areas studied, the farm operators who used tractors worked somewhat longer hours than did the farm operators who did not use tractors. The mechanisation of Wisconsin farms has enabled one man to do a given amount of work in less time, but our records show that the time saved has been used for increased production rather than for increased leisure. "

For Montana the following statements are made :

" Whenever a new labour-saving appliance is put in, it is merely an attempt to turn out more goods rather than to shorten the hours. . . . With the introduction of the tractor our dry-land farmers have doubled or trebled their acreage. They have been putting in more time than they have ever done before. "

Detailed cost records from Minnesota kept since 1902 show that dairy farmers and small grain farmers " are working almost two hours more daily than they did 28 years ago ". Reports from other American States confirm the tendency to maintain the long working day.

It therefore appears that the introduction of perfected mechanical equipment into North American farming has not yet contributed to shorten the working day.

Nevertheless, while working days remain long, there can be fewer of them. In this way leisure is secured for a certain number of persons engaged in farming. When the harvest is over, as there are no animals on the farm, the farmer can lock up his machinery and go away for a vacation. This is quite frequent. Students and teachers sometimes also farm during the summer only. This implies a single grain crop, rapidly sown, worked, and reaped.

The Wisconsin records, however, refer to milk, cheese, and butter farming. There is economic pressure on the American farmer to diversify his farming and add animal industries to crop farming ; there is economic pressure on him to farm the largest possible area. Both tendencies prevent the shortening of the working day. Other relevant elements are the fact that the American farmer and his sons personally perform the major part of the duties on the farm and work for a quick cash profit, that wage-paid hands are not organised in any way and are seldom resident on the same farm for any prolonged period, and that the short working day is not specially, and certainly not universally, prevalent in American manufacturing industry.

Working Conditions in Shanghai Factories

At the People's Livelihood Conference held in February 1931, under the auspices of the Chinese National Christian Council, a resolution was passed to the effect that, in order to ascertain the practicability of the Chinese Factory Act, a scientific study should be made

of the existing conditions of work. [1] In pursuance of this resolution an enquiry was begun in May 1931, under the direction of Dr. Ta Chen of Tsing Hua University, Peiping. The following is a summary of those parts of Dr. Ta Chen's report [2] which deal with the results of the enquiry.

Returns were received from 200 Chinese and 52 foreign factories [3] in Shanghai, of which 228 formed the basis of the report. These establishments employed 171,173 persons, including 51,960 men, 104,145 women, 11,895 children [4], and 3,173 apprentices. Of the workers investigated, 130,617 or 76 per cent. were employed in the textile industry, and of these 101,397 or 78 per cent. were in the cotton-spinning industry. Table I shows the distribution by industry of the factories and various categories of workers investigated.

TABLE I. NUMBER AND CLASSIFICATION OF FACTORIES AND WORKERS INVESTIGATED

Industry	Number of factories	Number of workers				
		Men	Women	Children	Apprentices	Total
Cotton spinning	49	23,028	71,983	6,346	40	101,397
Cotton weaving	13	1,909	765	170	59	2,903
Silk reeling	29	577	12,264	3,379	250	16,470
Silk weaving	18	2,097	2,348	388	942	5,775
Knitting	19	1,239	2,527	82	224	4,072
All textile	128	28,850	89,887	10,365	1,515	130,617
Chemical	34	3,446	2,965	943	400	7,754
Public utilities	7	5,603	—	—	120	5,723
Food and tobacco	24	7,148	10,436	464	69	18,117
Iron and metal	24	3,769	403	63	808	5,043
Printing and paper	11	3,144	454	60	261	3,919
Total	228	51,960	104,145	11,895	3,173	171,173

[1] Cf. *Industrial and Labour Information*, Vol. XL, No. 4, 26 Oct. 1931, pp. 120-122, which contains a summary of the decisions of the Chinese Government postponing the application of certain provisions of the Factory Act, and of the views of employers and workers on the applicability of the Act.

[2] CHINA INSTITUTE OF SCIENTIFIC MANAGEMENT: *Study of the Applicability of the Factory Act of the Chinese Government. A Preliminary Survey of the Shanghai Area.* By Ta CHEN. Shanghai, 1931. 91 pp.

[3] The Factory Act defines a factory as an undertaking using power-driven machinery and where 30 or more workers are usually employed.

[4] Under the Factory Act a child worker is a person under 16 years of age.

Hours of Work

Day Work

Table II shows particulars of the hours worked by day by the different categories of workers in the various industries. It will be seen that the longest hours were worked in the textile industry, and in particular in cotton spinning, and the shortest in the chemical industry. No information was available concerning the practice of giving rest intervals during working hours.

TABLE II. AVERAGE DAILY HOURS OF DAY WORK

Industry	Men	Women	Children and apprentices
Cotton spinning	11.3	11.3	11.2
Cotton weaving	10.7	10.7	10.3
Silk reeling	10.7	10.5	10.5
Silk weaving	10.6	10.6	10.6
Knitting	10.5	10.5	10.2
All textile	10.6	10.7	10.5
Chemical	8.9	8.8	8.9
Public utilities	8.9	—	—
Food and tobacco	10.1	9.4	9.9
Iron and metal	9.0	9.7	9.2
Printing and paper	10.1	9.3	9.0
General average	9.9	9.6	9.5

Night Work

Night work was performed not only by men and women but also by children in all industries, with the exception of the silk-reeling and iron and metal industries. Night shifts were worked in all cotton-spinning factories ; the average number per factory of women workers engaged in night work was 760 out of 1,532. In other words, all women workers in this industry were divided into day and night shifts: workers on the day shift worked for 11.3 hours and those on the night shift for 11.2 hours on the average. In all textile factories, an average of 230 women workers per factory out of 743, or 31 per cent., worked at night for 10.8 hours per night. The average number of night shifts per month in all factories was 13.8, 12.0 and 14.1 for men, women, and children respectively. Particulars are shown in table III.

TABLE III. AVERAGE NUMBER OF PERSONS PER FACTORY PERFORMING NIGHT WORK AND HOURS WORKED AT NIGHT

Industry	Average number of workers per factory			Average number of workers per factory performing night work			Average hours of night work		
	Men	Women	Children	Men	Women	Children [1]	Men	Women	Children [1]
Cotton spinning	469	1,532	141	274	760	70	11.2	11.2	11.2
Cotton weaving	159	69	21	—	44	—	—	11.0	7.5
Silk reeling	30	433	146	—	—	—	—	—	—
Silk weaving	131	157	7	113	41	—	10.5	9.3	11.2
Knitting	68	133	16	43	75	6	10.8	10.8	10.8
All textile	257	743	121	106	230	40	10.8	10.6	10.2
Chemical	108	129	86	79	129	49	9.4	10.5	8.5
Public utilities	800	—	—	—	—	—	8.0	—	—
Food and tobacco	317	549	42	49	198	9	11.5	8.5	9.0
Iron and metal	157	101	13	—	—	—	—	—	—
Printing and paper	286	65	30	32	12	10	6.2	5.0	3.0
Average	—	—	—	—	—	—	9.2	8.7	7.7

[1] Including apprentices.

WAGES

Table IV gives particulars of predominant daily wages for men, women, and children in the different industries. It will be seen that the highest rates for men were paid in the iron and metal industry and for women in the textile industry.

TABLE IV. PREDOMINANT DAILY WAGES

(*in Chinese dollars* [1])

Industry	Men	Women	Children
Cotton spinning	0.70	0.75	0.36
Cotton weaving	0.91	0.70	0.52
Silk reeling	0.72	0.53	0.31
Silk weaving	0.98	1.06	—
Knitting	0.71	0.63	—
All textile	0.80	0.73	0.39
Chemical	0.63	0.47	0.28
Public utilities	0.78 [2] / 1.18 [3]	—	—
Food and tobacco	0.90	0.63	0.41
Iron and metal	0.98	0.59	—
Printing and paper	0.82	0.37	0.37

[1] The Shanghai dollar was worth 30.25 cents U.S. in May 1931.
[2] Unskilled labourers. [3] Skilled labourers.

Rest Days and Holidays

In 176 factories which reported on this question, the average number of rest days per month was 2.6. Practice varies in respect to the intervals between rest days: some factories close regularly on Sundays, others once in ten days, others twice a month. A certain number of factories close at noon on Saturdays for one and a half days. Some workers employed in industries where continuous operation is necessary have no rest days at all, but they usually work shorter hours per day than those worked in industries observing the weekly rest.

Out of the 176 factories reporting, 55 granted monthly rest days with pay, and 121 without pay. The former usually referred to factories where the workers were paid on a monthly basis, and the latter to factories paying wages by the day or piece.

In addition to regular rest days per month the factories reporting granted 14.4 days per year on the average as special holidays. Table V shows the average number of these holidays and the total number of establishments paying and not paying for these days.

TABLE V. AVERAGE NUMBER OF SPECIAL HOLIDAYS AND NUMBER OF FACTORIES PAYING AND NOT PAYING FOR THESE DAYS

Item	Holidays			
	National	Festival	Solar New Year	Lunar New Year
Average number for all industries	4.7	1.7	3.9	4.1
Number of firms paying	81	48	66	31
Number of firms not paying	72	68	107	91

The granting of an attendance bonus is very general in China: it is customary to give 30 days' pay for 28 days' work, or 32 days' pay for 30 days' work. The two days' extra wages, therefore, may be taken as equivalent to payment for two rest days. It is also a common custom to give half a month's wages as a New Year gift, which may be interpreted as payment for special holidays (other than monthly rest days).

Child Labour

There were 11,895 children employed in the 228 factories investigated, but information as to their ages was not asked for owing to the difficulty of answering this question. The report states, however, that there were a considerable number of children employed in native

factories from the youthful age of eight or nine years, though child labour in the ordinary sense (under fourteen years) had disappeared from foreign enterprises.

Sickness, Injury, and Death

The study showed that the majority of the factories investigated paid both wages and medical expenses for sickness and injury arising during employment. For permanent injury and death, however, only a few establishments paid wages and medical expenses beyond a certain limit. Details are shown in table VI.

TABLE VI. NUMBER OF FACTORIES PAYING AND NOT PAYING WAGES AND MEDICAL EXPENSES FOR SICKNESS, INJURY, AND DEATH ARISING FROM EMPLOYMENT

Item	Wages		Medical expenses	
	Paid	Not paid	Paid	Not paid
Sickness	133	72	151	36
Injury	137	65	185	18
Permanent injury	25	102	98	48
Death	14	105	74	59

Maternity Bonus

Out of 210 factories which furnished information, only 63 or 30 per cent. granted a maternity bonus. The average cost per case varied from 5.75 dollars in the chemical industry and 9.95 dollars in the textile industries to 22.90 dollars in the food and tobacco industries. The average amount paid per case in 1930 was 16.02 dollars.

Education

Out of 206 firms which furnished information on education, 55 reported that they had some sort of educational facilities for their employees. Factories where trade unions are recognised usually grant the unions a subsidy towards running schools for the workers' children. Some employers themselves establish and maintain schools. In factories where there is genuine provision of educational opportunities for young workers, instruction is usually given outside working hours. Twelve companies specified that their educational facilities apply only to young workers. The average number of hours of instruction was 9.1 per week.

Conditions of Employment

Out of 227 factories reporting, 130 or 57 per cent. had no employment contract whatever, 81 had contracts with individual workers and 16 had a group contract system. Labour unions were reported in 83 factories, while 112 stated that there was no union. The existence in the factories of employee representation or any kind of factory council was very rare.

Conditions of Work in the Batik Industry in Java

The Labour Office at Batavia has for some time been engaged on an enquiry into conditions of work in the batik industry in Java. The first volume of its report, dealing only with Western Java, was analysed in these pages some months ago [1]; the second part [2], which has since been published, deals with the centre of the island, and contains, like the first, a quantity of interesting information on the industry itself and on the conditions of work.

The report gives a very definite impression that the conditions described denote an extremely low stage of economic development. On almost every page there are instance of the improvidence of the Native population, of its poverty and meagre needs: lack of ready money, satisfaction of the more immediate needs by means of loans at ruinous rates of interest, low wages, more or less complete dependence on the employer for the credit he gives — such is the ever-recurring theme whenever Native labour is under discussion. To all this must be added the instability of an industry suffering from seasonal influences, from the fact that most employers, whether Chinese, Arab, or Native, are wholly devoid of any idea of the play of economic forces, and from the effects on the Dutch Indies of the present world-wide economic depression.

As in Western Java, the sanitary conditions of the workshops leave much to be desired, and workers lodged by their employer are sometimes no better housed than domestic animals.

A question which calls for special mention is that of the compulsion to work. In some cases, indeed, in spite of the provisions of the law, this has taken brutal forms; a circumstance rendered more serious by the fact that the chiefs of Native villages and lower-grade police

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[1] Cf. *International Labour Review*, Vol. XXIII, No. 2, Feb. 1931, pp. 247-249.

[2] KANTOOR VAN ARBEID: *Batikrapport*, van P. de Kat ANGELINO. Deel II: *Midden-Java*. Publicatie No. 7. Weltevreden, Landsdrukkerij, 1931. IX + 332 pp. 3 fl.