne a very large share in the bringing of Germany commercially and industrially as well as scientifically to the front. They rank now with the universities, confer degrees in the same way, and make the same requirements of those who desire to take the courses they offer. The four general courses of the technical high schools, corresponding to the faculties of the universities, are : (1) Architecture ; (2) Building (civil engineering) ; (3) Machinery, including shipbuilding, which, however, is more and more becoming a separate faculty ; (4) Chemistry and Mining ; (5) Science and Mathematics. But there are also special academies of mining, forestry, agriculture, veterinary surgery, and art, including sculpture, architecture, engraving, and so forth. Some of these are directly attached to the normal universities, like the agricultural high school at Bonn, which is attached to Bonn University. The musical high school in Berlin, to mention one only of numerous illustrations of specialization, is famous throughout Europe.

Whilst specialist education for industrial pursuits was thus early a feature of German education, there was one branch of special training to which attention was called comparatively late, namely, special commercial

education. The earliest commercial high school seems to have been that at Leipzig, which is loosely connected with Leipzig University. Cologne and Frankfurt have commercial high schools since 1903, and Berlin since 1906. There was a special purpose behind the foundation of most of these commercial universities. It was felt that men who are subsequently to manage the affairs of large commercial undertakings or to administrate the affairs of chambers of commerce ought to possess, if possible, the prestige of a university degree or its equivalent, but there was a strong body of opinion which disapproved of the young men being removed for three years from the atmosphere of commercialism in which they expected to spend their lives. This difficulty was overcome to some extent by the establishment of these commercial universities, which are in almost all cases foundations established by local communities, or as in Berlin by the Merchants' Guild (*Aelteste der Kaufmannschaft*). Leipzig found that the commercial lectures were flooded by foreign students, so it was arranged that all fees at Berlin Commercial High School should be doubled for foreign students, except the fees payable for the laboratories. The fee for Germans at Berlin is on entrance thirty shillings, and terminally £6 6s. The following is the usual three-year course :

In the first semester the student is recommended to attend two lectures weekly on the theory and technique of book-keeping, method in trade, trade arithmetic, and so forth. He is further advised to take one of the four-hour courses in a foreign language. In addition, he usually takes a special subject, such as national economy, bourgeois legislation, experimental physics, or the like.

In the second semester the student takes the advanced five-hour course in a foreign language, as well as courses in international commerce and trade, trade law, colonial trade (especially trade with the great English colonies), etc. The two last semesters are usually devoted to further study in the theory and practice of commercial science and kindred subjects. The examination for the diploma is oral and written, failure in two written papers disqualifying for the oral examination.

Four classes of students are admitted, but probably the most interesting class is that of those students who have taken the short six-year course of the gymnasium, and having thus obtained the one-year volunteer certificate, have then served a three-year business apprenticeship. A special three-year course is provided for these, as shown above, or they can take a one-year course if desired. The other three classes of students

are those who have taken the full nine-year gymnasium course, students of commercial intermediate schools, and German teachers who have already taken their State examination.

CHAPTER VII

THE ORGANIZATION OF INDUSTRY

IF it be true that Germans upon whom the burden is laid have shown an immense capacity for organization not only of army and navy, as we saw in a foregoing chapter, but also of almost all departments of human activity, it is no less true that Germans generally show a marvellous capacity for being organized. Whether this is an inherent virtue, carried at times to an excess which renders it a vice, or whether it is the result of years of military training, need not now be disputed. The German system of education, and even the carefully graduated bureaucratic system, which is less correctly pictured as wheels within wheels than as a vast system of band transmissions, have played and continue to play their part in this development of the capacity for being organized.

From very early years, as has been seen, the German youth envisages his future career, prepares for it, accepts it as the inevitable, and, if he will, can virtually estimate its finan-

cial possibilities before he has entered upon it. An American writer has asserted that many, perhaps most Germans can estimate their income from the time they begin to earn one until they draw their old-age pensions. This necessarily decreases individual ambition and makes for contentment, which for the individual is not always an unmixed blessing, but creates a state of mind which facilitates the organization of the individual in the interests of the State or of the capitalist. Both the States and the Empire, as well as the municipalities, further encourage this condition of things by their extremely thorough and extremely definite care that the individual shall not be too greatly worried about his future. The vast system of insurance in which Germany was the pioneer was devised by the Empire-builders less because of any strictly humanitarian tendencies than with the object of encouraging contentment or rather of discouraging individual ambition, except along the hard and fast lines laid down by the State scheme. It would not, of course, be fair to assert that the insurance system was invented solely as a sop to the Cerberus of labour, any more than it is true that the universal manhood suffrage of the Reichstag electoral system was granted in the face of feudal opposition simply to prevent popular opposition to the universal manhood

military service : but effectively the one and the other case may be considered as partially true.

The capacity for being organised has however produced results not entirely in accordance with those desired. The organisation of the German Social Democracy, probably the most astonishingly perfect political organisation the world has ever seen, would not be possible in any other country in Europe. Education enables the individual to understand what is required of him, but it does not cause him, at least in Germany, to demand the reasons for these requirements ; moreover, instructions must be very plain, and must not require the exercise of any particular effort of the brain. Hence the Socialist headquarters' staff simplified their instructions to the extreme limit, developed a strategic and tactical organisation, obviously military in its character, and created a nucleus of some million "enlisted" troops, which for electoral purposes can be brought up to nearly four millions. No one who has watched the vast army of Berlin Socialist demonstrators marching out in well-organised companies with their marked commissioned and non-commissioned officers, company by company and regiment by regiment, to some one of the great parks or commons can mistake the character of the formation or the habit of

mind which make such an orderly political demonstration possible. There is no noise, no conflict, and unless the police interfere no windows or heads are broken. The tens of thousands march out, listen to a speech, record a resolution, and march back to barracks. The desired effect is produced by the leaders not by the led. The Government is warned that this or that proposal can and will be met at the word of command by so and so many opponents: there is no pretence that the demonstration is the spontaneous outburst of an infuriated populace. And just for this reason these demonstrations somewhat fail of their desired effect, but they illustrate, which was also the purpose of this digression, the German capacity for being organised.

But there was a more immediate cause than this capacity for being organised leading to the immense development of German industry, especially after 1890, and again after the crisis of 1900, namely, the growth of internal competition as the result of the foundation of the Empire, a growth which compelled German manufacturers to raise continually their standards of quality and hence constantly to improve their methods of production. No doubt this effect ought to have been produced in great measure by the foundation of the economic union in 1833, followed as the union was by a vast improvement of means of

communication, and by the development of the railways, but actually it would appear that the divisions of the German States politically and the uncertainty which was produced by the non-existence of a reliable military union retarded development, which however was ready to burst out so soon as there was political conformity promising a period of military security.

It may therefore be untrue or only partly true that the foundation of the Empire was the principal cause of that sudden development of German industry which has been the chief characteristic of the last forty years : there were causes lying fallow in Germany, but developed in other countries. But it so happened that the dispersion of the long frost coincided with the appearance of two factors which gave German industry a special push upwards, viz., the introduction of electricity in lighting and traction and as factory motive-power, and also the development of the chemical industry, which is usually quoted as the most brilliant illustration of the alliance of laboratory science and industrial trade. E. D. Howard, in his work on the cause and extent of industrial progress in Germany, pointed out in 1907 that the early development of German trade was much less in the direction of foreign competition than of home sales. Between 1880 and 1890 the increase

in the production of pig-iron was nearly five and a half million tons, but more than two-thirds of this increased output found its market within the German frontiers. He shows too that even in the chemical industry the home market must be taken to have grown faster than the foreign, and the same appears to be true in other directions also.

At the outset it is undoubtedly true that cheapness at the expense of quality was the secret of the development of German factory work. "Cheap and nasty" were epithets applied to German products, not by envious foreigners but by the German representative at the Philadelphia centennial celebrations in 1876. Cheapness and the cheap imitation of high-class English goods first drove the old high-class German handicraft out of competition, and later laid the foundation of Germany's foreign business. It would be absurd to deny that even to this present date competition with imported goods in certain branches of manufacture is only maintained, despite the high tariffs, by imitation of the foreign goods in an inferior quality.

However, domestic business was developed, not only by these methods, but also as has been suggested by railway development. From 1840 to 1860 Great Britain had at any time nearly double the mileage of railways that Germany possessed. In 1870 Great

Britain still was four thousand miles ahead, but in the next seventeen years, whilst Great Britain only added four thousand miles, Germany added twenty-three thousand miles or more than doubled her mileage. Ten years later her mileage was nearly twice that of Great Britain, which again had only added four thousand miles as against Germany's eight thousand. This suffices to show how backward was Germany's railway communication until the foundation of the Empire. It is true that the subsequent rapid development may be attributed in part to well-recognised military requirements, but in the main the State Governments took the railways in hand from economic motives. With few and unimportant exceptions all the German railways are State-owned. A large amount of public capital has been invested in them, the States borrowing for the construction. Bismarck originally attempted to secure railway administration direct by the Empire, but the large South German States declined to accede to this project, chiefly for financial reasons, and it was abandoned.

In general, railway administration throughout the Empire follows norms which exist, though they are not laid down as such by any authority. However, disputes do, of course, arise, and at times give occasion to inter-State quarrels. Prussia nationalized her railways

immediately after the war with France, and has used them not only as a very valuable source of State income, but also as a means of encouraging or assisting this or that industry or branch of agriculture. Rates for building material for the shipping industry were immediately lowered when the shipping industry required national support, rates for agricultural produce are lowered when agriculture needs a helping hand, and the development of regular agricultural railway traffic is a prominent feature of Prussian administration. The chief disadvantage of the system arises from the fact that owing to the vast State capital locked up in the railways the administrations are expected by the Finance Ministries to produce for the States financial revenues, which in some years are not quite in accordance with the interests of the railway service.

But it is none the less true that the nationalization of railways after the war was one of the deliberate contributions of the States to the rapid development of industry. The canal policy was another of the well-chosen means to the same end, and the canalisation of rivers still proceeds and is a paying investment. It should not be forgotten, however, that the long stretches of nearly level plain which are characteristic of North-Eastern Germany have facilitated canal-work to an

extent not frequent elsewhere. Many of the later schemes for junction of north and south Germany by series of locks over great hill-ranges (or by canal-tunnels through them) are certainly never destined to be executed, because their value to the development of the home market would bear no kind of relation to their cost. The traffic on the inland waterways of Germany in 1911 amounted to nearly 80,000,000 tons, carried by approximately 20,000 vessels of various sorts. A curious interlude in the history of canal development in Germany has been the quarrel over the midland canal between the agrarians and the Prussian Government. The main feature of the quarrel was really the anxiety of the agrarians lest by the opening of a cheap waterway nominally intended to facilitate the communication between the agricultural east and the industrial west there should actually be facilitated the introduction and popularisation in the east of cheap foreign agricultural produce. The quarrel even developed into an estrangement for some time between the Emperor and the feudal landlords and aristocrats.

The classic illustration of that combination of scientific enquiry with practical industrial life which is quoted as one of the "secrets" of German industrial development is, as has been observed, the chemical industry, which,

as E. D. Howard says, "is the direct produce of German technical education: for the technical schools and university-laboratories may be regarded as the corner-stone of the nation's industrial greatness and the whole foundation of its supremacy in the chemical industry."

The most spectacular instance of this growth of the chemical industry is doubtless the substitution of artificial indigo, discovered by the Munich chemist, Dr. Bayer, in 1897, for the vegetable indigo, which Germany had up to that time been obliged to import. A few years previous to the discovery, the Empire was importing vegetable indigo valued at over one million sterling; a few years afterwards Germany was exporting three times that value of artificial indigo. The value of exported dye-stuffs derived from formerly useless by-products of gas and coke manufacture amounted in the last year for which statistics are available to more than six million sterling. At the end of 1909 there were about 150 limited companies manufacturing chemicals, their capital was about £25,000,000, and their profit in the year nearly 20 per cent. [The figures are quoted from the Statistical Year-book for the German Empire.]

The chemical industry, employing roughly 100,000 people, has its chief seats in the neighbourhood of the Rhine and Main, though one of the largest companies is the Aniline

Company of Berlin, which employs fifty-five chemists and twenty-one experts. The well-known Badische Anilin Fabrik of Ludwigshafen employs 148 chemists and 75 experts, the Elberfeld factory employs as many chemists and twice the number of experts. These are, of course, only illustrations. An important feature of German chemical industry is the export of potash salts for fertilisation, of which Germany has virtually a monopoly. The export is valued at roughly six millions sterling per annum. But, as has already been suggested, one of the great factors in German industrial development has been the opening up of her own home-markets, and this meant practically the facilitation of communications between the different districts producing different commodities.

The industrial strength of Germany, like that of Great Britain, must be based on her iron and steel manufactures, the barometer of industrial activity and progress. German ore and coal were neither so easily nor so cheaply brought together as in the case of England, and it was only the nationalization of railways and the cheapening of transport that made competition with English pig-iron possible. It was further facilitated just at the right moment, that is, about the date of the foundation of the Empire, by a discovery, the Thomas-Gilchrist process, which made

possible the separation of phosphorus, present in disturbing quantities in much of the German ore, particularly in the Lorraine district, which had just been added to the Empire.

Lorraine had the additional advantage of combining coal and ore in fairly close proximity, so that it has been asserted that in the future this proximity and the consequent cheapening of the smelting process will transfer the chief centre of the iron industry from the Rhenish-Westphalian district to Lorraine. This Rhenish-Westphalian district has utilized its special product, coking coal, for the smelting of ores brought down the Rhine from the Siegerland district and the Nassau mines, but also by canal from abroad. The centre of the industry is Dortmund. There is a third important smelting district in Silesia on the south-eastern frontier. Here coal and ore are also found in proximity, but the coal is said to be less suitable for smelting purposes though the ore is richer in iron. Hard coal is mined chiefly in Upper Silesia and Westphalia, the deposits of Lower Silesia and the Saar district being smaller and, according to some estimates, of lower value.

Other mining properties in Germany are rock salt, copper, lead and zinc, all in small quantities and scattered. The total amount of silver, zinc, and lead ore mined in 1910

amounted to about 3,000,000 tons, with a value of about £3,000,000 sterling, the principal districts being the Rhine, Harz, Upper Silesia, and the Erzgebirge. The production of rock salt amounted in the same year to about 1,000,000 tons, with a value of £250,000, and of potassium salts over 8,000,000 tons, with a value of nearly £5,000,000.

The home market for iron has been assisted very largely by the rapid development in Germany of the electrical industry, wherein the Empire has made remarkable strides, and wherein she has shown, as in the chemical industry, one result of the work of her technical schools. Some 60,000 people are now engaged in an industry which thirty years ago practically did not exist. The value of electrical machinery and appliances exported from Germany now amounts to about £8,000,000 per annum. Great Britain alone takes about £750,000 worth of electric lighting globes, whilst in other classes of electrical appliances Austria, Russia, Italy, and South Africa appear amongst the best customers. The domestic consumption of electrical appliances has been largely forwarded by the growth of electric tramways, which in most of the large German cities (except Berlin) are in the hands of the municipalities. An important modern development is the use of electricity for agricultural purposes, farms being supplied

with light and especially motor power from large central stations. The work done by German technicians and scientists together in the forwarding of wireless telegraphy needs to be no more than mentioned.

In the manufacture of steel ware and of machinery, Germany is usually credited, not without justice, with being rather an imitator than an initiator. Her great success in this line has been achieved by the rapidity with which Germans have adopted the improvements invented elsewhere, and the fact that they have succeeded in producing the newest types of machinery at prices which enable their reproductions to compete successfully with the original manufacturers. The industry now employs over half a million people. Germany came late into the market as a producer of factory-made textiles: the automatic spindle in cotton spinning was introduced nearly thirty years later than in England, and weaving survived as a household industry much longer than elsewhere. That even to this day the old spinning wheel is only just vanishing from German villages is shown by the large number of wheels which at regular periods appear in the second-hand market. In other countries they have already become "ornaments," in Germany they can be bought, at certain seasons, for a few pence. At the end of last century there were still

nearly 100,000 hand weavers in Germany, but mostly employed in producing special fabrics such as silk cloths. The technical schools are rapidly asserting themselves in this as in so many other directions, particularly in the production of designs "with brains in them" (*Times* report, 1903). Saxony, which is the centre of the German cotton trade, has recently made great strides in the production of one special article, tulle, of which according to R. M. Berry ("Germany of the Germans," 1911), as little as twenty years ago not a yard was made in the German Empire. Now Saxony manufactures her own frames, and they turn out tulle to the value of roughly £2,000,000 per annum. The textile industry employs over 1,000,000 people, of whom nearly half are women.

Other trades employing large numbers of people are the metal trade, with nearly 1,000,000 employees, and food-stuffs and clothing (with over 1,000,000 each). The building trade employs 1,500,000 people, and the production of food-stuffs over 200,000. There are also over 10,000 people employed in the fabrication of tobacco preparations.

German industry is almost as much syndicated, that is, concentrated into syndicates and cartels, as the American, but curiously enough there is as yet no violent public feeling against the syndicate system. The

opposition, that is, does not run along the American lines, and the bulk of the protesting literature is socialistic and devoted to the general denunciation of capital as such, not of capital in its syndicated form. One reason for this may be that the German cartels were developed under the stress of industrial crises, particularly that of 1900-1901, which followed a period of rapid production. E. D. Howard says that the consumption of pig-iron sank from 262 pounds per head of the population in 1900 to 178 pounds in the following year. "The producers were forced to take combined action to prevent over-production, and the result was the establishment of strong syndicates."

These syndicates still control the market, but the German cartels, unlike the American trusts, are not yet monopolies, that is, they do not control the market both for raw material and for the finished products, nor have they gone so far in merging the individual companies into one corporation; the companies retain their legal and actual individuality, but they submit for certain purposes to the control of committees representing common interests. Moreover, organization and obedience to organized authority, as has already been suggested, are so thoroughly drilled into the German not only by the formalized and specialized school course,

but also by his service in the army, that although the German is a "born grumbler," he becomes or is by nature (professors may dispute which is the correct formula) less disposed to give his grumblings effective force. The whole State system, especially in Prussia, is so much and so obviously a system wherein and whereto the individuality of its component individuals is sacrificed that when precisely the same principle is developed by modern capitalism for its own purposes, it no longer strikes the individual so forcibly, and he is no longer acutely conscious of being outraged as an individual.

It is also fairly obvious that the development of scientific machinery and the constantly increasing precision of a big manufacturing plant tends to reduce factory labour ever more to the level of that simple obedience to rule, the German "Vorschrift," which saves the individual German so much trouble and robs him of so much individuality. Howard observes truly enough that "the capitalist could scarcely ask a better training school for his employees than the German army."

Partnerships give way to stock companies, and stock companies in turn to syndicates, but the nature of the agreement changes also. The syndicate develops into a public body, its executive becomes a Beamtenschaft,

or body of officials invested in the German mind with all the dignity and privileges of the official caste, and as such not lightly to be subjected to individual criticism. Hence there is a fair field in Germany for the growth of the syndicate as the normal form in economic development. In their own way the great stores, which are a feature of the commercial life of the country, especially of its big towns, and against which small shopkeepers constantly protest collectively and individually, are themselves another illustration of the same process whereby the number of the employed increases, but the number of employers does not.

The German syndicates are best known to English readers as a rule owing to the charge brought against them that they sell cheaper abroad than at home; in other words, that they dump goods at a loss abroad in order to keep up the standard of price in their home market. "The German pays double prices for his goods that the foreigner may get his cheap." The defence is that the cartels are not actually monopolies, and that by restricting output at certain periods they maintain a more even market at home, and thus a more even grade of employment than would be possible under a system of internecine competition between individual companies. It is also argued that the big companies, like

Krupps, can and do pay more attention to the welfare of their workmen than would be possible for small employers: they greatly exceed the legislative requirements both in respect of their pension schemes and in respect of housing, recreation and so forth. The counter claim to this is, of course, that what some do all should be legally compelled to do, if necessary with the assistance of the State funds. However, by the time the argument has reached this stage it is no longer a German question, but one concerning the whole relations between capital and labour.

The development of capitalism shows a progressive increase in the number of large companies and businesses as against small, and also an increase in the number of limited liability and other stock companies as against individual ownership, but this is doubtless not an especially German feature of capitalistic development. Of the combinations of labour as opposed to capital, the Social Democracy is, of course, the most striking: it is at least an open question, however, whether it is also the most effective. Its devotion to Marxianism and to principles which could only be brought into practice by a complete overthrow of the existing social order has in the past prevented its parliamentary representatives from acting as a Labour party; the Socialist party in the Reichstag

has developed into a permanent opposition, making a valuable occasional ally for discontented groups in other parts of the house, but not itself an effective fighting unit.

This ineffectivity has produced the South-German Revisionist movement within the Social Democracy, which aims at depriving the party of its purely negative force, and at enabling it to record a vote when desirable in favour of the lesser of two evils, particularly in financial legislation. That this Revisionist principle will in time prevail practically throughout the party may be taken perhaps for granted: it would prevail much sooner if the Prussian Government would adopt some of the more liberal spirit which prevails in other parts of Germany; for it is precisely the absurdity of the Prussian feudalism in the bureaucracy and in the Prussian Diet, and the comparative harshness with which the executive works that makes Prussia the stronghold not only of the old feudal spirit, but also of the strict Socialist spirit, the stalwarts of the "Umsturz."

Apart from the social democratic combination, whereof the kernel is the Socialist Union, there are two other forms of Trades-Unions in Germany, the Christian Union and the Hirsch-Duncker Union. The former, with a present membership of about 350,000, is at variance with the Social Democracy mainly