

FARM AND FACTORY IN CHINA

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Aspects of the Industrial Revolution

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LONDON
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32 RUSSELL SQUARE, W.C. 1
1928

First published . . . June 1928

PRINTED IN GREAT BRITAIN BY
THE EDINBURGH PRESS, 9 AND 11 YOUNG STREET, EDINBURGH

TO MY FELLOW-STUDENTS
OF CHINA
CHINESE AND FOREIGN

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FOREWORD

TWENTY years ago, the writer¹ and a Chinese friend visited a prosperous match factory. They were taken first to a large room in which young boys, standing at long benches, were packing matches into boxes. The process was accompanied by many flashes, as the matches, which were of the strike-anywhere variety, ignited through friction. Protection from fire, both for the boys' hands and for the building, was woefully primitive. Passing on, the visitors rapidly came to the mixing-room, where the phosphorus, together with the other ingredients, was stirred into glue to form the material for the heads of the matches. The room was a small one, with almost no ventilation; the phosphorus was the yellow (white) kind, which, unlike the inert red form, is intensely active and poisonous. For this reason its use is now widely prohibited.²

As the phosphorus was stirred in, in open mortars on a table in the centre of the room, frequent bursts of flame formed puffs of white fume. No hoods were provided, nor any artificial draught, and the air was thick and nauseating. When questioned as to the occurrence of phossy-

¹ Then a teacher of chemistry in China, with previous industrial experience in Lancashire.

² See p. 100.

jaw among the workers, the manager, a kindly man who had learnt the industry in Japan, confessed to having known fatal cases in the latter country and admitted that some of his own men had been obliged to give up work in his factory. He listened readily to information as to the use of red, non-poisonous phosphorus and, failing that, as to means for drawing off the fumes. In the latter respect considerable improvements were effected.

The making up of the match-boxes was done outside the factory by women and children, despite the fact that most of the employees in the factory itself were small boys, who did all but the heaviest work. Strips of wood, nicked at the right places, and strips of paper, were prepared on the premises, but the folding and pasting together were done in the homes at incredibly low rates. Here was a factory which was regarded in the immediate neighbourhood as a godsend, finding employment for many, reducing poverty and almost abolishing begging. Yet in it were exemplified all the evils of unregulated child-labour, the conditions which lead to "sweating," and lack of protection from the dangers of a trade particularly injurious to health.

This incident may serve to raise the questions : What is happening in China in the sphere of industry ? What does the process of being drawn into the main stream of the world's economic life mean for the people of this eastern land ? What, in its turn, does the line of China's in-

dustrial development mean for the world at large?

The China of to-day is full of striking contrasts of mediæval and modern; she forms the field of the most intensive communist propaganda. Her people are making trial of modern industrial methods and fashioning a new industrial philosophy at a time when she has not only broken from her old moorings but is adrift on an as yet—to her—uncharted sea. Her strongest driving power is a passionate nationalism—and her economic problems bristle with international complications. How intimately the industrial phases of her changing life are bound up with the stirring and tragic events of recent years must be clear to all. We need only remind ourselves, to take one example, that the “Shanghai incident” of 30th May 1925 occurred in the course of a demonstration against the killing of a Chinese workman by his Japanese foreman. It is perhaps less clearly realized how profoundly economic change is transforming the social institutions in China and the daily life of her people.

The forces moulding modern China cannot be estimated without some knowledge of the traditional economy handed down from the past. This brief study accordingly begins with the village peasant and the handicraftsman of old, but still existing, China. The imaginative effort to enter into the simple life of these people who constitute some of the finest of human material,

is one of the essential conditions for understanding the needs and the tendencies of the present. The chief purpose of the book is to contribute something, however small, to such an understanding.

CHAPTER I

THE VILLAGE AND THE PEASANT FARMER

I. THE PEASANT AND HIS VILLAGE HOME.

THERE is much that is attractive about country life in China, and at times its charm is strongly felt. To enter a village on the Great Plain in the autumn is to be presented with delightful pictures of still life and happy labour, set in scenes of varied colour and lighted with golden sunshine. The air is full of the joy of harvest, and everything conspires to awaken memories associated with some of the most treasured literature of the past. The open threshing floors of rolled or beaten earth are the centre of life and interest. Here the fruits of the season's toil are brought; the muzzled ox or ass treads out the corn or rolls the beans; the peasant winnows the grain by shovel or simple machine, or his wife winnows it by fan. In the fields men are ploughing the recently harvested land or sowing winter wheat. Touches of bright colour, lightening the customary drab, are provided by the cobs of maize sunning on the gently sloping roofs of peasants' homes and barns, and by the burden

of the fruit-trees. For a time, at least, the people's simple wants are met.

But there is a darker side to the picture which even the brightest sunshine is powerless to dispel. The sun may light up flood waters and ruined homes, or reveal the emptiness of the barns, and crops scorched by drought. China has recently been described as the land of famine.¹ The unevenness of the rainfall is such that in Chihli most of the precipitation occurs in a few weeks in the summer. A missionary living south of Peking crossed one of the largest rivers of the province dry-shod one July to find himself, three weeks later, prisoner in a flood which altogether covered twelve thousand square miles. And whether the year is good or bad the three spectres of poverty, ignorance, and disease are never absent.²

To those accustomed to the motor-buses and asphalted roads of, say, modern England, it is difficult even to imagine the isolation of villages in China, connected with one another only by footpaths, or by cart-tracks on the earth, which are ploughed over by the farmer in autumn or spring and are watercourses in the summer. Traffic may be at anything from two to four miles an hour—when it is possible at all. China has not even India's macadamized roads, though

¹ *China: Land of Famine*, by W. H. Mallory, American Geographical Society.

² For similar conditions in India, see *From Field to Factory*, by M. Read, pp. 32-33. S.C.M.

a "Good Roads Movement" is one of the signs of the times. The isolation due to lack of transport is intensified by the prevalent illiteracy. Literacy in the country villages in China is limited to a very small percentage of the people, being made especially difficult by the character of the language and the difference between literature and speech, which is as great as that between old Anglo-Saxon and modern English. The Renaissance in China is indeed creating a new literature, based on the vernacular, and the Mass Education Movement is making an attack on illiteracy, but it will necessarily be a long time before the effects of these movements are strongly felt in the villages. Soon after the Revolution in 1911, a farmer was asked what he thought of the Republic. Scratching his head, he replied that he had heard that the Emperor had had a quarrel with a man named Yuan; which was probably as much as three-quarters of the people understood about the change of government. The result of isolation, poverty and ignorance is a state of inertia and stagnation which only the most powerful forces can hope to move. Even the cheerfulness of the people in the face of calamity is only made possible by a considerable measure of callousness bred of lack of hope.

Under these conditions it is not surprising that the country districts are still living a self-contained, self-sufficing life to an extent not met with in our industrialized communities of the

West. Professor Buck of Nanking, in a study of 150 farms in one locality in North China,¹ found that these farmers marketed just over half their crops, and that on the average seventy per cent. of the entire family living was directly supplied by the family's own farm and labour. The village needs for outside goods are still largely supplied by travelling pedlars, annual temple fairs² and periodic markets; though in the larger centres shops are of growing importance. An interesting development in recent years has arisen in the successful efforts of the great oil companies (the Standard Oil Company and the Asiatic Petroleum Company) and the British-American Tobacco Company to persuade the villagers to light their homes with kerosene and smoke cigarettes. In the process they have covered China with a wonderful network of distributing agencies.

These isolated villages of illiterate peasants are the conservative strongholds of China's ancient life. Here still flourishes the "joint family," including in one homestead all the direct male descendants of the oldest surviving member, with their wives and families. The oldest member, or

¹ *An Economic and Social Survey of 150 Farms*, Yenshan County, Chihli Province, J. Lossing Buck, University of Nanking Publications.

² These temple fairs are often the great economic and social events of the year, accompanied by travelling theatricals, and attracting the villagers in hundreds and sometimes thousands from miles around.

his widow—for the distinction of this position overcomes even the disability of sex—is head of the family and exercises almost unlimited patriarchal power. He holds the family purse, controls even middle-aged sons, and must give his consent to every important departure on the part of any member of the family. Even marriage is a responsibility, not only of those entering upon it, but of the head and of all the members with him. If it brings the family a new worker in the person of the bride—and this sometimes seems to be the paramount consideration—her support and that of her children fall, not exclusively upon the husband, but collectively on the whole family.

This joint-family system has been the strength and weakness of China. Informed with the spirit of ancestor worship, it created at once the stability arising from filial piety and the stagnation resulting from excessive regard for the past; it has subordinated the young to the old, the living to the dead, and women to child-bearing, through early marriage and the reckless multiplication of the race.¹ It has made for social democracy—the brilliant scholar and the distinguished official being members equally with

¹ A Chinese friend points out that the social prestige of a large family saddles the older men with the support of the young. The fact is that young and old, men and women, are sacrificed to the family ideal. As the Chinese saying has it, parents are cow and horse for the children, providing their sustenance and performing their tasks.

the simple peasant who shares their glory—but it has laid a burden on the able which has often crippled their usefulness and which they have sometimes been unable to carry. It has been a powerful cement, binding together large groups in social and economic unity in a manner especially useful in the self-contained static conditions of the past, but it has equally formed a barrier beyond which social obligation has rarely been felt, rendering nepotism a religious duty and standing in the way of broader union. The sinister influence of nepotism, *i.e.*, undue favouritism to one's relations in the bestowal of appointments, etc., is widely apparent in both industrial and political life as one of the chief obstacles in the path of progress. To-day, however, this joint-family system, so central in the life of China, is being weakened among the more educated by the influence of new ideas, and among the poor (as we shall see) by the changing conditions of industrial life.

The village itself has been the simplest possible aggregate of these joint families, its affairs democratically managed by elders elected by the heads of the families. Land, speaking broadly, has been the freehold possession of the individual families, not the communal property of the village. In the south a small group of villages has usually been the scene of clan life, but in the north the clan is not important. When the village has coincided with the clan there has been common clan ownership of a portion of the land

which has provided alms for the poorest of its members and income to defray the expenses of the clan festivals and the support of scholars. There has been no caste system, such as that of India, determining occupation and assuring status, and the feudal period passed away two millenniums ago. The common activities of the village are simple, including provision for temple worship, the entertainment of travelling theatricals, the lighting of the village street, the maintenance of peace and sometimes the collective protection of the crops.

Such is the setting in which the peasant lives, and of which he is largely the product. He himself is still the backbone of the country, he and his family forming probably over eighty per cent. of the population and furnishing an inexhaustible labour supply for city industry. Thrifty and industrious, sturdy and independent, patient even in adversity, he gives the impression of great possibilities. But here again there is the darker side. Village life is full of mutual suspicion. Generally honest, though honesty is unpleasantly associated in China with dullness, often wonderfully loyal, as the old man who through a winter's night stayed to staunch with his body a leak in the village dyke and was found frozen to death in the morning, but more often callous and indifferent, in their mingled strength and weakness these "farmers of forty centuries" are the warp on which the web of China's future must be woven.

2. THE PRESSURE OF POPULATION.

The insistence on the securing of descendants mentioned in connection with the joint family, renders it not surprising that there are many evidences of over-population. The size of a family for example is found to depend on that of the farm. The smaller holdings are inadequate for the support of those living on them. In a study of nearly 3000 families in various villages in Chihli, the average size of 372 families with less than half an acre per family was 2·7, and the number of persons per family steadily increased until the average of 14·8 was reached for 29 families with between 33 and 83 acres apiece. One family owning 170 acres consisted of 21 persons¹ Professor Buck found in a group of villages in the same province that about two-thirds of an acre seemed to be required per person.² A large proportion of the population fall below this ratio. Those with little land eke out a livelihood with subsidiary means of support, but the opportunities in this direction are woefully inadequate. Statistics are not available, but the impression of those who have considered

¹ "The Study of Chinese Rural Economy," C. M. Malone and J. B. Tayler, *Chinese Social and Political Science Review*, January and April 1919. The authors do not claim a high degree of accuracy for these figures, but believe they sufficiently indicate the general situation.

² Coll. of Agric. and Forestry, Univ. of Nanking, *Bulletin* 13. See Appendix, p. 106.

the question is strong that industry and colonization are not absorbing the surplus, and that chronic undernourishment, weakening the constitution, is causing a high death-rate among the poor.

From such figures as we have, population in China seems to bear more heavily upon the means of subsistence than in either India or Japan. In India in a recent census the most densely peopled area was Bengal, with a population of 1162 per square mile of cultivated land.¹ The United Provinces came next, with 816 for Oudh and 761 for Agra. Madras had 614 and Bombay 308. The figure for Japan was 2349, but that included not only the rural areas which we are considering but the cities as well, and Japan is no longer self-sufficing in the matter of food. In Chihli the figures in various villages ranged from 550 to over 2000. In Shantung they are believed often to exceed 2000. In several villages in the rice-lands of Chekiang the density ranged from 2270 to 6860 persons per square mile of cultivated land.

Some unpublished figures of Professor Buck's indicate a rather high rate of increase in the rural population, but sufficient data do not yet exist to permit of general conclusions. We do know that a few districts in South China have

¹ It should be noted that the figures give the population in relation not to total area but to that of cultivated land. The figures for China are therefore not comparable with those of the Post Office and other estimates.

supplied such an overseas migration that China, without any colonies, has over nine million of her people abroad. In the North the Chinese colonization of Manchuria and Mongolia will demand further notice. The outward pressure of China's population is a phenomenon of which we should hear a great deal more were there statistics to tell the tale and were China a powerful nation like Japan.

Professor Clay has pointed out that the increase in irrigated area in Egypt has not greatly benefited the individual fellaheen ; it has simply increased the numbers of them. No form of economic development in China will be of any avail unless there is a fundamental change in social outlook affecting family life, the growth of population and the standards demanded by the workers.

3. THE FARMER'S LIVELIHOOD.

The chief cause of poverty in rural China is thus the pressure of the population on the land. The small size of the individual farm is caused by the continual division of the family patrimony as it has descended from father to sons. There has been no right of primogeniture in China, and the usual practice has been the equal division of the holding between the sons, though sometimes the eldest son has received a double portion to enable him to care for the aged members of the household and maintain the ancestral worship. This custom has made for a very wide distribution

of property in China, where land is the chief form of wealth, but in the absence of clear economic ideas as to what constitutes a sufficient basis for the support of a home, the division has gone too far.¹

The commonest holding in the north, where irrigation is rarely possible, is only about 4 acres, 65 per cent. of the holdings, according to the sample results of Malone and Talyer,² lying between $\frac{1}{2}$ and $4\frac{1}{4}$ acres. In the wet rice-lands of the south, with their greater yields per acre, still smaller farms are the rule. A villager with a little land, say half an acre or so, is often worse off than one with none, because he clings to it instead of going forth and seeking a living elsewhere.

The farming is, of course, very different from any Western type. There is no dairy farming—China has no milk, no pasture-land (except rough pasture in the hills), and no hedgerows or fenced fields. The reason for this lack of pasture is that as much human food as possible must be won

¹ In regard to land tenure generally, the Chinese farmer is in a relatively satisfactory position. There are no restrictions on the transfer of land, which can be bought and sold freely, the deeds being stamped by the local magistrate. The buying up of land by wealthy men is a process of integration that to some extent offsets the process of division. In the north there are considerable districts in which over 90 per cent. of the land is farmed by occupying owners, but in provinces in the south tenant-farming is common. Sixty per cent. of the farms of Hunan are said to be cultivated by tenants.

² See Appendix, p. 106.

from the soil, and the dense Chinese population cannot afford to put down to grass, land which can be cultivated for grain or legumes, *e.g.* beans. Long experience has enabled the Chinese farmer to work out a remarkably economical system, which secures this all-important result to a high degree.¹ In the south, where rainfall is plentiful, rice, for example, is grown for the most part under water in levelled fields, enclosed by low banks (which serve as footpaths). The rice is first sown in seed-beds and then planted out by hand, spear by spear. This involves immense labour, and is designed to save the land for other crops, which are maturing while the seed is sprouting. In this way two or three crops may be secured from the same land during the year, rape often being grown in the winter and wheat in the spring. The ploughing of the paddy-fields is done by the grey water-buffaloes, which are found all over South-eastern Asia and South India. The buffaloes are also used for raising water from the irrigation ditches to the fields, though this is sometimes done by the peasants, by means of a kind of treadmill.

In the north the staple crops are grains and beans. Wheat is planted in the autumn and harvested in the early summer. Millet, maize and kaoliang (Chinese for "tall grain," a kind of sorghum, which plays a great part in North China),

¹ F. H. King, an American agricultural expert, gives a most interesting statement of the excellences of Chinese farming in *Farmers of Forty Centuries*.

are sown in the spring or early summer and reaped in September. Reaping is all done by hand both north and south. Another great labour in the former is hoeing. After rain the ground has to have the surface loosened (mulched), in order to prevent evaporation, and this is done by hand, although a light cultivator pulled by a donkey would frequently do it nineteen times as quickly.

It is this lavishing of human labour, of which there is unfortunately such a superabundance, on their fields, which has led to Chinese farming being called intensive. But true intensive farming calls for heavy manuring and gives high yields, and neither of these is usual in China. The yield of wheat, for instance, is not nearly so good as on an English farm—is indeed no better than that produced by extensive methods on American prairies. The main fertilizer everywhere used is night-soil, which is all carefully preserved to return to the land. The implements employed are also very simple, the plough being a very light one made of wood and only tipped with iron.

The result of these conditions is that the average farm does not provide any but the most meagre living for an average-sized family. In bad years, in North China at least, a large part of the population has practically to hibernate through the winter months, making as little exertion as possible to economize food, and gradually bringing themselves back into condition

again in the spring. Moreover, the average farm does not afford sufficient labour to occupy the farmer's whole time. The studies by Professor Buck already referred to show that in both North and Central China few farmers put in much more than ninety full days directly in farm-work during the year, and many only seventy or eighty. Neither does the usual farm make good use of the animals. All this is evidence how little the economic point of view is grasped by the peasant, who is ruled by custom and sentiment. There is land that has been reclaimed from the foreshore of the Yangtse River by cotton magnates, which is rented exclusively for the cultivation of cotton at prices two or three times as high as those charged for similar land not far away on the same river, the cultivation of which is free from any such restriction. Rent is not yet entirely on an economic basis.

The small farmer is driven by lack of income and surplus of time to take up any subsidiary industry that may present itself. For instance, some of the peasants and small tenant farmers in the Yangtse valley will, during the slack winter season, turn travelling tinkers.¹ With portable furnace and anvil, tools and materials, bedding and so forth, made up into two bundles to carry at either end of a pole, they tramp from village to country town, doing their own cooking (the meal is limited to coarse rice and salted

¹ Bureau of Economic Information: *Chinese Economic Monthly*.

cabbage) and sleeping at the temples or in the open. It is said that they manage to live in this way for less than fourpence a day.

Some years ago much of the cheaper cotton cloth sold in Peking was imported from abroad. Some enterprising merchants began buying yarn from the mills in Shanghai and Tientsin and supplying it to the farmers in Kaoyang, a rural district south of the city. The men and their wives wove it on simple treadle-looms into a cloth which captured a wide North China market. The families made a little less than £4 a year with a loom that cost about the same sum. That is not much, but it is as much as is paid, in addition to his keep, to a farm labourer in the same district for a whole year's work.

There is no space, or need, to multiply examples; but it need hardly be said that, even in the aggregate, opportunities of a similar kind can only provide for a fraction of the needy, and that idle time in the winter, especially in the north, remains an immense economic loss.

What kind of a livelihood does the peasant gain as the result of all his toil? Some years ago Professor Dittmer made a study of the incomes and expenditures of some two hundred families in villages near Peking, and his results are in substantial agreement with later inquiries.¹ To say that the majority showed incomes of from

¹ *Quarterly Journal of Economics* (Harvard), November 1918. See also later studies by Dr T. Chen, *Chinese Economic Monthly*, October 1924 and February 1925.

£5 to £10 a year is to give figures that probably have as little meaning for us as those in which scientists state the dimensions of atoms. It will be wiser to describe the living in concrete terms and to add that many families obtain insufficient supplies even of the necessaries named.

The diet consists of grain cooked in various ways: as gruel or in strings like macaroni, as bread (steamed not baked) or cakes, or cooked with vegetable oil which takes the place of butter and lard in supplying the fat in the diet. In addition there are beans which act as a substitute for meat; together with turnips and cabbage. A meal containing two or more of these items is washed down with tea or boiled water. A little meat, usually pork, will be indulged in once or twice a year at the principal feasts.

Members of the household will make the family shoes with scraps of old cotton cloth, and its caps of better material, and will make up the clothes and the wadded quilts, though much will be second-hand and the main work that of patching and repairing. In the north the house is built of adobe brick, that is of bricks dried in the sun but not burnt. The body of the wall is composed of these, which are then plastered over with mud mixed with chopped straw. The window is of paper, the bed a raised platform of earth or brick, with a flue running through it by means of which it can be heated at night. For this purpose a few handfuls of dried grass, roots and twigs, raked up by the old men and boys, are

used, and the house is often not otherwise heated. There is little that the peasant cannot find or make for himself, except perhaps some of the timber for the house. The floor is simply earth. In the south, bamboo plays the leading rôle: the houses are better but there is more overcrowding. Sanitary conveniences consist mainly of a hole in the ground behind a screen of reeds or kaoliang stalks.

Such in briefest outline is the living of the poor in the villages of China.

4. NEW INFLUENCES : VILLAGE RECONSTRUCTION.

There is as yet probably much less change in the Chinese than in the Indian or Japanese village. In the latter countries the Governments have promoted far-reaching rural policies. But in China, too, modern influences are beginning to affect the peasant. Near Shanghai, for example, considerable changes are taking place in the villages. For a while Shansi was known as the model province because of the comprehensive programme of educational and other reforms which the governor initiated some years ago, but, unfortunately, there is evidence that the force of that movement has spent itself. What will be the outcome, if any, of the Farmers' Unions recently organized by some of the Nationalists in the south it is too early to say. The fact of their formation is sufficient to indicate that, at least in such provinces as Canton and Hunan,

new rural movements are possible if skilfully organized.¹ In some provinces, notably Fukien, local rivalry has done a good deal to promote education. Modern education, indeed, is penetrating everywhere—more or less slowly. An important feature of the educational situation is the fact that attention is now being focused in both government and missionary circles on the problem of fitting education to the needs of the village community. The Mass Education Movement, which is endeavouring to grapple with the problem of illiteracy, has experimented with its methods in a rural area with some promise, and in order to reach the farmer more effectively is studying rural life, agricultural economy and co-operative enterprise in relation to one another.

On the agricultural side, farmers are being supplied with improved seed both by agricultural colleges and by interested commercial parties—for example, with tobacco seed and the tested eggs of the silkworm. Experiments are being carried on in a number of centres, and some extension work is bringing improvements to the notice of the farmers. Several American missionary societies are sending agricultural experts to assist their rural missions.

A small but very promising beginning has been made with co-operative village banks on the lines laid down by Raiffeisen in Germany, which have proved their value wherever a population of

¹ The writer, however, is not competent to discuss this movement, with which he has had no contact.

peasant proprietors is found. These banks consist of groups of farmers who pledge their joint credit in making loans from central banks. They are allowed to lend to their own members only, and each loan must be for a specified purpose approved by the responsible committee. They have been found to exert an excellent moral as well as economic influence wherever they have become established. Study is now being planned of the possibilities of co-operative arrangements for the supply of the villagers' needs and the marketing of the produce he sells. It is very necessary that the peasants should combine together in co-operative ways, otherwise they will be unable to avail themselves of the new and more scientific methods now being introduced. These inevitably require not only larger capital but greater adaptability and a spirit of enterprise. It is only through co-operation that the countless small-holders can meet this changing situation.

Assistance in the matter of co-operation is being given by the China International Famine Relief Commission, which is also promoting river conservancy and protection against floods. The American Red Cross has assisted in road-making, but a foundation for rural progress can only be found in an education which will create new social ideals and a new economic outlook. Rural China may not inaptly be compared to Denmark when, humiliated and stripped of some of her provinces by Germany and ruined economically by the competition of cheap grain from America,

she found herself confronted by the problem of completely transforming her agricultural organization. The Folk High Schools, which had been created by the genius of Grundtvig, proved one of the main factors in enabling her to meet her difficulties and to become, despite her lack of resources, one of the most progressive and prosperous communities in the world. Directing the strong national feeling of the day to the task of internal reconstruction and utilizing the national history and literature for a purpose at once idealistic and practical, those schools succeeded in creating an alert and responsive peasantry imbued with a spirit of comradeship in a common enterprise and so laid the foundation of that cooperative commonwealth which we know as the Denmark of to-day. China likewise, to make real progress, must find means to create a new rural life. The task is there—but China still awaits her Grundtvig. There is no undertaking that calls more urgently to the Chinese patriot, for the farmer's standard of living is the baseline for the country as a whole, and little can be hoped—at least for the unskilled city worker—unless the peasant can be lifted to a higher economic and cultural plane.

CHAPTER II

THE HOME AND WORKSHOP INDUSTRIES OF CHINA

I. TYPES OF CHINESE INDUSTRY.

CHINA has long been famous for her artistic products: her jade and porcelain, lacquer and carved work, silk and cloisonné, scrolls and paintings, which reveal the artistic feeling and skill of her craftsmen. Many of these crafts were highly developed before the days of Marco Polo, the great Venetian traveller of the twelfth century. Their wares still tempt the foreign tourist in the great cities of China and adorn the homes of the wealthy in many lands.

These luxury trades all belong to those phases of industrial development that we associate with the mediæval and early modern periods: the handicraft system and the form of domestic industry which preceded the factory system. In the same economic classes, too, are the humbler trades which supply the wants of the common people, their rice-bowls and chopsticks, their ploughshares, millstones and sickles, their kettles and boilers, the woman's ornaments and man's umbrellas. Even to-day the great majority of

Chinese industries are conducted in these immemorial ways, and some glimpses of them will be necessary to an understanding of the present industrial situation.

These traditional industries of China differ greatly in size and exhibit a great variety of detail in their organization. Some are extremely simple. Many toys and other small articles are made in the homes out of bamboo, kaoliang stalks, paper, wood, mud, and what not, and are sold directly by the makers, who peddle them on the streets or at markets. In the large cities the industries tend to group themselves. Thus Chopstick Street is one of the features of Wuchang. On a fine day one sees the workers sitting on trestle stools in front of their shops dexterously splitting and then trimming the prepared lengths of bamboo or wood, and marvels at the speed and accuracy with which they work.

In Peking there is a Flower Market Street. At 6 o'clock every morning the market¹ is attended by families which have been making artificial flowers of paper or silk. Some 1500 families, it was revealed by a recent study,² were engaged in this trade, all living in the immediate vicinity of the market. It is usual for one family to specialize in one kind of flower. The leaves and stems are made by separate families. In this case each family is independent, buying its own

¹ Peking contains numerous markets which open at or before daybreak for a couple of hours or so, and then close for the day.

² See *China's Industry and Finance*, D. K. Lien.

materials and marketing its own products. The tools are simple and inexpensive and the materials, which can be readily obtained in small quantities, include Indian silk, silk waste, cloth, Chinese and Japanese paper, paraffin wax, wheat flour, copper and iron wire, peacock feathers, imitation silver thread, cotton and various dyes.¹

In other cases the small home worker depends for the supply of his materials and sometimes for his tools upon some merchant who is interested in marketing the product. The Kaoyang weaving industry already referred to is an example of this (p. 27).

At the other extreme are industries, such as porcelain and fur, in which the number of workers may rise above a hundred in a single firm. At Pengcheng, in South Chihli, a local clay deposit has been made the foundation of an industry occupying over 300 firms, employing perhaps 10,000 workers. In almost all cases the firm consists of a single family. The capital is small, varying from £300 to £1000, according to the number of kilns operated. There are no banking facilities except an old-style money shop, charging a high rate of interest, usually 30 per cent. per annum. These firms make bowls and jars for common use, not the famous porcelain-ware of Kingteh Chen, Kiang-Si.² The less skilled men generally, such as those who grind and

¹ *Chinese Economic Monthly*.

² See *China's Industry and Finance*, by D. K. Lien, for an account of the latter.

prepare the materials, are paid by the day, and receive ten to seventeen pence; those who paint on the designs are paid by the piece, and receive pay averaging from 2s. to 2s. 5d. per day. Chief of these are the potters, who shape the bowls and jars. They receive a share of the amount realized by the sales, varying from one-third to a half, from which they pay their helpers. They thus have a very direct interest in the quality of the work.

In order that the potters need not wait too long for their share in the proceeds, they are often paid on account in advance, a system which seems to have serious drawbacks.

The technique followed is rule of thumb and trestle, not changed for generations. The owners splitting about the future, but intensely of bamboo or refusing to adopt any new pig-accuracy with methods or fresh designs, even

In Peking there is a notice. The workers are 6 o'clock every morning leaving themselves with families which have better their position. Some flowers of paper or silk. Some ease themselves was revealed by a recent study, work, often in this trade, all living in the infrequent the of the market. It is usual for one to specialize in one kind of flower. The stems and the are made by separate families. In each case each family is independent, buying strate

¹ Peking contains numerous markets which open at an early daybreak for a couple of hours or so, and then close for the night.

² See *China's Industry and Finance*, D. K. Lien.

in whose jurisdiction the town lay, organized an industrial council, composed of three representatives of the firms, three of the workers, and two of the local gentry. Little notice, however, was taken of this; the employers organized their federation while the potters and painters established separate unions.

The housing is distinctly unusual. Large caves, 20 to 30 feet wide and 60 to 80 feet deep, each with a door and four ventilation holes high up, are used both for workshops and for store-rooms. The former are the larger, and the workers without their families with them live in these; the store-rooms house the families. The better-paid skilled men, however, live in their own houses and not in these caves.

The iron industry in Shan-Si, again, is still carried on by the methods used hundreds of years ago—the unit of production being very small. The iron ore is often raised by a hand-windlass, exactly like those used in country houses for raising water from a well; coal is drawn out of the mines by men walking up a low sloping adit or passage-way. Each village engaged in the industry specializes in some one type of article, and its products are still carried to considerable distances by pack-animal until some serviceable river or railway is reached.

How laborious are the processes employed may be gathered from a single example. The right mixture of crushed coal and ore is filled into cylindrical fireclay crucibles, 4 feet high and

6 inches wide, which are arranged on a bed of coal in a pit and covered over with clay. The coal is fired from below and the whole charge is allowed to burn for two days. Then the cover is removed, the crucibles are broken up and a spongy mass of iron is obtained from each. This is melted into ingots of a suitable size, and these are beaten out by hand, with incredible labour, into spades, or whatever the article may be. In other cases cast-iron is produced, and the articles, such as large boilers for cooking and heating water, are formed by pouring into moulds.

Trades such as these have developed their own marketing organizations. The china-ware of Peng-cheng and elsewhere is usually sold through commission houses. The heads of these are expert licensed brokers, who often combine the function of broker with that of innkeeper. There are also special markets which have some of the characteristics of exchanges. Two miles from where these lines are being written is a grain market. There are nine brokers, united in a guild, who pay £120 a year to the magistrate of the district.

Adjoining the brokers are the stores of the city grain dealers. The farmers of the neighbourhood bring their grain to the brokers. The latter fix the price and take 10 per cent. of the grain as commission from the farmers and a sum of money as commission from the dealers. The farmers and dealers do not come into direct relations.

A little farther away, at one of the gates of Peking, is a fruit market. Here the brokers, who are licensed by a guild in the city, are innkeepers. The peasants from the western and northern hills come one day with their fruit, stay the night and return next day. The city shopkeepers are the buyers. If there are no offers for the fruit on the day it is brought, the peasant can leave it there to be disposed of by the broker at the first opportunity.

2. CHARACTERISTICS OF THESE INDUSTRIES.

There are certain features common to most types of Chinese industry. They are usually on a family basis.¹ The small business not only belongs to one family, but all the labour is supplied by members of the family. The women and children often play an important part. In South China and to a less extent in Central China, women bear their share of heavy, outdoor work, plying the sweeps or long oars on junks and river-boats, carrying heavy loads as coolies, working in the fields, and so forth. In the north women have been more secluded—and incidentally foot-binding has been more extensively practised. Children begin to help as soon as they were old enough to be of any use at all.

The work being at hand in the home, the working hours have often covered the whole

¹ *E.g.* see p. 35.

period of daylight, except for two breaks for meals, and when business is urgent much of the night may be spent in labour if the work does not require too good a light. What might result in exceptional cases may be gathered from the example of some coal-mines in Shantung. The mines being difficult to enter and leave, it was desired to keep the men there for as long as possible at a spell. The shifts were accordingly arranged at 20 hours on, followed by 12 hours off. But even in China men do not work for 20 hours at a stretch, and the nominal 20 apparently means 16 of actual work. Hours as a rule, however, are not fixed or definite, and in normal times the worker who is his own master can take a rest when he feels he needs it. Generally speaking, there is no great intensity of application, especially as trades are frequently—perhaps generally—overstaffed. This is true both of workshops and shops or stores. There seems to be no doubt, however, that the young are often driven mercilessly by those above them.

In all this industry there is nothing to spare the muscles. One watches the beating out of ingots of iron, or pairs of labourers bathed in perspiration spending days sawing planks out of big logs that a band-saw would reduce in an hour or two; elsewhere it may be coolies fighting for the privilege of carrying heavy loads a day's journey for the cost of a few bowls of rice, or six or eight men dragging cargo through the city streets which one man and a mule could deal

with more effectively. In the north, much of the traffic is by wheel-barrow. Waiting at a wayside inn at dusk on a dry frosty winter's evening one is deafened by the strident creaking of the large wooden wheels as the barrowmen arrive. Singly and in groups they continue to drop in well on into the night. Their barrows, with loads up to four hundredweights, are left in the unflagged courtyard. The simple meal is soon disposed of, washed down with hot water or weak Chinese tea. There is a respite of an hour or two spent in the hilarious but sometimes quarrelsome comradeship of the road, then one by one the quilts are unrolled, or the men simply stretch themselves in their wadded overcoats side by side on the raised earthen or brick platform, covered with reed matting, which constitutes the bed.

Before dawn the next morning they are on the road again, not breakfasting until perhaps ten or eleven o'clock, passing the day on two meals only. In this way they tramp hour after hour with but brief rests, pushing and balancing their heavy loads in the grooves worn by others before them, crossing and recrossing the cart-roads, with their deep ruts smothered in inches of dust, mounting banks several feet high by the roadside or crossing a ploughed field to cut off a corner; with nothing to save their muscles except when they can mount a sail.¹ So they go on—it may

¹ The wheel-barrowmen sometimes carry sails to fix on their barrows, when the strong steady winds are favourable.

be through biting wind, in twenty or thirty degrees of frost or in blinding dust that penetrates and envelops everything, day in, day out, until they have covered two hundred miles or more from Shantung to some city of the north.

The standard of living supported by industry approximates to that of the peasant in the village, allowing for the differences between town and village life. The workshop is often a narrow room, 9 to 10 feet wide, fronting on the street, but running well back. Being deep and only lighted from the front, it is often dark and generally grimy, and work is trying for the eyes. The squalor amid which beautiful carpets, cloisonné and other art products are wrought is in striking contrast to the products themselves. No less so is that between the tolerance of these indescribable working conditions and the remarkable artistic faculty of the worker who accepts them. In the rug shops, dysentery is prevalent during the summer, owing to insanitary conditions, and the consequent debility of the workers is so serious as to cause a notable falling-off in output and quality, despite the fact that in summer the longer daylight means longer working hours and better illumination. Moreover, meals are taken in the workshop, and if there are hired workers they often sleep there. There is little wholesome amusement, the main forms of indulgence being story-telling, theatricals, and some form of gambling.

3. GUILD CONTROL.

The outstanding feature of Chinese industry is that its control has continued to be in the hands of guilds, which have a history in China of many centuries. The Government has not until recent years attempted to exercise any direct control of industry and trade. The Government has given to the guilds a semi-official status, using them for the collection of taxes and recognizing their regulations.

The number of guilds has been very great. China is said to have more voluntary associations than any other country in the world. Guilds have been of different kinds. There have been provincial guilds, which are really clubs, including the members of one province carrying on business in another; and there have been large guilds of bankers and merchants; but for our purpose the most important are the smaller local guilds, which have covered industry, trade, and such services as water-carrying and sewage disposal. Even the beggars have had their guilds—often quite powerful ones.¹

The guilds have necessarily been numerous, because of the fact that for most goods the market is a small local one. Wherever two or three families have been engaged in the same trade there has almost certainly been an under-

¹ For guilds, see especially Gamble's *Peking: A Social Survey*, pp. 163-204; Morse, *Guilds in China*, deals with the large provincial and merchant guilds.

standing in regard at least to minimum prices—not in regard to maximum prices, as the unwary foreigner quickly discovers. The initial price asked will probably be at least three times the amount which is acceptable, and anything above the latter is fair gain. But the tradesmen will not undersell one another as a rule.

For the larger industries there are well-organized guilds which regulate not only prices but the entrance to the trade through apprenticeship, wages, hours, weights and measures, and a number of other matters. The guilds take steps to enforce their decisions and bring defaulting members to book. The degree to which businessmen submit to guild inspection is a revelation to western merchants. All their books are open to the guild officers, who may be rivals in the trade, serving in rotation. As a matter of fact, however, membership of a guild is so essential that rules are rarely broken. The business-man has no protection against the extortion of officials, and no security except the guild; business in the static conditions of Chinese industry has sought to establish itself not by competition but by combination, and life is so precarious for any who fall out of the system, that no one could afford to be outside. The Chinese with insufficient land to support his family has to face a fierce struggle for a place in the economic system and knows that once he has lost it he is liable to go under altogether.

The apprenticeship has sometimes been limited

to sons and near relatives of members. It covers a period of years often much longer than is necessary for learning the trade. The lot of an apprentice is a hard one. The long hours fall very heavily upon him. Apprenticeship has immobilized labour but it has given some security to the worker. The abuse of apprenticeship under modern conditions will receive separate notice.

The guilds in China have on the whole been more democratic than in Europe. In Europe the guild passed increasingly into the hands of the wealthy. Something of this tendency is met with in China, but it has not developed nearly as far as it did in the West. How they are relating themselves to trade unions and chambers of commerce will appear later.

CHAPTER III

THE INDUSTRIAL REVOLUTION BEGINS IN CHINA

I. BEGINNINGS AND EXTENT OF MODERN INDUSTRY.

SUCH is the milieu into which modern enterprise has been introduced in China. Though the contact of China with Western Europe and America began before the age of steam, it was the conquest of the ocean by the steamship which really broke down China's long isolation. At first her interest was in trade only, and it is significant that the first modern enterprise in China was a steamship company.¹ In comparison with India and Japan, China has made both a late and a slow start in industry, late because of the conservatism of the people, slow because of special features in Chinese life. It was the officials who moved first, actuated not only by the desire for individual wealth, but by the hope of national strength which industrial development brings. They were urged forward by foreign capitalists, anxious to find profitable investments and to develop the very considerable resources of China for the sake of the world economy they were

¹ The China Merchants Steam Navigation Company, 1873.

building up, and which they envisaged China herself entering. For many years very exaggerated notions were held of the extent of the mineral wealth of China, and these undoubtedly attracted the attention of concession hunters. The work of the Geological Survey, one of the most efficient departments of the Chinese Government, has brought fuller knowledge and soberer estimates. These show, however, that in comparison with other Far Eastern countries, China is favoured with abundant coal and other resources.

The early ventures were initiated either by great Viceroys, like Chang Chih Tung, who created iron and steel works, an arsenal and textile mills in Central China, or by the associates of such men, such as Tong Kao Sing, the friend of Li Hung Chang. At this stage, mints and arsenals, naval dockyards and other enterprises of direct value to the Government were prominent, but a beginning was also made with shipbuilding, engineering, textiles, mining and railways. A new phase began after the Sino-Japanese war, one of the stipulations of the treaty which followed being that foreigners should be free to carry on industry in China. Except under the grant of a special concession this privilege is confined to the Treaty Ports. In consequence, these are now much more than mere commercial, warehousing and banking centres; some of them are important manufacturing towns as well.

After the Revolution which initiated the Re-

public, the old opposition based on "fengshui"¹ disappeared and a new impetus was given to development. The conservatism of Old China has, in fact, been replaced by the radicalism of a Young China, which has broken with the past and is all too impatient for a speedier rate of change. Young China shows none of the hesitations in regard to industrialization that mark important sections of Indian opinion led by Mahatma Gandhi and Tagore.² When Dr Sun was thrust aside by Yuan Shih Kai after the setting up of the Republic, he spent much of his time in elaborating schemes for the development of railways, new ports and great industries in China. The adoption of modern technique with the deliberate object of raising the standard of living in China, is one of the main purposes of the Nationalist Party. The interest of this party in labour organization, co-operation, and similar movements, is one of the factors which is likely to exercise an important influence in the future (see Chapter VI).

Under the Republic, industry began to break away from the leading-strings of the Treaty Ports, and large factories made their appearance even in an interior province such as Honan. The more recent growth has been due mainly to unofficial Chinese enterprise, though there has been a notable increase in Japanese controlled

¹ Literally "wind-water," a system of necromancy concerned, among other things, with the effect on local well-being of innovations.

² *From Field to Factory*, by Margaret Read, p. 16. S.C.M.

industry, not only in South Manchuria, where their influence is predominant, but in the textile and other manufactures in Shanghai and Shantung. This modern expansion was checked by the outbreak of civil war, and during the last few years has been almost completely arrested. Many Chinese and some foreigners consider that this slowing down of development is a distinct advantage, as it gives time for a better understanding of the problems involved and for the growth of a sound policy before any wide extension occurs.

The Chinese are splendid industrialists. Abroad they have been remarkably successful, perhaps most notably under British rule in Malay. A brief visit to India convinced the writer that the Chinese peasant is a much better factory hand than the Indian ryot, with greater gifts as a mechanic, less impatient under the monotony and confinement of factory life (and so less prone to absenteeism and to rapid change of employment), and with perhaps a stronger urge to secure a higher standard of life—judged at least from the material standpoint. It is a significant fact that despite the low customs duties in China, the Japanese have found it profitable to invest tens of millions of dollars in China in recent years. In relation to their low wages at any rate Chinese labour efficiency is high.

But for the present, expansion in China is delayed by the breakdown of all effective government, owing to political instability and military

chaos. Behind the present confusion lie two great facts: the break with old traditions, customs and sanctions, which, until new are created, leaves the people without a compass and the warring factions unrestrained, and the curious diarchy which has been apparent in Chinese civilization. The social and economic life of the people, alike in the country and the town, has been based on the democratic institutions of village and guild, while above the people and in very loose connection with these popular institutions, which have been recognized by, but hardly a part of the official system, has been the Government autocracy, centring in the Son of Heaven, from whom all political authority proceeded. Resort to the magistrates and the law courts has always been avoided wherever possible. It is quite clear, therefore, that a great deal of construction will be necessary, even when peace comes, before the Government in China can effectively play the part that an industrial economy demands of it. The problem is not merely that of shaping a new political system to take the place of the Emperor and the official hierarchy, but also of creating a body of accepted doctrine on which this system can rest. Until the Revolution, the Confucian ethics provided an unwritten constitution for the Empire, setting standards which if not complied with by the rulers justified revolt, and forming the basis for the decisions of the Board of Censors, which furnished some sort of check on the arbitrary:

action of officials. The attainment of political stability demands not simply the forging of new governmental institutions, but the working out of a new philosophy of life, a new social ethic with which the institutions shall accord.

Meanwhile the weakness of the Government reacts in many ways. Under the Manchus it led to suspicion of the foreign expert, which limited his usefulness and prevented the Chinese from profiting from his services and acquiring his knowledge as, for instance, the Japanese did. To-day the lack of effective authority places almost insuperable obstacles in the way of factory supervision and of the application of commercial law, prevents the investment of capital and is throwing industry back on the Treaty Ports. Added to all this are the facts that officials have depended upon the perquisites of their office, not upon a definite salary, so that graft is universal; and that the nepotism resulting from the family system is nowhere more in evidence than in official circles.

The net result of half a century of effort is that in a country of four hundred million people—one which if superimposed on the map of Europe would stretch from within the Arctic Circle to the coast of Africa and from Liverpool to Leningrad—there are some seven thousand miles of railway, rather more than a dozen modern coal-mines, a few iron and steel, ship-building and other engineering works, and about a thousand modern factories. The most numerous

are cotton- and flour-mills and match factories, which all exceed a hundred each; there are eighty electrical plants, fifty telephone exchanges and important oil, tobacco, cement, printing and soap works and numerous silk filatures. In addition, there are some thousands of smaller semi-modern factories. Shanghai is estimated to possess 275,000 to 290,000 workers in modern plants, without counting the wharf, barrow and rickshaw coolies. The larger industrial undertakings are grouped in and around Shanghai, in what may be called East China, on the northern coal-fields (including Manchuria) and their ports, and up the Yangtse River in Central China, especially at the Wuhan centre. It is notable that, though the south has flourishing indigenous industries and its people have been prominent in new developments elsewhere, the south itself has not become the scene of large-scale operations except at Hong-Kong.

It is doubtful whether those connected with large-scale industry in China, together with their families, number more than four millions or one per cent. of the population. If this number be doubled to include these in semi-modern plants, it is clear that only an insignificant part of the whole population has yet been drawn into the new system. These facts must be remembered if we are to see modern industry in true perspective. Its importance in China does not lie in its present extent, but in the fact that it has undoubtedly come to stay, and that, as soon as

political conditions become favourable it is certain to spread very rapidly. Small as the beginnings are, they have already made possible new standards for skilled labour, have given rise to a new labour movement and have created new city population with problems of their own.

2. LOSS AND GAIN.

The gain arising from the introduction of modern technique is perhaps nowhere so clearly seen as in the case of improved transport. The first railway in the country was a narrow-gauge line running from Shanghai to Woosung, which was torn up within a few months from its opening in 1876 because of official opposition from Peking.¹ The officials took advantage of the excitement caused locally when an unknown coolie threw himself before the train and was run over. Undiscouraged by this failure, a small group of Chinese, backed by the famous Viceroy, Li Hung Chang, co-operating with some British friends, quietly went ahead with other plans. This group was the one that formed the first Chinese steamship company, and, as that required coal for its operation, it had opened mines near the coast in the north. A railway was wanted to carry the coal to the sea. The Peking authorities at first refused permission and a canal was dug. It was found, however, that the latter could not be brought nearer than six miles from the pit-

¹ *Railways in China*, P. H. Kent.

mouth. With remarkable faith in the future, the engineer planned his six miles of railway on such lines that it could be made the starting-point of a national system. He insisted on the adoption of standard gauge. With the boiler from a winding engine, wheels that had been bought as old iron, a frame of channel iron from the head-gear of the No. 1 shaft of the mine, he built the "Rocket of China," which was duly christened on the 9th of June 1881, three years after the mine had been opened. Gradually, as the reward of vision, perseverance, and tact, the confidence and support of the officials were won, the fears of the people allayed, and the track extended until it stretched from Peking to Mukden—the first of the Chinese Government Railways. Thus was written the most romantic chapter in the history of China's railways, the leading part being played by one of the many individual foreigners—in this case a Briton,¹ who, content to work unostentatiously within the limits set by Chinese conditions, under Chinese auspices and with Chinese interests at heart, have rendered lasting service to the Chinese people.

The economic value of railways to China has since been strikingly set forth by no less influential a Chinese patriot than Dr Sun Yat Sen, the founder of the Nationalist Party and father of the Revolution of 1911. In his lectures on "The People's Livelihood,"² he explains that,

¹ Mr C. W. Kinder, C.B.

See *The Nineteenth Century*, for May 1927, pp. 663-677.

before the days of railways, the goods brought from the hinterland of Canton to that port were carried on the shoulders of coolies. A coolie could carry a load of about 100 catties (133 lb.) for a distance of some 50 li (17 miles) per day. From Hwangsha, 170 miles to the north by rail, an engine pulling a train of 20 trucks, each containing a load which would require 500 carriers, can do the journey in eight hours. Thus in eight hours the engine makes a haul which would have taken 10,000 coolies ten days.

But the advantage of the railway is much more than merely economic. We have seen something of the system which mechanical transport displaces; a system which, while it supplies a meagre, almost animal existence for many, limits social and economic intercourse, leaving local areas of necessity self-contained,¹ and keeps those engaged in it very much beasts of burden. One realizes very vividly in China the boon conferred by those inventions which have taken the heaviest work off the thews and sinews of men, made possible feats otherwise beyond human accomplishment and multiplied the productivity of labour manifold. One cannot but agree with the desire voiced by Dr Sun to see China liberally supplied with all the equipment and technique of

¹ A striking example of this is furnished by experience of fighting famine in North China. The large reserves of grain in Manchuria would have been useless without the railways. Within a comparatively short distance men and draught-animals consume as much as they can carry.

modern factory production and mechanical transport, not only for the sake of a greater output of wealth, but for the prospect of a more humanized life for the worker, of which it holds out a prospect.

But there have been many indications that the coming of modern industry is by no means pure gain. Examples like that of the match factory given in the Foreword could be multiplied to show how easily unhealthy conditions arise. In an asbestos works, for instance, the mineral fibre was beaten out in a room which, speaking from memory, was about 30 feet across. This was done by twanging in the fibre a thong of gut stretched across a heavy wooden bow. A prodigious amount of dust was created by the activities of a considerable number of men simultaneously engaged in this work. There was no attempt to perform the process under cover or to draw off the particles. Consequently the cloud of dust was so dense that it was impossible to see across the room. The men breathed through little bags of sacking covering the nose and mouth, and these, as the pores became choked up with dust, expanded and collapsed as a kid glove does when held over the mouth.

In this works, too, there was a system of home work, the spinning of the fibre into coarse thread being put out. Not only did this tend to sweated conditions, but, like child labour, it tended to depress adult wages by eking out the family earnings.

The nature of these two occupations made the neglect of health provisions particularly harmful in both cases, but the same neglect was generally evident in other industries. The need for special health measures, for safety devices on machinery, and for all those provisions which are the special care of the factory inspector, are not realized at the outset by those accustomed to a less exacting regime. The appearance of undesirable conditions seems to be the invariable accompaniment of rapid industrial change everywhere, except in those instances in which the employer has come to regard the welfare of the worker, to the fullest extent that the industry makes possible, as one of his primary responsibilities.

How far in actual practice the worker has benefited from modern industry can only be learnt from a broader survey of the facts, to which it is now time to turn.

3. RESULTING CONDITIONS.

i. *Conditions of Work.*

In studying the effect of modern factory technique in China, it will be convenient to distinguish the modern from the semi-modern factories. By the former are meant large factories or mills, using power-driven machinery and organized in an up-to-date manner; the latter include industries which are new, but in which, if power is employed,

it is only for some parts of the process, and hand labour still plays an important part.

Let us turn first to the textile mills which have attracted so much public attention in recent years. Labour conditions tend to be best in the largest and best equipped mills on which capital has been most fully spent. In cotton-mills there has been steady improvement in the type of structure erected in China, the newer mills paying decidedly more attention to lighting, ventilation, sanitary arrangements and so forth, as well as to provision against fire and for the safeguarding of machinery than the earlier ones. And yet even the modern mills produce an unfavourable impression on observers fresh from the West. For one thing they are more crowded. A cotton-mill in Shanghai working with, say, Lancashire machinery and producing the same "counts"¹ as a Lancashire mill, will employ about four times as many workers as the latter. There is less discipline. After the free and easy basis of family industry the training of the Chinese worker to greater precision, orderliness and speed is not an easy task. Westerners do not always remember that the great advances in sanitation and personal hygiene which we enjoy to-day only go back a generation or two. In China they are only just beginning, and the habits of the people do not yet make possible as high a standard as is found, say, in English or American mills. The real question is whether the mill-owners are doing all

¹ The count measures the fineness or weight of the thread.

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that is possible to them in their strong and responsible position to raise the standards as far as their own workers are concerned.

The Child Labour Commission appointed by the Shanghai Municipal Council reported¹ in July 1924 of factories generally and of cotton-mills in particular in very similar terms :

“ In many cases the atmospheric and dust conditions are bad. The sanitary arrangements in the majority of mills and factories leave very much to be desired.

“ In many cases little attention is paid to the state of the latrines, and the stench near such places is very marked.”

Bad as these conditions are, there are still worse in many of the semi-modern factories and small workshops. The silk filatures belong largely to this category. Colonel Malone says of those he visited :—

“ . . . the main shed of a silk filature, where the majority are employed, is the reeling shed. This contains a row of metal benches. On one side the women sit, on the other the children stand. Some of the children could not have been more than seven years old, and some were probably even younger. The children on their side of the bench have a basin, to which boiling water and steam is laid on, in which they stir

¹ The Report is printed in Cmd. 2442 (1925), pp. 113-130.

the silk cocoons, frequently scalding their little hands. . . . There is ample water surface to provide steam to fill the whole shed, besides leaks in steam-pipes, etc. The atmosphere was stifling and would be terrible in summer. There was absolutely no means of artificial ventilation for drawing off the steam or providing fresh air. All the women were dripping with perspiration, the whole shed being full of a hot damp vapour. There was a pungent stench from the dead cocoons on the floor.”¹

The fact is that the old lack of control is carried forward into these semi-modern plants often with very serious consequences. Such features as living in the workrooms frequently appear. Mr J. W. Nipps, speaking of the silk filatures of Chefoo reports :—

“The workers (in this case men) almost universally wear no clothing above the waist. They can readily be recognized in any crowd by their sallow complexion. All workers must live in the factories. Those completing their work before night are free to go where they please, but they must return by dark. This means that only a few men get out of the factories except on special occasions. When they finish their work at night, they pull out their roll of bedding and sleep on the floor, on stray boards laid across benches, or on the ground in the courtyard. They rise at day-

¹ *New China*, Pt. II, Labour Conditions, p. 6.

break, roll up their blankets and stack them in some corner until night. Thus they work, eat and sleep in the same quarters.”¹

There is no need to multiply descriptions of this kind, which apply with variations to most of China's industries.

ii. *Child Labour and Apprenticeship.*

No phase of modern industry in China has attracted so much attention as the employment of Child Labour. The only two Labour Commissions yet held have both been occupied with it—namely, those of Hong-Kong² and Shanghai respectively. The evils are undoubted. The children are employed at excessively tender years. They are obliged to work inordinately long hours, and that under conditions tending to great fatigue. The Shanghai Municipal Council's Commission reports :—

“ It is difficult to state definitely the lowest age at which the children commence work. The Commission, however, saw many children at work who could not have been more than six or seven years of age. Some of these children are not on the pay-roll, but are allowed to be brought by their mothers in order that

¹ Cmd. 2442, p. 35.

² For details of the Hong-Kong Commission's work and the resulting regulations, see *Humanity and Labour in China*, pp. 52 ff., by Dame Adelaide Anderson.

they may be under their care. In many mills the conditions during the night-shift are, according to Western ideas, most unusual. Rows of baskets containing babies and children, sleeping or awake as the case may be, lie placed between the rapidly moving and noisy machinery. Young children who are supposed to be working, but who have been overcome by fatigue or who have taken advantage of the absence of adequate supervision, lie asleep in every corner, some in the open, others hidden in baskets under a covering of raw cotton. The discipline appears to be lax, and those in charge seem to wink at much that goes on in this respect. The Commission noticed that on its advent a warning whistle was given, and many of the children were awakened by their immediate neighbours and hurried back to the machines.”¹

In the silk filatures the evil of standing long hours is, apparently, still worse, and many children develop a “peculiar regular and rapid up-and-down movement of the body by means of alternately relaxing and then straightening their knees.” After referring to humidity the Commission says :—

“It was stated that fainting (of workers) in hot weather is not uncommon. . . . In the main they present a pitiable sight. Their physical condition is poor, and their faces are

¹ Cmd. 2442, p. 117.

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devoid of any expression of happiness or well-being. They appear to be miserable, both physically and mentally. The adults are given a certain number of cocoons from which they have to produce a certain quantity of silk. Should they fall short of this quantity they are fined. They then frequently revenge themselves by ill-treating the children working under them. The Commission is satisfied that the conditions under which these children are employed are indefensible.”¹

The statement as to the medical evidence gathered by the Shanghai Commission concludes :—

“ It was agreed by all the medical witnesses that the existing industrial conditions in Shanghai are extremely adverse to the bodily and mental welfare of the Chinese child employee. Such children, as a body, were said to be physically inferior to those not so employed, but no definite measurement or other particulars were given. Industrial accidents were largely attributed to fatigue and carelessness following on long hours of monotonous work.”²

The facts gathered and weighed by the Commission constitute a sufficiently sweeping condemnation of child labour as it exists in Shanghai, but fortunately the difficulties to be faced in remedying the situation, though real, are not

¹ *Ibid.*

² *Ibid.*, p. 115.

insurmountable. Among the difficulties may be mentioned the lack of birth certificates, making proof of age impossible. The parents desire to have their children with them in the mills, partly for the sake of their earnings and partly because their homes are so crowded and insanitary. There are very few educational facilities to keep the children better employed, and there are no Government regulations in force. A beginning in the right direction has been made by a few leading firms, but the improvement of factory conditions meets only one side of the situation. A suggestion as to further policy will be found in Section V.

Related to the question of child labour, which as we have considered it, is one for the modern factory, is that of apprenticeship, which affects mainly the smaller industries.¹ Little heed has been paid to the lot of the apprentice at any time, but the new conditions are intensifying the problem. It is a significant fact that under modern conditions whenever an old industry has expanded rapidly, say because of a large demand for export, guild control has broken down. A striking instance is seen in the case of "Tientsin" carpets, which are largely exported to America.² Many of the smaller workshops that have sprung up to meet this demand are run by one or two skilled workmen, assisted by ten, twenty or more apprentices. The latter are brought in to Tientsin

¹ See also p. 44.

² T. C. Blaisdell and C. C. Chu, "The Rug Industry in Peking," *Chinese Social and Political Science Review*.

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or Peking from country villages and work, eat and sleep in the workrooms. They receive no money wages except a few dollars at the New Year, and are entirely under the authority of the employer. Their apprenticeship lasts for about three and a half years, and, as they become proficient in a few months, they supply cheap labour for the rest of their term. When that is over, they are no longer wanted, and the majority are thrown on the labour market to find such unskilled work as may offer. Under these circumstances true apprenticeship ceases to exist, and passes into a form of contract labour, subject to no control by Government or industrial organization.

4. HOURS AND WAGES.

The long hours of the old industries in China have influenced her modern development. Shifts of twelve hours are common, and thirteen, fifteen and more hours are worked in some trades. Long hours under the factory system are, however, not the same thing as under the old-style industry. The factory introduces two new elements into the situation: definiteness, regularity, and a greater monotony on the one hand, and the setting of the pace by machinery on the other. The comparative lack of "drive" in the past, the lack of outside interests, amusements and recreations, and the absence of over-specialization all tended to make long hours less irksome.

To-day it is necessary to allow for regular breaks and periods of rest. The slogan "one day's rest in seven" has been taken up by the Christian Church, and where this is not granted, one, two or three days a month are sometimes allowed.

The large numbers employed in spinning-mills are the result of an effort to avoid the strain imposed by long hours at the pace set by machinery. Shorter hours and greater efficiency will have to come together. The four Chinese who do the work of one Lancashire lass do not get as much out of the machines in their long shift as she does in eight hours. A young Chinese engineer connected with a coal-mine equipped with modern machinery and organized on the basis of eight-hour shifts, described the difference between the old style of mine and his. In the former the men banded themselves together in gangs. A gang entered the mine when they liked, worked at their own pace, and left when it suited them. They were paid by output, large or small; "But," the engineer added significantly, "when they come to us they must work." Even the eight-hour shift does not always secure this. In another modern mine where the eight hours' system had been in operation for some years, a newly appointed welfare officer found that the underground men, who were engaged by contractors, were putting in forty-five shifts a month, that is to say that on alternate days they worked double shifts—and there were no Sundays.

This situation is the result of low wages, the

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pressure of which is very generally felt. Modern industry in China has not yet produced its Henry Ford, stimulating high productivity on a high wage as Mr Ford has done in his motor works at Detroit. It is not only the hired workman who feels the difficulty. In Peking there are some three hundred knitting-machines, making socks, stockings, belts, etc. The industry is mainly a home one, a family having one, two, or, at most, a few machines. So finely are the prices cut, that the men complain that they have to work sixteen or seventeen hours a day to make ends meet. This new industry is another example of the guild not yet having come in to fix minimum prices as it does in customary trades.

In turning to consider wages, two difficulties are met with. In the first place, the lack of reliable statistics makes representative average figures difficult to get; in the second place Chinese life is so different from Western that it is almost impossible, in making a comparison, to pass from terms of money to terms of well-being. A few general statements may, however, be attempted. The more highly-skilled workers in, for example, the mechanical and electrical trades, for whom the expansion of industry has created a relatively high demand receive wages that secure for them and their families a considerable measure of comfort from the Chinese point of view, and enable the thriftier to make provision for old age. The skilled artisans in the older trades, such as carpentry, in many parts of

the country at least, can support a family, though without any real margin. The less skilled men generally receive wages which will not support a family, even according to the most modest standards, and their wives and children are driven to work to supplement the men's earnings. The position of the unskilled is appalling and, apart from a new social outlook changing the whole situation, hopeless. Colonel Malone in 1926 estimated the average wages of rickshaw coolies, wharf coolies and cotton-mill hands in Shanghai at 16s., 18s. and 24s. a month respectively. Yet the Shanghai Municipal Child Labour Commission had previously estimated the needs of a man and wife of the poorest class, without children, at 32s. per month, at a time when living was cheaper than in 1926. A later estimate of the needs of a family of five placed it at 42s. 8d. Thus low as is the standard of living which the Chinese worker deems satisfactory, it is only reached by a comparatively small minority.

In comparison with English workmen in a similar grade of work, the Chinese often earn between a fifth and seventh the wage. But to make any real comparison it is necessary to know what the wage will buy in the two countries. Seeböhm Rowntree in his book, *The Human Needs of Labour*, gave details of what he considered a model diet for an English working-class family. A calculation made a few years ago showed that the Chinese workman could secure the same amount of nutriment (at Peking prices) for a third

of the cost of the English diet. It is true that the Chinese diet would be considered less palatable by the Englishman, who would only be induced to take it by extreme hunger, but it is enjoyed by the Chinese accustomed to it, and who is to judge of the relative satisfactions in the two cases?

Many more comparisons of this kind will soon be possible, because the study of Chinese social and economic life is now being undertaken scientifically and systematically.¹

5. THE LABOUR SUPPLY AND THE SYSTEM OF EMPLOYMENT.

It must already be clear that the efficiency of the workers could be considerably increased by a wise policy. An American employer in Shanghai said that he had watched the efficiency of Chinese workers in a particular line increase in a few years from fifty to ninety-five per cent. of American efficiency. The abundant supply of cheap labour has led employers to neglect this

¹ It is hoped the studies will include the productivity of the worker, his money wage and its purchasing power in terms, not directly of commodities, since these vary from country to country, but of subsistence wants and higher wants they satisfy, according to scales that have yet to be fixed. It will then be possible to make such a statement (to take a hypothetical case and figures), as that the textile workers of Shanghai might be paid one-sixth the wage of corresponding Lancashire workers for one quarter the output, while their money might go three times as far. It is probable that such studies would reveal some curious anomalies.

side of industry, and only too often the labour has been in the hands of contractors, alike in textile mills, the building trade, mining, and other industry. The Shanghai Commission make repeated reference to this fact, and say :—

“The contract system of employment is common. Under this system the contractor supplies the requisite labour and is paid on production. This system is open to grave abuse. The Commission heard evidence to the effect that in some instances contractors obtain young children from the country districts, paying the parents two dollars a month for the service of each child. By employing such children in the mills and factories the contractor is able to make a profit of about four dollars a month in respect of each child. They are frequently most miserably housed and fed. They receive no money, and their conditions of life are practically those of slavery.”¹

Even with adult men the contractor's power is very great. The men are usually far from their homes and depend on the contractor for food and shelter, payment for which is deducted from their wages. Through fines or gambling debts they frequently fall still more completely into his power, and he is not slow to exploit his position. A few years ago a large concern, whose underground workers were engaged through con-

¹ Cmd. 2442, p. 116.

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tractors, was the scene of a strike, which resulted in an increase of rates. Subsequent investigation showed that the strike had been engineered by the contractors, who had taken sixty per cent. of the increase, passing only forty on to the men.

Even when the contractor system does not obtain, the handling of labour is frequently in the hands of quite ignorant foremen, and little or nothing is done to train them in sound methods. Complaints by the workers of their treatment have formed one of the most fruitful causes of strikes.

Some deeply-rooted Chinese customs make a new Labour policy both difficult and urgent. The local clannishness and the reluctance to break with the old village home lead to many consequences. The water-carriers in Peking all come from certain districts in Shantung; the carpenters in towns over a wide area in North China are originally from a small county in South Chihli. In some cases the men bring their families with them, in others the latter stay on in their village homes and the men visit them at long intervals. Over a hundred thousand Shantung, Honan and Chihli peasants tramp or travel hundreds of miles by special cheap boat and trains every spring to the fertile and thinly peopled land of Manchuria. There they spend the whole agricultural season, returning to their distant homes in the winter. Year after year they repeat this process rather than take their

families away from the ancestral family village to settle in ampler quarters in the North.¹

A Famine Relief Committee in 1918 had immense difficulty in persuading farmers, whose land was under water and would continue submerged for two seasons, to colonize rich virgin soil secured for the purpose in Manchuria. The result of such habits is to bring to new industry a constantly shifting population which does not settle down to family life in the new surroundings unless these can be made sufficiently attractive.

Yet even this reluctance to leave the old home cannot disguise the enormous outward pressure of population from the rural districts which is the dominant feature of the "labour market" in China. The poorer peasants, inured to hardness, accustomed to want, content with almost any labour if it brings them food, make the problem of unskilled labour in China intensely difficult.

¹ It is believed that on account of the conditions arising from civil war and banditry the number reached a million in 1927, and there is a growing tendency to family settlement in Manchuria.

CHAPTER IV

SOME SOCIAL ASPECTS OF INDUSTRY IN CHINA

1. CITY HOUSING CONDITIONS.

It is interesting to compare living conditions in the new commercial and industrial cities with the village life of which we have already had a glimpse. The Shanghai Child Labour Commission thus sums up the evidence it received as to the effects of city life upon the children engaged in industry :—

“It was stated that country children in China are of good physique, whilst those living in the cities are, generally speaking, below the standard of Western countries. Tuberculosis is particularly prevalent in the towns. . . . The crowded living conditions are to a great extent responsible for the poor physique observed.”

“The crowded living conditions” of Shanghai have recently been described by Mr M. Thomas Tchou, Labour Specialist of the Commercial Press,

¹ Cmd. 2242, p. 115.

the leading publishing house in the East. They are, he says, best in houses supplied by the factories for their own workers at comparatively low rents. Outside house property has to earn fifteen per cent. for its owners, and with the high price of land in Shanghai this means as a rule only one room per family, or at best two. The better type of house is of two stories, fairly strongly built, but there is only one water-tap per row and no separate water-closet. The passages between the rows are very narrow and are littered with garbage. The second-grade houses are of only one story and are flimsily built, leaky roofs being a common source of trouble. To eke out space, the tenants create an upper story within the houses by setting up platforms reaching three-quarters of the way across the rooms. In these dwellings the noise, smell and other evils are intensified to a point at which they react on health and temper.

For the accommodation of men without their families, there are tenements which are crowded with up to five men per hundred square feet. These tenements are said to be dens of gambling, opium-smoking and other forms of vice, and to be invariably infested with vermin.

But the worst conditions of housing in Shanghai occur in the case of labourers who come from a distance from the city and speak a different dialect. Finding it impossible to gain a footing in any but the very lowest paid work, they cannot afford even the poorest accommodation.

These people go just outside the city¹ and build themselves wattle huts, so that Shanghai is surrounded with colonies totalling thousands of huts. The catalogue of the troubles of these hapless folk is not yet complete. They are the most neglected of communities, living without public utilities of any kind: no water supply, no lighting, no medical attention, no removal of garbage, no sanitation, nothing of the nature of social welfare. Moreover, they are subject to floods carrying sewage filth, to fire—for much of the material of the huts is inflammable—and to being evicted as the land becomes more valuable or is wanted for other purposes.

This matter of housing is an example of the not infrequent cases in which numbers make all the difference. A single hovel in the country, blown upon on all sides by the winds of heaven, may be just as bad as any individual hut in a collection such as has been described, but its evils are largely neutralized by its surroundings, and it does not become the menace to its inhabitants and their neighbours that is found in every dense group.

2. THE LABOUR MOVEMENT.

The last few years have witnessed an extra-

¹ It should, perhaps, be explained that Shanghai consists of the settlements under foreign control, and the old Chinese city and suburbs under Chinese authorities. The latter are now endeavouring to bring the areas for which they are responsible under a unified, modern, municipal administration.

ordinary growth in the Trade Union movement in China. Changes have been so rapid in Shanghai that even those on the spot have felt it extremely difficult to keep pace with them, and those who have been away for but a few months are quite out of date. It is too early to foretell to what the movement will grow, but it is clear that it is one that must be reckoned with and that should be understood.

Some fifteen years ago a few Socialist teachers in the Government universities, and their student associates, got into touch with rickshaw coolies and railway and industrial workers. Winning their confidence through educational and other help rendered, they began to organize them into unions. The first-fruits of their activities were the formation of the National Labour Party in Shanghai in 1913, with a branch in the railway and mining town of Tongshan, and the Federation of Labourers and Farmers in Shanghai in 1916, which advocated joint action by these two groups in the spread of Socialist teaching.

They found the men responsive to suggestion. The spirit of association is strong, as we have seen in connection with the guilds. It has not been difficult to bring the employee members of the guilds together on the one hand, or to form labour unions in those modernized forms of transport and industry in which the guild has gone or has not appeared. There is thus a closer relation between the guild and the union in China than there was in Europe; they are

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found side by side as members in the same federation and in some cases the one passes into the other. In March 1927 Canton city officially reported 180 unions, of which fully 70 were re-organized guilds.

Trade unionism in the West has travelled far since the workers in industry took up the bitter struggle against the combination acts, and the fact of the modern international labour movement has naturally profoundly influenced the situation in China. The Chinese workman, if left to himself, would probably not have gone as far as he has in the organization of the modern type of union. He has generally been too conscious of the grim struggle for life under the old order, too thankful to have enough to keep body and soul together, to have begun to think of the new industry as a "system," under which he might not receive justice. In the old days he was ready to strike if wages fell below the modest standard he set as necessary, or in the face of any specific injustice, but that did not require any permanent organization. He was free from, or at least was not conscious of any economic disability or injustice against which he was called upon to fight either the Government or the employers as a class. When modern industry came, there was no hostility against machinery, though there was strong objection to mechanical transport by those who expected to be displaced by it. Ignorance and illiteracy set no definite goal to work for. Consequently it is not surprising

that the movement in China is largely due to fostering from the outside, that it still depends to a noticeable but decreasing extent upon educated sympathizers as spokesmen and secretaries, and that its growth has been very much influenced by political factors.

The first important strike in the modern movement was that of the seamen in January 1922. This led to a number of sympathetic strikes, which practically held up the life of Hong-Kong until a settlement was effected. The success of the strike led to a great extension of the union movement.¹ The seamen's union is one of the strongest. The mechanics' union is also powerful, and more recently the textile unions have become important. From a Western point of view, however, even these stronger groups have very small funds, and the less well organized have no very definite membership.

The movement differs greatly in character in different parts of the country, varying with the state of industry, the political conditions and the character of the people. It is weakest in the north, where the workers are more phlegmatic and less responsive to new influences, though they are likely to excel in staying power when they do move. In Canton at the other extreme the movement has been fostered by the Nationalists,

¹ It was as a result of this strike that the Canton Government abrogated Article 224 of the Provisional Penal Code, which rendered strikes illegal. This Code is still in force in all parts of China not under Nationalist control.

partly no doubt from genuine sympathy, but also for political reasons. In the important mining districts of Hunan, labour has been very aggressive. The workers took control in some mines and paid themselves high wages for short hours until business came to a standstill on account of rising costs. At some metal mines in the same province a similar state continued until a military governor put an end to it—and to some of the leaders.

For several years, because of the influence there of the Nationalists, Canton was the centre of the movement, the first All China Labour Congress being held there in May 1922; but recently the most significant developments have taken place in Shanghai. On 30th May 1925 occurred the "Shanghai incident," when the police of the International Settlement fired on a crowd advancing on one of the police stations. The occasion was a demonstration organized by students and labour unions to protest against the killing of a workman by a Japanese foreman. The result is known to all the world. There followed many strikes which were part, not of internal politics but of the Nationalist movement for the abolition of foreign privileges.

It would be a mistake, however, to give the impression that the movement is mainly political. There is genuine labour activity which is growing in strength. Strikes for economic reasons have indeed predominated. Dr T. Chen states that out of 1098 strikes occurring in the period 1918-

1926, but excluding 134 directly connected with the Shanghai incident, 580 arose from purely economic causes (low wages and rising prices), 283 over cases of alleged ill-treatment of workers (by foremen) and 64 were connected with popular movements. In strikes for industrial causes the workers have been successful in a majority of cases. There can be no doubt that the pressure exerted by the union movement has helped to better conditions and to stimulate a more liberal policy on the part of employers.

The General Labour Union which was inspired from Canton is an organization with communist leanings, but there are other unions growing in importance which are definitely anti-communist and they are federating in opposition to the General Labour Union. They are, however, weaker financially than the latter, which has had outside backing. The future of the movement will depend upon which group gains the support of the workers. That in turn will be influenced by the attitude of employers and the public. Those who are in close touch with the workers believe that the majority wish to be wisely led, and so they are desirous of seeing the promotion of workers' unions on a sound and constructive basis.¹

¹ The opinion of some of the wiser workers was expressed by one of them when he said, "If the employers and the authorities would recognize the unions, steady men would go into them, and their leadership would be in the hands of men who know the trades—not in the hands of the agitators."

Until the political situation becomes clearer it would be unwise to attempt to forecast the attitude that Government is likely to assume to trade union organization if and when China again passes under unified control. All shades of opinion exist, from the most radical nationalist to reactionary militarist. There is danger, on one side, of the subordination of industrial to political interests if the doctrinaire extremists gain power, and on the other of a reactionary, repressive policy which can only breed trouble. China has long been familiar with combination in industry, and provision for discussion and conciliation would be in line with the history and genius of the Chinese. It must be admitted that the influences making for industrial strife and class-war are too powerful to be ignored, but it would be a calamity of the first magnitude if they were allowed to gain the upper hand.

3. TENDENCIES IN INDUSTRIAL ORGANIZATION.

This matter of avoiding class-war in China is one which is exciting a good deal of concern with many Chinese. China has been singularly free from any form of class feeling and from social segregation into distinct classes. The idea of hostile social camps is repugnant to the instincts and contrary to the philosophy of thoughtful Chinese. One of Dr Sun Yat Sen's main criticisms of Marx is just this, that class-war is neither desirable nor inevitable. The practical

conclusion that follows is that modern industry in China should pay special regard to all means of preserving the solidarity of employer and employee, whether on lines developed in the West or on others suggested by Chinese experience. In China, for example, under the regulations of an earlier Peking Government, the first function of a Chamber of Commerce is to bring about friendly relations between merchants (or manufacturers) and workmen ; and it is possible that, as the guilds which the Chambers now largely represent are replaced by employers' federations on the one hand and trade unions on the other (as they tend to be), the Chambers might for certain purposes contain representatives of both, and come to exercise this function of conciliation in an improved way.¹

From a more purely economic point of view also, many Chinese are asking whether the Western forms of industrial organization are necessarily the best for them. When efforts were made to improve cotton cultivation in China, it was found that in the north the best results were obtained with American seed, but that in the Yangtse valley improved strains of Chinese cotton did best, as the dampness of the autumn did not suit upland cotton. Similarly it is felt that in some industries there are native forms of organization which will prove more

¹ See Gamble's *Peking*, pp. 451-8, for the regulations, and Vinacke's *Problems of Industrial Development in China*, Chap. VI, for a discussion of this subject.

successful than those copied directly from the West. Unfortunately too little study has been made of older types of Chinese industry, which present a great variety of detail in regard to such matters as the organization of the market, the position of the worker and the sharing of profits.

For instance, in a localized paper industry in Chihli using the inner bark of the mulberry, groups of seven workers form a unit under a merchant. Five of them do the less skilled work, preparing the materials and drying the paper; a more skilled man makes the paper, and the head man finishes and smooths it. The merchant keeps the books, sees to the marketing, and supplies all the capital needed. In some of the groups there is an interesting system of profit-sharing. Thus out of a profit of, say, \$600, the merchant takes \$200, one-half of this reckoning as due to him as manager, and the other half as return on his capital; the foreman (finisher) gets \$90, the paper-maker \$80, and the other five \$40-50 each.¹ In the South Chihli pottery industry already referred to, the 300 producers sold their wares through a "Chih Huo Tien". This interesting institution combined the functions of an inn and a broking establishment. The master received a ten per cent. commission from the producers but had to entertain gratuitously the merchants who came to buy. His relation with the makers was, however, ill-defined, and on

¹ "Study of Chinese Rural Economy," *Chinese Social and Political Science Review*, April 1924.

account of the dishonesty of a recent master, the Chih Huo Tien now handles only one-quarter of the current business.

Hitherto the joint-stock company has not flourished in China. Business in the past having been in the hands of a single family or of two or three close friends, usually connected by marriage, the basis of business morality has been family loyalty. Where this is lacking, as in the joint-stock organization, it is found that a new conscientiousness has to be developed before successful working can be secured. This is one reason why the industrial development of China cannot or should not outrun the development of new moral standards adequate to the situation.

4. SOCIAL REACTIONS.

In the preceding pages an attempt has been made to present the more obvious results of the initial stages of China's entrance into modern world economy. Many points have necessarily been passed by. The influence of commerce, the growth of new wealthy classes in the Treaty Ports, with new tastes and imported luxuries—all this has been ignored. But we have seen industry causing far-reaching social changes, undermining old institutions, like the joint family and the guild, breaking old village bonds and the connection with the land, creating new situations by bringing the workers into the cities, with their crowded, insanitary conditions, throwing the

sexes together in closer and freer intercourse outside the family circle, necessitating a new knowledge of science and medicine and of the art of municipal government, making fresh demands on capacity and character, and calling for new moralities. The Chinese themselves are deeply conscious of the changes that are taking place in social thought. The traditional division of society into scholars, farmers, artisans and merchants has become an anachronism. The co-operation of students, workers and merchants in common action to realize national aims, the beginnings of union between farmers and industrialists, are felt to have a significance which foreign observers may easily miss.

All this social change has been happening as one phase of the many-sided revolution through which China is passing, at a time when the most diverse and conflicting influences are agitating the life of the country and especially the minds of the young. Traditional Chinese thought is to-day contending with the science of the schools, with Russian propaganda and with Christian teaching. Ideas that have any vogue almost anywhere in the world are crowding in on those who, having broken with old standards, are still for the most part without new ones to take their place.

At such a time the business-man, whose industrial activities are indirectly responsible for so many of these changes, has a peculiar responsibility in regard to them. It is incumbent upon him to see that the needs created by the changes

are anticipated and met. While directly responsible for the well-being of his employees during their work he cannot evade the wider responsibility for helping to make provision for the new wants which their changed conditions necessitate, and for making his business a constructive force building up a stable and progressive industrial community.

CHAPTER V

TOWARDS AN INDUSTRIAL POLICY

I. THE HUMAN FACTOR IN INDUSTRY.

THE far-reaching social consequences of economic changes described in the previous chapter, emphasize the importance of the human factor in industry. This from the more technical or business side is concerned with labour efficiency and the absence of industrial unrest, and on the broader social side with the well-being of the working population. The desire to avoid the evils which arose from the Industrial Revolution in the West can only be realized in China if measures based on the best Western practice in dealing with labour under the conditions of modern industry are adopted from the outset. Had all mills been run as Robert Owen ran New Lanark, the Industrial Revolution would have produced much happier results. His methods would be equally effective in China if employers could be persuaded or coerced into adopting them.

Within the business this policy would mean the fuller application of the science of employment management. Great progress has been made in

the West in regard to the engagement of workers, the fitting of the man to the job and the job to the man, the elimination of waste time and effort equally with waste of material or energy, the study of the conditions of work and of the reduction of fatigue and discomfort ; but all this is inadequately realized by all but the exceptional employer in China. Employment management in other words has become a profession demanding both practical and theoretical training. Its adoption in China means the elimination of the contractor and the training of the foreman. Some Sino-British enterprises in China, anxious for a better understanding of the worker and more intelligent treatment of him, as well as more satisfactory housing conditions, have engaged ex-missionaries for the purpose. But there is still a need in China for men who have had thorough training and varied experience in England or America to advise with those in local touch with the workers and to train Chinese who, given the necessary experience and character, are obviously better fitted for these duties than the foreigner.

Such men would rapidly improve labour efficiency in those industries in which it is at present low. They would be charged with the improvement of the conditions of labour and would be responsible to the management for discovering in what ways discussion and conciliation between them and the employees could be provided for. Schemes for pensions, profit-sharing or copartner-

ship would fall within their scope.¹ Business men in China bear testimony to the responsiveness of the Chinese worker to any consideration shown him, and his willingness to submit to quite rigorous discipline at the hands of those of whose justice he is convinced. What is wanted is a modern substitute for the family spirit in industry.

The large firm also has specially favourable opportunities for proving itself of service to China through collective provision for the needs of its employees. China is adopting new standards of living. This does not mean slavishly copying the West, but rather the adaptation to Chinese conditions of those methods for promoting health and comfort, for enlarging intellectual interest and social intercourse, and for providing means for the enjoyment of music, art, and the drama, which have developed so greatly in some countries during the last century. The possibilities of life for the more highly-skilled artisan are being studied by those interested in his well-being, and great improvement would be possible if the larger businesses actively co-operated in the effort to create the most wholesome standards—as indeed some of them have already begun to do.

¹ The outstanding, almost the only, example of accomplishment in some of these directions is the Commercial Press. A small number of undertakings, both foreign and Chinese, are attempting one or more forms of industrial welfare. Unfortunately, these efforts are unconnected; a pooling of experience and concerted action would give a strong impulse to the whole movement.

2. EDUCATION AND INDUSTRY.

For the worker and for industry the most fundamental of all needs is education—of the right kind and quality. The need for technical training of foremen, staff, and higher grades of workers is widely recognized. Immense sums have been spent on the university education of Chinese youth, both in China and abroad, but there have been very few industrial concerns into which they could enter. The present need is rather for the training in close touch with industry itself, of the classes just named. A beginning is being made in Shanghai, under the direction of Professor Joseph Bailie.¹ But even more important, if possible, is suitable cultural education, to do for the industrial population what has already been indicated as desirable for the rural. A basis must be given for an understanding of the new life in the city on which they are entering, with an appreciation of the requirements of hygiene, of the responsibilities and privileges of citizenship, and many similar subjects which will occur to anyone familiar with the worker's life. Several forms of education will be necessary if the whole community is to be reached. These include the education of the children of workers and a system of part-time education for young people employed in industry up to some age limit, say fourteen. In the West this system has been outgrown but has been pro-

¹ Of the Institute of Technical Training, Shanghai.

posed in a new form and at a more advanced stage in the Fisher Bill in England ; it is urgently needed in a country like China without compulsory education. Finally, there is required some form of adult education, not only to provide for the present generation but to give to those with experience of life what cannot be appreciated by the young.

3. SMALL-SCALE INDUSTRY.

The evidence seems to suggest that small-scale organization fits better into Chinese economy than large scale. It could make fuller use of the partially employed rural population and it secures a greater degree of total satisfaction to the average man, because it leaves him a larger amount of initiative and freedom. It would afford wider opportunity to the Chinese to follow their own bent. A rubber planter in Malay based his preference for Indian labour on the fact that the latter was content to follow instructions, while the Chinese had their own way of doing things, and before one knew it were running the show in their particular fashion.

Small-scale industry, however, can only be made a success in these days if considerable numbers of small producers federate together and secure expert scientific assistance, standardize their products, and create co-operative agencies for the supply of their needs and the marketing of their products. With the cheap transmission

of electrical power and the improvement of road transport, the diffusion of industry is becoming daily more practicable. Large-scale enterprise has offered big prizes for the few, and it has attracted the largest share of thought and experiment, but it is not at all certain that, in China at least, small units working on a federated basis would not surpass it in efficiency in some industries, if equal thought were given to it. Improvement in small-scale industry is not possible, however, unless the workers can be awakened from their conservatism and rendered as scientifically-minded and co-operative as the Danish peasant.¹ This is a matter in which guilds and Chambers of Commerce should interest themselves. As soon as possible, central and provincial governments should initiate an active industrial policy to explore the possibility of securing these ends.

¹ See p. 31f.

CHAPTER VI

INTERNATIONAL ASPECTS

1. FOREIGN ENTERPRISE IN CHINA.

So far industrial enterprise in China has been described without differentiating between that under Chinese and that under foreign control. Some of the Powers, notably Japan, Great Britain and to a less extent America, have considerable undertakings owned and managed by their nationals in China. The British were granted early mining concessions which have since become Sino-British; they have developed engineering and shipbuilding works; they have long had a few leading cotton-mills, and they are concerned with tobacco, wool-cleaning and other enterprises. The Japanese, who entered the field later, have coal- and iron-mines, a larger number of cotton-mills and various flour-, oil-, and bean-cake-mills, albumen factories, chemical plants, and other enterprises. Through investments they have control of the largest iron plant in the country, and much else.

There are three aspects of the situation which call for consideration: (i) the influence of the foreign employer on industry in China; (ii) his position in relation to the national demand for

the revision of the treaties defining his privileges and status ; and (iii) the possibility of foreign business co-operation in the realization of China's national aims.

(i) The character of foreigners as employers in China has recently attracted a good deal of attention and been the occasion of some controversy. It is claimed by their friends that the influence of the leading foreign capitalists has been wholly beneficial, that they have raised standards and introduced humanitarian principles, but their enemies represent them as ruthlessly exploiting the Chinese labourer. With every desire to be impartial the writer would state his judgment : (1) that in regard to such matters as the conditions of work, the rates of pay and the hours of work the influence of the foreign firms has, generally speaking, been distinctly beneficial to the Chinese workman ; (2) that the average foreign business-man in China has been no more altruistic than business-men are apt to be, and that the adoption of humanitarian principles owes a good deal to the pressure of the workers and the efforts of their friends ; and (3) that, for reasons to be stated later, the conception of the part that foreign industry might play as a constructive force has not been adequately grasped, and that on this side there has been at least comparative failure.

There are, of course, great differences between individual employers, but here we are concerned

with broad aggregate results. Within the sphere of actual business relations the average foreign firm compares very favourably with the average Chinese. The earlier foreign activities in China were commercial rather than industrial. The relations of merchant with merchant, of British, for example, with Chinese, have on the whole been excellent. In matter of strictly commercial morality ; in keeping their contracts when prices or exchange have gone against them, in delivering goods according to sample or specification and so forth, the British have been generally faithful to the traditions to which they owe their position in international trade. This fact has, in the past, borne fruit in dealings with the Chinese merchant, of whom it was long said with truth "that his word was as good as his bond." Unfortunately in the abnormal post-war period, with its exchange problems, breaches of contract by traders of various nationalities and of the Chinese became more frequent, and the situation has grown worse.

Also on the side of their dealings with workmen, the foreign industrialist in China has on the whole a good record. The oldest British cotton-mill in China had no strike until the great political strike of 1925. This may be taken as typical. The Japanese in their recent industrial expansion in China have apparently resolved to be second to none, and in the comparatively new Nagai Wata Kaisha mills, for instance, they have set a high standard. Among

the progressive firms who have attempted to promote the well-being of their employees, Chinese, Japanese, British and American—to mention only the nations most concerned—all have a place, the Americans ranking higher in this than in commercial standards. The foreign employer has advantages in comparison with his Chinese confrères. He has behind him the slow, developed traditions of accumulated experience and a large supply of technically-trained men to draw on. In technical matters: caring for machinery, building up reserves, providing for depreciation, and so forth, his policy is sounder. To set against this the Chinese employer has the fact that he is much nearer to the worker (from whom the foreigner is frequently separated by a contractor or compradore) and has a much better understanding of their ways, their needs and their possibilities. On the face of it there would seem to be a good case for co-operation between the two.

Also, the foreigner is separated as a rule by more than an intermediary. He is divided by race, by language, by social outlook. He usually lives in a foreign community in which he finds most of his social life. Western business tends to a narrow outlook and a self-contained character—"business is business" with an inadequate ethic, and this is a serious shortcoming in a situation such as that in China. As Nurse Cavell said of patriotism in an international situation it "is not enough," so one is tempted to say of industry in China, commerce alone is not enough.

(ii) But the problem in China is not purely an industrial one. Because of the anomalous relations obtaining between China and the Powers, it is also political. America saw her railways developed by French and British capital without misgiving, and Japan, when she had made up her mind to enter the path of industrialization, quickly picked the brains of the experts she employed and then dispensed with their services. But in China it has been a different story. There is not space even to summarize Chinese-foreign relations down to the present embroglio. There is much to regret on both sides, and foreigners strengthen their position by frankly confessing their share in the mistakes made. Speaking of the effect on the Chinese of the scramble for concessions in the latter part of last century, Professor Sargeant says :—

“ . . . commercial concessions were inevitably and unfortunately associated in the Chinese view with foreign political and territorial aggression.”¹

Foreign business in China should make it its aim to dissociate itself from this legacy of political complications and to come into harmony with Chinese national policies for economic development. Under the treaties made from time to

¹ *Anglo-Chinese Commerce and Diplomacy*, A. J. Sargeant. Clarendon Press.

time large commercial and industrial interests have been built up. A developed commercial life, with banking institutions, credit, specialized markets, intricate communications, large-scale undertakings, can only function under a modern type of government. The treaties through the growth of Chinese nationalism and of a more sensitive international morality have become repugnant to the Chinese and to many foreigners, to a degree which makes them impossible in their present form. The task not only of statesmanship but of all foreigners connected with China is to endeavour to establish such co-operative arrangements for the control of joint interests as will facilitate the realization of China's aspirations not only for sovereignty in her own borders but in modern municipal government and economic development.

2. CHINA AND INTERNATIONAL STANDARDS.

In entering into the main stream of the world's life, China should be given to feel that she does so with interest, goodwill and, as far as is consistent with her freedom to choose her own way, the active assistance of the people of other lands. On the lower plane of self-interest it should be realized that for the sake of standards everywhere, it is desirable that Chinese standards of living should be raised. On the side of labour, low standards in China tend to depress those

elsewhere; on the side of industry, a wealthy China would mean much more world trade. As Chinese industry grows, individual trades may suffer and adjustment be required, but the total volume of trade between China and other countries will enormously increase.

On the higher plane of international goodwill various groups have manifested their interest in appropriate ways. Philanthropic and humanitarian sympathy, especially in America, has led to the subscription of immense sums for famine relief. Organized labour in various countries has sought to help the Chinese worker. When Chinese employees were on strike in Japanese mills in Shanghai over the treatment of a coolie by a foreman, the workers in Japan organized a demonstration in support of the Chinese. The Labour Party in England sent out Colonel Malone in 1926 to report on labour conditions in China, and he has proposed certain practical measures of assistance of a more permanent kind. But the two groups which call for fuller notice here are the International Labour Office and the Christian missionary movement.

With regard to the former, it is true that hitherto China has been expressly excluded from the operation of the international standards proposed by the Washington and later Conferences under the International Labour Office. But the latter body has already exerted an influence which raises the hope that with political stability once established, it will be of considerable direct

assistance. It is believed that it was largely the inquiries and suggestions made from Geneva and supported by the interest of foreign sympathizers in China which led to the promulgation of the factory regulations of March 1923 by the Peking authorities; and though political conditions rendered that first step abortive, it may yet prove the promise of better things to come. The influence of the I.L.O. is seen again in the prohibition by the same ministry of the use of yellow phosphorus for match-making as from 1st January 1925. Although this prohibition has not been enforced, it has led to a partial substitution of the red for the yellow form, despite the fact of the greater popularity, higher selling-price and lower cost of the matches made with the yellow variety. This is distinctly a good augury and should make the way easier for the future.

With regard to the Christian movement, a keen interest is being taken by a number of groups in the welfare of the worker, whether he be country peasant or city factory hand. Several of the Christian universities have agricultural departments or colleges, which are studying the technical problems of the farmer and helping him to improve his methods. Rural education under missionary auspices is paying increasing attention to the social and economic needs of the villagers, and attempts are being made to meet those needs through the schools. Indeed there are now mission schools with agricultural

experts, especially under the American and Canadian societies, serving various local areas. The rural co-operative movement is also finding some of its best friends among the Christian community.

Other Christian groups are equally interested in the welfare of city workers, especially perhaps of those employed in the newer types of industry. Their interest extends both to working and living conditions, including housing, as well as to moral and social welfare. It was through the preparatory efforts particularly of a small but active Christian group that the Shanghai Municipal Council's Child Labour Commission came into being, and the services of Dame Adelaide Anderson, for many years His Majesty's Chief Woman Inspector of Factories, were secured for it.¹ The Christian movement is concerned not only with creating right attitudes and a public conscience on some of the questions involved, but it feels the need of bringing the right kind of technical knowledge to bear on them. The teacher and doctor have long been familiar members of the missionary force. The circumstances of the day are driving home the conviction that workers with an intimate knowledge of industrial life and training in the methods of industrial welfare are as much needed as the medical man. Moreover, the fact that modern industry has come from the

¹ See *Humanity and Labour in China*, Dame Adelaide Anderson. S.C.M. 10s. 6d.

West, and that mainly from the lands most concerned in Protestant missionary enterprise, creates a feeling of fuller responsibility for the welfare of those who have been drawn into the new and strange conditions of city life.

Missionaries are frequently charged by extreme Nationalists in China with being the "running dogs" of the foreign capitalist. The foreign capitalist often takes a very different view of missionary activities. The truth is that the Christian desires to co-operate with all alike, Chinese and foreign, employer and worker, for the attainment of those conditions on which alone permanent prosperity can be secured and a satisfactory life attained for the people of China. In the settlement we hope will emerge from the present chaos, China's greatest need in all directions will be for men of character, and it is in helping to train these that the Christian Church can render China most valuable aid.

3. INTERNATIONAL CO-OPERATION AND NATIONAL AIMS.

Is it too Utopian to speak of foreign co-operation in the realization of China's broader national aims (as distinguished from the ultra-nationalistic aims of some of her extremists) in these days of internal disorder and international strain? Is it not rather the only direction in which a solution can be found and peaceful

progress achieved? Beneath the surface strife of military factions and political cliques, forces of constructive thought and social impulse are slowly gathering strength and power, underpinning even the deeper centres of recurrent weakness in China. The justification and the security of the foreigner in China alike depend on discovering and co-operating with the new and still nascent movements which are the result of China's contact with the better features of Western life. It has been when this has been done in the past that contact has been fruitful and relations cordial. The fact that the West has so often failed in this respect is a principal cause of the present difficulty.

A concrete instance of such failure may make the meaning clear. When a Mayor of Greater Shanghai was recently appointed by the Chinese authorities with the object of bringing the districts surrounding the International Settlement and French Concession under a unified, modern municipal government, the first difficulty that was encountered was the absence of trained Chinese administrators.¹ After eighty years of international intercourse in that great port, which has grown to include eight hundred thousand Chinese under international authority, there were practically no Chinese with the experience which would qualify them to establish higher types of municipal government in their own cities.

¹ See article by Dr V. K. Ting, in the *North China Herald*.

In the industrial sphere it is too early as yet to say in what direction growing experience of industry and the reflections of her thinkers will lead China, but it may confidently be expected that the broader human ends and aspects of industry will be more stressed by the Chinese than they have been in the West. China's heritage is pre-eminently the great body of social ethic which forms the most distinctive part of her traditional culture. To-day, when Confucius is regarded in many quarters as a reactionary, with his eyes on the past and his thought inextricably bound up with the old imperial system, Chinese scholars are turning to less orthodox but not less profound thinkers, of whom Mo-tzu is one of the greatest. His teaching is that society can only be organized about the two principles of "love" and "profit." If we may take the latter in the broad sense of social welfare which harmonizes it with the former, his thought serves as the basis for the development of a science of social economics at once scientific and ethical, as all social science must ultimately be. We cannot remind ourselves too often that the search for social righteousness is the deepest and best thing in Chinese life and the one that Western contacts should above all seek to strengthen. It is hoped that the view taken in this little book is not inconsistent with this aim.

For Anglo-Saxons, who will form the majority of its readers, it is well to remember that while China has drawn and should draw inspiration

from many sources, the main spring of her new national ideals has been Anglo-Saxon liberalism and especially American democracy. However far China may ultimately go, the best Western industrial practice and social ideals are urgently needed and, generally speaking, warmly welcome to-day; and for the sake of future world-development, the West cannot afford to be represented by any but her best.

APPENDIX A

SIZE OF FAMILY IN RELATION TO SIZE OF HOLDING. VILLAGES IN CHIHLI.

(From Study of Chinese Rural Economy, Malone and Taylor.)

1 Size of Holdings.	2 Number of Holdings (or Families).	3 Percentage of Total Holdings.	4 Percentage of Total Land.	5 Persons in the Families.	6 Percentage of Total Population.	7 Average Size of Family.
Under 3 mu *	372	12.6	0.9	1,006	5.2	2.7
3	595	20.3	3.4	2,399	12.6	4.0
6	658	22.3	7.4	3,145	16.5	4.8
11	600	22.4	15.8	3,773	19.8	5.7
26	335	11.4	18.5	2,807	14.7	8.4
51	201	6.9	21.3	2,181	11.4	10.8
101	89	3.0	18.1	1,140	6.1	12.9
201	29	1.0	11.9	430	2.2	14.8
501-1000
Over 1000	7	...	2.6	21	0.1	21.0
	2940	16,908	88.6	5.7
Without land	592	2,190	11.4	3.7
	3532			19,098		5.4

* 6 mu = 1 acre.

APPENDIX B

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—*Headway*.

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