

DEPARTMENT OF COMMERCE AND LABOR.

BULLETIN

OF THE

BUREAU OF LABOR.

No. 58—MAY, 1905.

ISSUED EVERY OTHER MONTH.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1905.

EDITOR,
CHAS. P. NEILL,
COMMISSIONER.

ASSOCIATE EDITORS,
G. W. W. HANGER,
CHAS. H. VERRILL, G. A. WEBER.

II

CONTENTS.

	Page.
Labor conditions in the Philippines, by Victor S. Clark, Ph. D.....	721-905
Labor conditions in Java, by Victor S. Clark, Ph. D.....	906-954
The new Russian Workingmen's Compensation Act, by I. M. Rubinow....	955-959
Digest of recent reports of State bureaus of labor statistics:	
Connecticut.....	960-962
Maine.....	963-965
Virginia.....	965-967
Digest of recent foreign statistical publications.....	968-982
Decisions of courts affecting labor.....	983-1011
Laws of various States relating to labor enacted since January 1, 1904....	1012-1019

BULLETIN
OF THE
BUREAU OF LABOR.

No. 58.

WASHINGTON.

MAY, 1905.

LABOR CONDITIONS IN THE PHILIPPINES.

BY VICTOR S. CLARK, PH. D.

The Philippine dependency includes more than 1,700 islands, and is distributed over a water area of 832,968 square miles. An irregular line drawn to embrace the entire group presents an outline not unlike a pear, with the narrower portion to the north, near the twenty-first parallel of latitude, or approximately the same latitude as central Cuba. The broader southern portion touches the fifth parallel, opposite southern Venezuela and Colombia, and extends east and west through 10 degrees of longitude. The longest direct line that can be drawn between any two points in the archipelago, from the Batanes Islands, north of Luzon, to the Tawi Tawi group, just off the north coast of Borneo, represents a distance of 1,000 miles. If Manila were placed in the position of St. Louis, northern Luzon would extend through Illinois to the vicinity of Chicago, while the southern end of the same island would project in a narrow, irregular strip of land, to the neighborhood of Nashville; Mindanao would lie on the Gulf coast of Alabama and Florida; the Sulu group would extend nearly to Galveston, while nearly parallel and north of this archipelago Palawan and a few attendant islands would form a long index reaching into eastern and northern Texas. Were land communication perfected one might ride by rail from the mouth of the Cagayán River, on the north coast of Luzon, through Sámar, Leyte, and Mindanao, to Zamboanga, nearly 1,200 miles, traversing the whole eastern limit of the archipelago, with only two water intervals that could not be bridged, and those comparatively narrow channels as easily ferried as the Strait of Mackinac. From the highlands of Leyte, Bohol and Cebú are visible

to the westward, while farther, in the same direction, Negros and Panay lie in close succession, with the coast of each in plain sight of its neighbor. These and the minor islands at present developed, therefore, form a compact group, and suggest the thought that at no very remote geologic age they were included in a single land body.

The land area of the Philippines is approximately 115,026 square miles, of which 40,969 and 36,292 square miles, respectively, or nearly 70 per cent of the surface of the archipelago, is included in Luzon and Mindanao. Of the 1,668 islands listed by name 342 are inhabited, and about 50 have appreciable economic importance. Although these present considerable diversity of soil, climate, and topography, they are practically a homogeneous unit from the industrial point of view, as the natural productions of the local divisions are similar or identical. The pearl fisheries, which seem destined ultimately to become a valuable asset of the dependency, are confined to the Sulu Islands, Palawan, and possibly the southern coast of Mindanao, and no mineral wealth of importance is supposed to exist in the volcanic and coral islands of the southern and western portions of the archipelago; but agricultural and forest resources, which are the main dependence of the country, are essentially the same throughout the Philippines. Hemp, sugar, tobacco, rice, and copra, the staple products of to-day, and most of the more experimental crops thrive in all the islands, subject only to local conditions of soil, rainfall, and altitude.

A number of considerations, however, partly political and geographical, partly racial, and partly commercial, make it convenient to regard the Philippines under three divisions. Luzon and its immediately dependent islands are tributary to Manila and Hongkong. They have a preponderating Tagalog population, though they are the home of the entirely diverse Igorots and Ilocanos and minor tribes of less importance. The Visayan group, in the middle zone of the archipelago, is indirectly tributary to Manila and Hongkong, through its subordinate commercial centers of Iloilo and Cebú, the former of which is the sugar and the latter the hemp metropolis of this division. The population is distinct from that of the northern islands, and these provinces have had a more or less independent political and commercial development. Finally, the Moro province, in the extreme south, is entirely diverse from the other two divisions in race, religion, and manners. It is commercially tributary to Borneo and Singapore, and its slight industrial development is almost entirely due to Chinese and East Indian traders from the latter city. The Sulu Islands are entirely and Mindanao preponderatingly Moro, though the northern coast of the latter island is commercially dependent on Cebú. While the Spanish term "Moro" connotes a racial distinction, it denotes directly the Mohammedan population of the archipelago, and therefore has primarily a religious signification. The Philippine or Christian

population of the Moro province is composed largely of the descendants of convicts from the penal settlements, and is confined to a few coast towns.

The climate of the Philippines is everywhere tropical, though upon the highlands of northern Luzon some temperate-zone crops are raised. The rainy season is more marked in that island, and cool winds from the north prevail during the winter months. Monsoons, which often make the east and north coasts of the archipelago rough and stormy, are broken before they reach the summer seas of the Sulu group, and typhoons seldom rage in that vicinity. The latter storms and occasional earthquakes are the most destructive natural disasters from which the archipelago suffers. So far as temperature alone is concerned, there is little distinction to be drawn between the northern and the southern islands. Though the thermometer ranges between greater extremes in the north, the average number of heat units in a year is not appreciably greater on the south coast of Mindanao than in Manila, and the climate of the interior uplands of the Moro island is said to be the most agreeable for white men in the archipelago. Local topography has more to do than latitude in determining climatic conditions in the Philippines.

The tribes or races of the dependency are numerous, but may be roughly divided into three main groups. The Negritos, supposed to be the original inhabitants of the islands, still survive in a state of savagery in the mountains of Luzon, Negros, and Panay. In the first of these islands, within 150 miles of Manila, there are still villages of head hunters, and while the writer was in Negros two men were killed by these mountaineers in observance of some quasi-religious ceremony. The "Filipino" races, often called "Indios" or "Indians" by Spanish writers, occupy the greater part of the archipelago north of Moroland, and are presumably descendants of early Malay invaders, though in parts of Luzon they have mingled so largely with the Chinese as to have absorbed race characteristics from the latter people. The Mohammedan tribes of Sulu and Mindanao present many independent racial characteristics, and are probably the latest arrivals among the peoples who have their permanent home in the archipelago.

The important bearing of this diversity of blood and language upon both political and industrial administration in the Philippines is apt to be overlooked or underestimated by a person with only an academic knowledge of the country. In a body of 100 men employed by the street department of the city of Manila, seven different languages or dialects are spoken, so that of seven workmen it may happen that no one can understand any one of the others, and native foremen are obliged to communicate with their native workmen by signs. This is not a normal state of affairs, because only in Manila, and that recently, have laborers congregated from many different provinces as a result

of the unsettled conditions following the insurrection; but nowhere in the Philippines do the social and labor conditions prevail that would obtain in a country having a homogeneous nationality.

A broad classification of a different character exists among the Filipinos. It is social rather than racial, and distinguishes the upper from the working classes. In the country the laboring man is known as a "tao," a term that carries with it implications halfway between serf and peasant—possibly the Russian "moujik" is the nearest equivalent in another language. Manual labor imposes among the natives a certain social stigma, a degradation of rank unknown in America or Europe, or at least differing in quality as well as degree from those social disabilities that industrial life is supposed to convey abroad. The ilustrados, literally the "enlightened," will engage in industrial occupations that do not soil the hands, but they are careful not to prejudice their social position by any lapse, no matter how trivial or transient, toward the supposed lower vocation of the manual worker. In an industrial sense, at least, the organization of society in the Philippines is aristocratic. This social classification may be due in part to Spanish influences and theories of colonial government, which favored the idea that the white man should maintain his prestige among the natives by abstaining from all commoner forms of employment. But it is probably largely an indigenous sentiment, surviving from an older native social organization of chiefs and followers, such as still persists in the "dato" system of the Moro province.

The industries of the Philippines are almost entirely agricultural. No mines are at present in productive operation. Such manufactures as exist are almost exclusively household employments, and their modest output is absorbed by the local market. The export trade is confined to a few staple commodities, and of these only one—sugar—is a product that requires a considerable industrial plant for its fabrication. Tobacco is manufactured into cigars and cigarettes in Manila, and this is practically the only large employing industry in secondary production. Land transportation is extremely primitive, but there is an active coastal trade. Grazing was formerly of some local importance in one or two islands, but has recently ceased to exist on account of the ravages of the rinderpest. Food fisheries are unimportant from the point of view of employment, as the business is unorganized and conducted almost entirely by natives fishing for home use or a restricted local market. There is a new timber industry springing up since the American occupation, but it is still upon an experimental basis and commands no foreign sales. In fact, so primitive is the industrial condition of the Philippines that the wage system has hardly begun to exist in most parts of the country, slavery or an almost equivalent system of peonage is a common condition of agricultural and domestic service, and the most imminent economic problem that

the islands have to face is how to effect a speedy and ready transition from a social state where many workers are in quasi-servitude, to one where they are industrially independent. The motive for such a change is not primarily the happiness of the working people, for they are possibly as contented and possess as satisfactory an adjustment of material resources to their physical and intellectual demands as they would in a more advanced state of society. But the change is necessary for the development of the natural resources of the country with native labor, and it is a condition precedent to the successful operation of the form of government that we design to set up in the islands. The primary problem in the Philippines is the labor problem.

HISTORY.

The history of European influence in the Philippines does not begin until nearly half a century after their discovery by Magellan, in 1521. That explorer lost his life upon the island of Mactán, not far from the present city of Cebú, in a conflict between the native tribes. Legaspi, who was the founder of Spanish dominion in the Orient, established at Cebú in 1565 the first European settlement in the archipelago, and occupied the present site of Manila six years later. The Spaniards appear to have found the Chinese already in commercial possession of Luzon, and during the first half century of their occupation were almost continually engaged in repelling invasions or in anticipating threatened attacks by these Mongolian rivals. The native races lived scattered in independent villages under a very loose governmental organization and recognized little authority beyond that of their petty chieftains. The Spanish conquest was one of persuasion rather than of force, and was greatly aided if not almost entirely due to the missionary activity of the monastic orders. But the political authority and prestige of Spain were doubtless strengthened, especially in the vicinity of Manila, by the fact that her settlements afforded rallying points and protection against piratical raids and Chinese invasion. In 1573, two years after the founding of Manila, a Chinese freebooter attacked the place with 62 ships, but was repulsed. Thirty years later, when Manila was being fortified, many Chinese entered the place with their leaders in the guise of workmen, intending to gain possession of the city by treachery; but their plot was discovered and, according to the records, 23,000 of them were slain by the 800 Spanish residents of the city and their native allies. A formidable Chinese invasion was repulsed in 1667, after which the Asiatics appear to have contented themselves with a commercial conquest, without any further serious attempt to drive out Europeans or change the political status of the islands.

After the repulse of the Chinese and a less aggressive Japanese reconnoissance in northern Luzon, Spain's principal rivals in the Philippines

were the Dutch, who were then founding their colonial empire in the East Indies, and for some years showed a disposition to dispute the sovereignty of Spain in her oriental possessions. The Hollanders were finally defeated in a naval battle at Playa Honda, off Zambales, in north Luzon, in 1617, and gradually the delimitation of the respective spheres of Dutch and Spanish influence was established at the boundaries that remain to-day between Mindanao and the Sulu group and Borneo and the Célebes. In 1635 Zamboanga, at the southwestern extremity of Mindanao, was fortified, and 60,000 of the inhabitants of that island are said to have been Christianized. But the incursions of Chinese pirates later caused the evacuation of this place and it was not reoccupied until 1718, a time when the aggressive missionary propaganda and colonizing ardor of Spain seems to have spent itself, for thereafter the ambition of that country was satisfied with the formal occupation of a few coast towns.

Only once prior to 1898 did Spain for a time lose possession of Manila. England, who entered the field of oriental colonization later, easily dispossessed the Spaniards of that city in 1762; but she never became mistress of the archipelago, where the influence of the friars and the Spanish officials maintained an active spirit of resistance among the natives, and she restored Manila to its original possessors two years later, the cessation of Spanish sovereignty in the Philippines having been more nominal than real.

Aside from the religious conversion of the natives, Spanish rule seems to have made very little change in the social condition or industrial habits of the Filipinos prior to the English invasion. The political organization of the people was but slightly modified. The indigenous system of village communities was retained, the local chiefs becoming representatives and taxgatherers for the Spanish Government, while for administrative purposes these villages or "pueblos" were grouped into provincial districts. This policy of fostering native institutions was partly due to the remoteness of the archipelago and its indirect connection with Spain by way of America and to the jealousy shown by the monastic orders toward lay officials. The friars opposed the immigration of Europeans and the development of private enterprises in the islands. A rigid commercial monopoly was maintained by the Spanish Government. Trade was restricted to the Acapulco ship, which sailed to Manila from the Mexican port of that name every year, and was a Pacific extension of the two trading fleets which Spain allowed to monopolize the annual commerce between Europe and her New World possessions. Special privileges or concessions for shipping goods or sailing upon the Acapulco ship were much sought after as matters of official favor or purchased by heavy bribes and commissions. This unnatural restriction upon trade put all commerce upon an artificial basis, encouraged

speculation at the expense of legitimate commercial development, made a sort of lottery of business, and both hampered and distracted attention from the development of the natural resources of the country. Unlike the Dutch East Indies Company and similar trading monopolies existing at that time in the Orient, which studied to increase their profits by increasing trade, and therefore local production, the Spanish system, by limiting the bulk of products exchanged to the capacity of a single ship, sought to enhance gains by exacting enormous profits upon a minimum of commodities, and thus kept at a standstill the industrial progress of Spain's colonial possessions. Such free traffic as existed was in Asiatic ships trading with China and the neighboring mainland, which, by making Manila a depot for Asiatic wares to be shipped to Spain by the Mexican route, still further limited the carrying capacity allowed for native products exchanged with the home country.

After the British occupation of Manila, Spain awoke to the necessity of furthering the settlement and industrial development of the Philippines. In 1778, under the régime of the liberal and enterprising governor, Don José Basco y Vargas, an attempt was made to introduce new industries, bounties and prizes were offered for products, and a "Royal Philippine Company" was organized. This company remained in existence until 1830. Its purpose was to develop tropical agriculture in the archipelago and the commerce between the islands and Europe. The cultivation of cotton, silk, coffee, and spices was introduced with some success. This enterprise ultimately failed, however, on account of the ignorance and dishonesty of its agents in the islands, the hostility of the Acapulco ship merchants, and the opposition of the village mayors and provincial governors, who held, until 1844, a practical monopoly of local trade within their respective jurisdictions. Survivals from this period of official trade monopoly are not uncommon in the Philippines at the present day. No serious effort was ever made to revive this company, but a new company, known as the Union Hispano-Filipina (Spanish-Philippine Union), was chartered in 1847, with the object of exploiting Mindanao. This corporation was granted certain special monopolistic and trade privileges and allowed to import Chinese labor; but the enterprise failed at its very inception, during the political and commercial crisis in Europe in 1848, and two subsequent attempts to revive it were unsuccessful.

At the close of the eighteenth century the natural resources of the Philippines had hardly been touched, and the principal industries of the present time were still inchoate. A Spanish friar, describing conditions in the North Philippines at this period, speaks of the transfer of plantations formerly opened by private parties upon land granted by the Government to the monastic orders. Many of these holders near Manila sold their estates in order to engage in the Acapulco ship

gamble. The Dominicans leased their lands on the following terms: They allowed renters to cultivate wild lands for three or four years for nothing, and then charged them 5 cavanos ($10\frac{1}{2}$ bushels) of rice for every cavalita of irrigated land. A cavalita took a cavan (2.1 bushels) of seed and produced from 50 to 60 cavanos (105 to 126 bushels) of crop. As the "Indians" paid no tithes, their rent was practically an equivalent for that contribution. These renters, however, were accustomed to sublet their leaseholds to the taos for one-half the crop less the rent, so that the actual cultivators of the soil received a much smaller return from their labor. On one friar plantation where the value of the annual product was \$70,000, the total ground rent received from natives was but \$1,500. There were 4,000 persons living on this plantation, of whom one-half were Chinese mestizos. The same writer also speaks of another plantation near Laguna de Bay, where one-half of the tenants were mestizos. In spite of these apparently favorable terms to renters, the friar landlords were not always popular, and one instance is mentioned where their agent had recently been murdered by the peasantry. Planters and merchants were accustomed, as they are to-day, to hoard their products in order to exact a higher price for them, and the market fluctuated wildly as a consequence. Provisions were not expensive, according to present-day standards, in Manila. The price of wheat averaged \$2 a pico, or not far from a dollar a bushel, though on account of the fact that only Europeans ate bread and the market was therefore confined to Manila the price fluctuated greatly, and sometimes rose to \$7 and \$8 a pico, especially if troops were concentrated in that city. A pound of bread cost one-half a real ($6\frac{1}{2}$ cents), a bushel of rice cost \$1, seven pounds of fresh beef could be bought for a real ($12\frac{1}{2}$ cents), while pork and fresh fish were still cheaper. Spanish residents were accustomed to loan money to Chinese, requiring to be furnished with the meat, eggs, and vegetables needed for their household in lieu of interest. Such loans were pecuniarily disadvantageous to the recipients, but secured for the latter the "protection" of their Spanish patrons. The Spaniards, on the other hand, were thus enabled to live on the return from a very small capital, and became advocates of Chinese immigration. The Chinese, like the "Indios" and mestizos, were organized into a guild, having a capitan in Manila who was responsible for their taxes. This official position was much sought after on account of the gains that it was possible to make out of the tax administration, and the office was sometimes purchased for as much as \$4,000. The ilustrado was already a source of annoyance in the country towns, for we are told that a few persons in each pueblo who could read and write despised work and lived by their wits. Their special source of revenue was derived from the lawsuits which they fomented among the peasantry, usually over land

rights, for which the natives would fight very tenaciously in the courts until quite ruined. The lands in question usually fell to the lawyers. Ladrões or "tulisanes" were numerous near Manila. They stole cattle in the neighboring provinces which they sold to dealers in the city, who immediately slaughtered the stock thus obtained, and so prevented its being identified by the owners. Some of the Laguna de Bay villages were known as ladrone towns.

In 1782 Governor Basco made the cultivation of tobacco compulsory in some of the provinces, thus taking the first step toward the government regulation and monopoly of this industry that characterized the following century. Originally cultivation was limited to the town of Gapán and certain municipalities in Bulacán and Cagayán, and in the most favorable localities for this plant the cultivation of other crops was forbidden. The tobacco could be sold only to the Government at an "aforo" or fixed price, and was manufactured in the latter's factories. From the very beginning there appears to have been considerable dishonesty in the administration of this monopoly.

Sugar was produced to some extent on the friar plantations in the vicinity of Manila during the eighteenth century, though about 1800 this industry was decadent on account of the high price of provisions caused by the presence of large bodies of troops in Manila. The garrison of that city had been reenforced anticipatory of a second English invasion, and food crops, especially rice and sweet potatoes, were more profitable. For the same reason, silk culture, which had been successfully inaugurated in the Laguna provinces, gradually disappeared. As early as 1778 there were 4,000 mulberry trees in the province of Camarines. Hemp had hardly yet come to notice as an export crop. The total value of the native products shipped from the archipelago in 1800 is estimated to have been \$400,000. A century later, in spite of adverse conditions due to recent war and existing insurrection, the value of annual exports, including gold and silver, had risen to \$21,766,440, and had increased to \$39,668,366 in June, 1903.

The primitive state of industrial development in the Philippines (^a) as recently as 1875, is indicated by the fact that the only hotels in the islands were in Manila, and that outside of Luzon industrial enterprises gave employment to but 29 Spaniards and Europeans. Official statistics show that in the year mentioned, omitting non-Christian tribes not enumerated, 474,878 people were engaged in agricultural enterprises or labor in Luzon, of whom 55 were Spaniards, 6 Europeans of other nationalities, 165 Filipino planters, 197 Chinese, 15,750 mestizos, 173,590 native peasant proprietors, and the remaining 285,115

^a *Historia geográfica, geológica y estadística de Filipinas*, por Don Agustín de la Cavada y Méndez de Vigo. 2 vols. Manila, 1876.

were native laborers employed by planters or peasants. The crop areas were, in order of extent: Rice, 446,960 hectares (1,104,438 acres); sugar cane, 123,047 hectares (304,049 acres); coffee, 36,084 hectares (89,164 acres); hemp, 30,580 hectares (75,563 acres); tobacco, 22,618 hectares (55,789 acres); maize, 18,174 hectares (44,908 acres); cacao, 5,415 hectares (13,380 acres). There were also 759 hectares (1,875 acres) planted in cotton. Of a total area of over 10,000,000 hectares (24,710,000 acres) in the island, approximately 800,000 hectares (1,976,800 acres), or about 8 per cent, were estimated to be nominally under cultivation. The Christian population of Luzon at this time was reported as 2,711,437, of whom 115,713 were in Manila. Similar agricultural statistics are not given for the rest of the archipelago.

Industries other than agricultural employed in Luzon 45,030 persons, of whom 290 were Spaniards and 8 other Europeans, 160 Filipinos, 2,640 mestizos, 3,096 Chinese, and 38,836 natives. The total value of the product of 50 principal industries was given as \$20,790,104. There were 2,622 sugar mills, or one for every 47 hectares (116 acres) under cultivation, with a product valued at \$3,933,000. Domestic weavers, with 24,233 hand looms, produced \$1,753,780 worth of cloth. All the other industries were of minor importance; 395 cocoanut oil mills pressed out oil to the value of \$197,500; the annual turn-out of the 50 coach-building establishments reported was valued at \$147,700. These returns also included 6 printing offices, 7 foundries, and 2 soap factories. The combined product of the last two establishments was valued at only \$600 per annum.

In the rest of the Philippines industries other than agricultural employed 88,354 persons, of whom 54,261 were weavers engaged in household production and presumably working but part of the time, as there was only one loom for every three weavers returned. These industries employed 26 Spaniards and 3 other Europeans, 124 Chinese, and 88,201 mestizos and natives. The value of the product for the 7 principal industries was estimated to be as follows: Of 18,087 looms, \$6,319,420; of 14,486 laborers employed in making copra and cocoanut oil, \$1,916,180; of 12,250 cigar and tobacco workers, \$1,500,000; of 5,747 cheese and dulce makers, \$689,640; of 755 ox and 20 water and steam sugar mills, \$677,025; of 232 distilleries, \$140,860; and of 135 placer gold diggers, \$54,000.

No explanation is offered for the fact that the product per loom is valued at but \$72 in Luzon and at \$351, or more than a dollar a working day in the other islands. These figures are presumably taken from the tax returns and may have been compiled in accordance with a different system or with varying thoroughness in different provinces. In any case they are only approximately accurate, and many of the totals are almost certainly based upon estimates derived

from incomplete returns made by the local authorities. Any native source of statistical information is far from reliable even to-day. A statistical conscience does not exist among Filipinos. They are innocent of moral seriousness in such investigations. Facilities for the gathering of exact data as to population and employment do not, up to the present time, exist in the Philippines.

The population of the archipelago in 1876 was returned as approximately 6,200,000, of whom 5,567,685 were Christian Filipinos, 31,175 Chinese, and the remainder members of non-Christian tribes not enumerated and taxed. Other estimates, however, made about the same time vary several hundred thousand from these figures, largely on account of different opinions as to the size of the uncivilized population. The Spanish census of 1887 reported 5,984,727 Christian inhabitants. The American census, in 1903, gives the civilized population as 6,987,686, and the total population as 7,635,426.

A period of industrial development and expansion immediately preceded the insurrection that marked the beginning of the end of Spanish rule in the Philippines. The average value of exports increased from \$20,575,106 per annum for the five-year period ending with 1887 to \$21,335,371 per annum during the five years ending with 1892. With political stability and a tolerable administration an era of great prosperity seemed promised during the last decade of the century. These happy anticipations, however, ended in disappointment on account of domestic revolt and foreign war. Since then an insurrection and political reconstruction have occupied the attention of the people and unsettled business conditions, and a series of unusual natural misfortunes has visited the country. Two seasons of drought greatly curtailed the rice crop and severely afflicted other agricultural industries. A plague of locusts followed that wrought havoc with almost every cultivated plant except hemp in many parts of the islands. An epidemic of Asiatic cholera carried off thousands of the population, and an even more fatal disease, the rinderpest, practically annihilated the flocks of the natives and deprived them in most districts of animals for plowing. But the power of recuperation shown by the country is surprising. Though vestiges of these recent disasters can not be at once obliterated, every day lessens the traces of their ravages. The value of annual exports is more than 75 per cent greater than ten years ago. No evidences of distress or destitution were to be discovered among the country population of the provinces visited, and but a single beggar was seen in the islands. Both statistics and personal observation agree in showing that normal economic conditions are rapidly reappearing among the Filipinos, and that labor conditions prevailing in the autumn and winter of 1903-4 were fairly representative.

GOVERNMENT.

The Philippines are governed at present by a commission composed of Americans and Filipinos, presided over by a civil governor. By the act of Congress, approved July 1, 1902, however, a representative legislature, with a lower house elected by the people of the islands, and an upper house appointed by the President of the United States, with the advice and consent of the Senate, will assume control of the insular government about 1906, providing present conditions of domestic tranquillity continue. Executive authority will be lodged in an American governor, also appointed by the President in the same manner as members of the upper house. The people of the Philippines will be represented in the United States Congress by two elected delegates.

At the present time the islands are divided into 40 provinces, ^(a) which are administrative districts in charge of a local council of three members. The officials constituting this council are the governor, the treasurer, and the supervisor, who is an officer having charge of roads and public works. The last two officers are usually Americans and are appointed by the Commission, but most of the provincial governors are Filipinos, elected by the municipal councilors of the province, with the approval of the Philippine Commission. There are a number of minor provincial officials, and the province is a health and court district, as well as a unit for school administration. The main duties of the provincial governments are to levy and collect certain taxes, supervise the administration of their constituent municipalities, and construct and maintain provincial roads and other public improvements outside the municipal centers.

Municipalities are the only self-governing divisions as yet established. Their councilors and officers are elected, with the exception of the town treasurer, who has recently been made an appointive officer subordinate to the provincial treasurer. Electors must be resident males over 23 years of age, who are able to read and write English or Spanish, or who hold real property to the value of \$500, or pay taxes to the amount of \$30 per annum in the municipality, or who have held municipal office under the Spanish Government.

The Moro province is excepted by act of Congress from the privilege of being represented in the Philippine legislature, and its present provincial government possesses more autonomy than do those in the Christian provinces and is administered by a military governor.

^a Thirty-nine provinces and 1 subprovince.

STATISTICAL SUMMARY.

According to the census of 1903 the population of the Philippines is 7,635,426, of whom 6,987,686 are civilized and 647,740 belong to barbarous or savage tribes. Of the population which is rated as civilized in the official statistics, 6,931,548 were born in the Philippines. The city of Manila contains 29,491 of the 56,138 non-Filipino residents of the archipelago. The Chinese are the most numerous of the foreign-born inhabitants, numbering 41,035, of whom only 517 are females. The civilian population of Americans is 8,135, of whom 1,215 are females. Next in order are the Spaniards, of whom there are 3,888, including 701 females. There were 921 born in Japan and 667 natives of Great Britain, besides a small scattering population of other European residents and Orientals. The mixed races are evidently understated in the census statistics, where their number is given as only 15,419. The Visayans are the most numerous of the native races, and constitute nearly half the civilized Filipino population. They number 3,219,030; the Tagalogs, 1,460,595; the Ilocanos, 803,942, and five other native races, residing chiefly in the island of Luzon, total 1,399,506. The Mohammedan population of Mindanao and the Sulu archipelago constitutes the largest single element of the uncivilized tribes, with 277,547 members, while the Igorots, of northern Luzon, number 211,520. The Negrito population is estimated at 23,511.

The distribution of population is irregular. Some islands are much more densely populated than others, and settlement is everywhere concentrated along the seacoast and the principal inland waterways. As a whole, the Philippines have 67 inhabitants to the square mile, or somewhat less than the State of Indiana. However, the province of Ilocos Sur, in Luzon, has 398 persons to the square mile and the island of Cebú 337. The island of Luzon, with over 35 per cent of the land area, has one-half the population of the dependency, while Mindanao, with 31 per cent of the area, has but 7 per cent of the total population. Arranged in order of size, the area, population, and density of population of the 8 largest islands are as follows:

AREA AND POPULATION OF 8 LARGEST ISLANDS, 1903.

Island.	Area. (square miles.)	Popula- tion.	Popula- tion per square mile.
Luzon	40,969	3,798,507	93
Mindanao	36,292	499,634	14
Sámar	5,031	222,680	44
Negros	4,881	460,776	94
Panay	4,611	743,646	161
Paragua	4,027	10,918	3
Mindoro	3,851	28,361	7
Leyte	2,722	357,641	131
Cebú	1,762	592,247	336

Luzon has several large inland lakes and waterways, so that 53 per cent of its population resides away from the seacoast; while in other parts of the dependency only 1½ per cent of the people, upon an average, are inland dwellers. Nearly 60 per cent of the population of the archipelago lives in barrios or villages of less than 1,000 inhabitants. Manila is the only urban center recognized by the census authorities.

The number engaged in gainful occupations is reported as 3,037,880, or 43.5 per cent of the total civilized population, as compared with 39.6 per cent in Cuba and 33.1 per cent in Porto Rico. The proportion of females is very large among the workers, but this is chiefly due to the fact that they are engaged in the domestic manufacture of textiles. Women are not employed largely in agricultural labor in the Philippines. The percentage of total population engaged in gainful occupations, according to sex and maturity, in the United States, Philippines, and West Indies is as follows:

PER CENT OF MALES AND FEMALES AND OF CHILDREN 10 TO 14 YEARS OF AGE EMPLOYED IN GAINFUL OCCUPATIONS IN THE PHILIPPINES, UNITED STATES, PORTO RICO, AND CUBA.

Country.	Males.	Females.	10 to 14 years of age.
Philippines (1903)	57.6	29.4	16.8
United States (1900)	61.2	14.3	14.8
Porto Rico (1899)	56.9	9.9	22.4
Cuba (1899)	68.2	8.8	24.6

The following table shows the number employed, by sexes, in the 5 groups of occupations presented in the census classification:

NUMBER AND PER CENT OF MALES AND FEMALES EMPLOYED IN EACH GROUP OF OCCUPATIONS IN THE PHILIPPINES, 1903.

Occupation group.	Males.		Females.		Total.
	Number.	Per cent.	Number.	Per cent.	
Agriculture	1,163,777	92.8	90,286	7.2	1,254,063
Professional service	23,358	91.1	2,279	8.9	25,637
Domestic and personal service	431,388	75.4	140,567	24.6	571,955
Trade and transportation	150,989	66.6	75,566	33.4	226,555
Manufacturing and mechanical pursuits	243,061	25.3	716,589	74.7	959,670
Total	2,012,593	66.2	1,025,287	33.8	3,037,880
Not gainful	1,484,059	37.6	2,465,747	62.4	3,949,806

While only 1 female is employed in agriculture for every 13 males there are nearly 3 females for every male employed in manufacturing and mechanical pursuits. As just mentioned, this is due largely to the number of women employed in weaving native textiles at looms in their own homes. The women employed at mercantile pursuits are

mostly attendants at the little stands and cottage shops where village produce and tobacco are sold. Comparative employment in the 5 groups of occupations given, in the Philippines, Cuba, and the United States, is shown by the following table of percentages, based on the total number engaged in gainful occupations:

PER CENT OF PERSONS IN GAINFUL OCCUPATIONS IN THE PHILIPPINES, CUBA, AND THE UNITED STATES, BY GROUPS.

Occupation group.	Philippines (1903).			Cuba (1899).	United States (1900).
	Male.	Female.	Total.		
Agriculture.....	57.8	8.8	41.3	48.1	35.7
Professional service.....	1.2	.2	.8	1.4	4.3
Domestic and personal service.....	21.4	13.7	18.8	22.8	19.2
Trade and transportation.....	7.5	7.4	7.5	12.8	16.4
Manufacturing and mechanical pursuits.....	12.1	69.9	31.6	14.9	24.4

The Philippines, therefore, appear to stand about midway between the United States and Cuba in the proportion of workers employed in agriculture. It would be quite erroneous, however, to conclude from the relative proportion of employment in manufacturing and mechanical pursuits in the three countries that the Philippines possessed a comparatively larger development of secondary production. Both the United States and Cuba, it goes without saying, are industrially more advanced than the Philippines, and manufacturing enterprises employ a larger portion of labor energy in the former countries than in the latter. Numbers and percentages are in this case very deceiving, because Filipino weavers spend but a part of their time at this occupation and the product of their labor is almost infinitesimal compared with that of factories and other large industrial enterprises. Women form less than one-fourth the workers in manufacturing establishments with an annual product of 1,000 pesos or over. Therefore the percentage of male workers employed in the last group of occupations in the Philippines affords a much fairer basis for comparison with the two other countries mentioned than does the total. It will be noticed that trade and transportation, which usually develop sympathetically with manufacturing, bear a ratio to other employments that corroborates this inference. Furthermore, the error in presentation that necessarily follows giving equal numerical value to female manufacturing labor in the Philippines with male labor in the same pursuits in that country and with all labor in like pursuits in the other countries, reacts upon the percentages showing relative numbers engaged in agriculture, so that here again the male column for the Philippines is the fairer basis for comparison with the totals column for the other countries, and, relatively to other pursuits, agriculture is probably more important in this archipelago than in Cuba.

The following table shows, by races and also by sexes in case of native tribes, the percentage of the total number of workers engaged in a more detailed group of employments:

PER CENT OF PERSONS ENGAGED IN SELECTED OCCUPATIONS, BY RACE.

Occupation.	Brown.			Yellow.	Mixed.	White.
	Male.	Female.	Total.			
Farm work	58.5	8.8	41.4		18.2	3.4
Laborers	17.3	4.0	12.7	11.6	4.3	
Merchants	2.4	7.2	4.1	33.9	21.0	17.3
Salesmen				14.7	6.9	8.0
Shippers and packers				1.7		
Clerks				2.0	7.6	18.5
Messengers				3.3		
Government officials					1.8	3.4
Teachers					2.4	7.1
Constabulary and police	1.0				1.6	5.9
Physicians					1.1	1.4
Lawyers					1.0	
Clergymen						4.2
Servants	1.6	2.2	1.8	2.5	1.2	
Coachmen						3.9
Cooks		1.1		7.2		
Laundresses		6.0	2.2		1.3	
Spinners and weavers		55.3	19.1		4.3	
Seamstresses		6.4	2.2		6.9	
Bakers				1.4		
Blacksmiths				1.2		1.0
Carpenters	1.8		1.2	6.2		1.3
Cigarmakers					1.0	
Machinists					2.0	2.2
Matmakers		2.0				
Shoemakers				3.4		
Fishermen	5.7		3.9			
Sailors	1.0					2.9
Engineers and firemen						1.2
Draymen						1.1
Other occupations	10.7	7.0	11.4	10.9	17.4	17.2

"Other occupations" include those employing less than 1 per cent of all the persons of the sex and race in question reported as workers. These percentages, of course, indicate nothing as to absolute numbers. More brown males and females are employed in making cigars, for instance, than are those of mixed races, as reported in the census statistics. The percentage of white coachmen and draymen is large only because the number of Caucasian workers is very small. Any comparisons made by reading single occupations across the table would be misleading unless the relation of each figure read to other percentages in the same column is kept in mind. One should also remember that practically all Chinese workers are males. It is very suggestive, in view of the demand existing in some quarters for an importation of Chinese to work plantations in the Philippines, that the yellow race shows the smallest percentage of agricultural workers of any reported, or less than 1 per cent of the Chinese employed in the dependency. However, in proportion to its numbers this race furnishes two-thirds as many unskilled laborers as the natives. On the other hand, the Chinese show the largest percentage engaged in mercantile pursuits. Including merchants, salesmen, shippers, and

packers, over one-half of those employed are engaged in this class of occupations. They also contribute relatively more than any other race to skilled mechanic trades.

The mixed race, so far as reported, resembles the whites in having its activity distributed through a wide variety of occupations. There are 9 occupations in which 1 per cent or more of the brown race is engaged, 12 in which 1 per cent or more of the Mongolians are engaged, and 16 in which 1 per cent or more of the mixed and white races are engaged. Like the whites, also, the mixed races are employed in government and professional service. But they show no disposition to engage in the skilled mechanic trades. The males of the brown race are engaged almost exclusively in unskilled labor and primary production, and the females of the same race in secondary production and exchange. The employment of about 88.6 per cent of the brown race, 89.1 per cent of the Mongolians, 82.6 per cent of the mixed races, and 82.8 per cent of the whites is recorded in the above table.

The following tabulation of the principal occupations of the people of the Philippines, in order of the total employment they afford, is compiled from figures presented by the census authorities from returns upon the population schedules. They are not offered as exhaustive, but rather as showing relative employment. That they are not complete is indicated by the fact that they do not check with figures obtained by the census enumerators elsewhere. For instance, the number of railway employees, as shown in a wage table appended to this report, is over 1,100, while it is given below as but 336. Similarly the manufacturing statistics show that more than 1,100 were employed in printing offices having an annual product valued at 1,000 pesos or over, while according to the following table the total number employed at these occupations in the islands is but 846. These discrepancies, which appear in figures quoted in this report, are due in part to the fact that the population schedules brought in by the enumerators did not contain complete information as to occupations in every instance, and that in a country like the Philippines, where there is little specialization of industries and occupations, many workers are constantly shifting from one kind of employment to another and have no definite trade or calling.

PERSONS ENGAGED IN PRIMARY AND SECONDARY PRODUCTION, AND EXCHANGE, BY OCCUPATIONS.

Occupation.	Number.	Occupation.	Number.
PRIMARY PRODUCTION.		SECONDARY PRODUCTION—concluded.	
Farmers and farm laborers.....	1,236,827	Metal trades—Concluded:	
Fishermen.....	116,799	Machinists.....	2,105
Herdsmen.....	14,683	Mechanics.....	940
Saltmakers.....	3,602	Tinsmiths.....	715
Pearl divers.....	1,767	Coppersmiths.....	442
Miners.....	418	Iron foundries.....	128
Total, primary production.....	1,373,596	Total, metal trades.....	9,513
SECONDARY PRODUCTION.		Printing trades:	
Textiles:		Printers.....	395
Weavers.....	569,906	Compositors.....	168
Hat weavers.....	12,979	Bookbinders.....	124
Bag makers.....	11,313	Journalists.....	93
Total, textiles.....	594,198	Lithographers.....	66
Clothing trades:		Total, printing trades.....	846
Seamstresses.....	65,285	Miscellaneous:	
Tailors.....	14,201	Cigarmakers.....	11,036
Embroiderers.....	7,224	Potters.....	6,125
Shoemakers.....	4,445	Sawyers.....	2,967
Dyers and cleaners.....	1,080	Carriage makers.....	653
Total, clothing trades.....	92,235	Ships carpenters.....	536
Building trades:		Oilmakers.....	210
Carpenters.....	38,230	Sailmakers.....	95
Nipa workers.....	7,349	Total, miscellaneous.....	21,622
Painters.....	2,583	Total, secondary production.....	822,045
Stonecutters.....	2,020		
Bricklayers.....	1,172	EXCHANGE.	
Nipa builders.....	757	Carrying trades:	
Builders.....	127	Sailors.....	23,027
Architects.....	41	Coachmen.....	14,610
Total, building trades.....	52,279	Boatmen.....	8,864
Food and liquor:		Stevedores.....	4,272
Cooks.....	28,747	Pilots.....	1,273
Distillers.....	15,379	Railway employees (steam and street).....	336
Bakers.....	3,026	Draymen.....	189
Sugarmakers.....	1,366	Total, carrying trades.....	52,571
Butchers.....	1,315	Commercial occupations:	
Bartenders.....	709	Merchants.....	137,311
Confectioners.....	699	Salesmen.....	13,165
Restaurant and saloonkeepers.....	111	Packers and shippers.....	892
Total, food and liquor.....	51,352	Total, commercial occupations.....	151,368
Metal trades:		Total, exchange.....	203,939
Blacksmiths.....	5,185		

Were it possible to give complete details of employment a large number of unclassified workers would be distributed among the above groups of occupations. There are 384,400 unskilled laborers reported, most of whom are doubtless primary producers. The number of launderers in the islands is given as 66,909. There were 5,362 persons engaged in teaching. Relatively to the total number of workers sailors are four times as numerous in the Philippines as in the United States. Carpenters form 1.3 per cent of the wage-earners in the dependency, as compared with 2.1 per cent in America and 2.3 per cent in Cuba. The position of some occupations in the classification is doubtful. Nipa workers might be classified as engaged in building trades, where weaving nipa palm-leaf shingles is an important employment, or as textile workers in the broad sense here understood, which includes the manufacture of mats and baskets.

In a consideration of any statistics relating to wages and money values in the Philippines some information regarding the Philippine currency is necessary. The following statement, therefore, has been prepared, and is derived from the Philippine Census of 1903, Volume IV, pages 537 to 540:

When the Americans occupied the islands, in 1898, the currency consisted principally of the Mexican silver dollar or peso, the Spanish Filipino silver peso, and fractional coins. At first the military authorities fixed the rate of exchange of United States money for Mexican silver at 1 to 2. This was followed by violent fluctuations in the ratio. On September 25, 1901, the civil governor, by executive order, attempted to establish the same ratio of 1 to 2, but the Philippine currency depreciated rapidly until 1903, when the commercial value of the Mexican dollar began to rise. The civil government endeavored to protect its own interests and those of others by changing from time to time, by executive order, the official ratios between the two currencies.

The act of Congress (No. 235), approved July 1, 1902, which temporarily provided for the administration of the affairs of civil government in the Philippine Islands, authorized, by section 84, "the civil governor thereof in his discretion to establish the equivalent rates of the money in circulation in said islands with the money of the United States as often as once in ten days."

The numbers and dates of the civil governor's executive orders, both before and subsequent to the Congressional authorization above quoted, and relative official values of United States and insular currency established thereby are shown in the following statement:

Executive order.		Official ratio between insular and United States currency.
No.	Date.	
17	Sept. 25, 1901	2 to 1 for quarter ending Dec. 31, 1901.
39	Dec. 26, 1901	2.10 to 1 for quarter ending Mar. 31, 1902.
(a)	Mar. 31, 1902	2.27 to 1 for quarter ending June 30, 1902.
96	July 7, 1902	2.35 to 1 for at least 10 days, and until further notice.
103	Sept. 23, 1902	2.40 to 1 for at least 10 days, and until further notice.
106	Oct. 22, 1902	2.46 to 1 for at least 10 days, and until further notice.
107	Nov. 11, 1902	2.50 to 1 for at least 10 days, and until further notice.
110	Nov. 23, 1902	2.60 to 1 for at least 10 days, and until further notice.
2	Jan. 25, 1903	2.66 to 1 for at least 10 days, and until further notice.
6	Mar. 11, 1903	2.60 to 1 for at least 10 days, and until further notice.
11	Apr. 3, 1903	2.55 to 1 for at least 10 days, and until further notice.
17	May 1, 1903	2.50 to 1 for at least 10 days, and until further notice.
18	May 14, 1903	2.45 to 1 for at least 10 days, and until further notice.
55	July 18, 1903	2.38 to 1 for at least 10 days, and until further notice.
(b)	Oct. 23, 1903	2.30 to 1 until Jan. 1, 1904.

^a Reported by cable to United States War Department; number of order not stated.

^b Proclamation of civil governor.

By an act of Congress (No. 137) approved March 2, 1903, entitled "An act to establish a standard of value and to provide for a coinage system in the Philippine Islands," a distinctive silver currency was provided for the islands, which has since gone into circulation.

The returns from manufacturing establishments are not absolutely

complete, as is indicated in the following table, but they present a sufficiently accurate view of the condition of factory production in the archipelago.

SUMMARY OF MANUFACTURES BY SPECIFIED INDUSTRIES, THE VALUE OF WHOSE PRODUCTS AMOUNTED TO 1,000 PESOS OR OVER IN EACH ESTABLISHMENT IN 1902.

[From the Philippine census. The money figures are given in pesos, and equivalents in United States currency have not been computed, on account of the fluctuations in value of the Philippine currency, as shown on page 739.]

Industry.	Number of establishments.	Capital (pesos).	Average number of wage-earners and total average monthly wages.		Cost of materials purchased (pesos).	Value of products (pesos).
			Number.	Wages (pesos).		
All industries.....	2,184	636,226,085	84,659	4,757,841	25,049,452	35,097,209
Blacksmithing.....	43	55,741	200	4,617	54,280	119,470
Bookbinding.....	3	2,484	10	198	887	6,490
Boots and shoes.....	98	226,581	627	11,468	180,133	394,213
Boots and shoes, slippers.....	80	217,997	606	15,836	179,869	446,943
Boxes, wooden packing.....	4	5,780	31	380	720	9,700
Bread and other bakery products..	326	965,940	1,715	29,155	1,459,181	2,084,106
Brick and tile.....	27	237,543	954	8,898	72,840	457,790
Candles.....	38	162,678	152	3,792	156,607	230,905
Carpentering.....	11	66,390	158	4,261	116,158	197,470
Carriages and wagons.....	77	264,725	745	18,798	213,977	477,957
Chocolate and cocoa products.....	22	54,110	76	1,377	74,067	100,767
Cloth, from hemp, pifa, and other fiber.....	7	7,500	505	1,600	6,260	13,928
Cloth, just.....	34	36,451	246	1,471	25,340	53,896
Clothing, men's, custom and repairing.....	119	364,998	798	16,915	260,992	559,788
Combs.....	4	5,600	10	141	6,528	10,750
Confectionery.....	32	68,920	174	3,372	103,873	214,605
Copra.....	37	52,554	219	1,861	79,631	151,024
Cutting and edge tools.....	3	6,244	21	182	3,121	7,350
Dyeing.....	3	9,565	19	203	14,110	17,806
Engraving.....	4	4,200	8	132	768	6,500
Food preparations.....	3	8,200	25	343	5,022	6,700
Foundry and machine shop products.....	29	861,794	1,248	34,880	307,485	968,225
Furniture and cabinetmaking.....	31	185,547	262	5,931	85,936	167,030
Gas, and electric light and power..	3	2,238,560	171	5,500	1,151,749	1,461,143
Hats and caps.....	23	283,762	589	15,930	207,604	507,015
Hemp, fibering.....	38	156,555	935	10,323	20,408	77,123
Ice, manufactured.....	5	2,185,098	574	21,135	294,858	862,742
Lime.....	37	30,481	184	2,644	21,489	73,645
Liquors, distilled, malt, and vinous.	287	4,232,356	2,195	89,053	2,303,198	4,388,319
Lithography.....	4	69,580	97	3,457	27,992	79,600
Lumber, sawed.....	78	2,623,087	1,531	34,965	1,368,860	2,736,754
Marble and stone work.....	4	5,870	21	344	4,552	17,708
Mineral and soda waters.....	44	194,931	346	6,157	174,844	399,399
Oil, coconut.....	22	43,039	144	3,448	23,160	68,328
Oil, essential (ilang ilang).....	9	137,376	88	1,228	168,049	193,640
Oil, lumbang.....	8	30,590	35	1,831	22,130	40,064
Photography.....	14	60,592	48	1,315	12,304	57,083
Pottery and terra-cotta products..	20	53,872	234	3,607	21,104	66,489
Printing and publishing.....	28	1,124,359	1,023	37,024	200,728	1,024,338
Rice, cleaning.....	73	624,906	767	9,451	586,820	1,010,965
Saddlery and harness.....	16	81,184	90	2,610	37,275	70,657
Salt.....	49	245,952	841	20,526	.....	91,284
Ship and boat building.....	26	12,478,008	4,200	208,006	9,523,589	4,499,170
Silversmithing.....	44	55,972	132	2,371	61,598	109,141
Soap.....	90	262,937	287	6,044	284,565	551,585
Tanning.....	30	160,373	175	4,327	128,651	220,745
Tinsmithing.....	35	63,095	105	1,742	31,111	85,180
Tobacco, cigars and cigarettes.....	108	4,485,503	10,126	137,736	4,294,702	8,698,634
Tobacco, smoking.....	5	14,900	24	376	44,980	41,882
Trunks.....	24	70,600	183	3,083	65,713	116,500
Watch, clock, and jewelry repairing.....	3	5,000	8	135	515	3,100
Wood carving.....	4	10,300	16	532	3,014	12,700
All other industries (f).....	24	325,905	681	7,580	556,095	829,853

a Not including sugar-producing establishments, data concerning which are shown separately.

b Not including unreported capital for 21 establishments.

c Not including unreported number of wage-earners for 11 establishments.

d Not including unreported wages for 17 establishments.

e Not including unreported cost of materials purchased for 112 establishments.

f Embraces bicycle repairing, 2; boots and shoes, wooden, 2; boxes, cigar, 2; brass work, 2; cordage and twine, 2; cotton goods, 1; furnishing goods, men's, 1; ink, writing, 1; matches, 1; mats and matting, 2; nets and seines, 1; nipa, fabric, 2; paints and colors, 1; pianos, 1; resin, 1; umbrellas, 2.

Two-thirds of the factory operatives in the dependency are in Manila and its suburbs, including Cavite, and of the 2,184 establishments reported, 876 are in Manila itself. That urban center has 86 per cent of the capital invested in manufacturing and 78 per cent of the product. The most important single industry, from the point of view of employment, is the manufacture of cigars and cigarettes. The average earnings of all employees in this occupation are about 163.23 pesos per annum, and during a year each worker adds upon an average 434.91 pesos to the value of the raw materials that pass through his hands. This makes the per cent of industry product that he receives as wages 37.5, as compared with 42.5 received by cigar makers in the State of Michigan. Ship and boat building establishments represent the largest investment of capital of any industry, and afford more employment than any except cigar making. The average annual earnings of employees are 594.30 pesos, which is considerably higher than the rate prevailing in any other industry, and more than double the average annual earnings—about 262 pesos—in all establishments reported. Tailors earn about 21 pesos monthly, jusi weavers (females) about 6 pesos, and weavers of other fabrics about 4 pesos a month. The data are not complete enough to enable us to determine these wages more than approximately. Manufacturers in making returns for the census failed to discriminate between material used in production and all materials purchased in their business during the year. Therefore no conclusions as to labor cost of production applying to all the industries in the table can be drawn. The one that seemed justified in cigar manufacturing indicated a lower cost of labor, relatively to product, than in the United States.

Nearly half of the 1,075 sugar mills having a product of 1,000 pesos or over in the Philippines are in the province of West Negros. Pampanga, in Luzon, has 194 mills, the island of Cebú 69, and the district around Iloilo, in Panay, 62. Upon the whole island of Negros there are 569 mills, representing a capital of 12,108,560 pesos out of the 16,993,495 pesos invested in this industry in the dependency. In these figures the capital of 2 establishments in Negros is omitted because of faulty returns. Of the 45,247 wage-earners reported, 3,309 are women. The following table is compiled from census returns. Wage-earners and wages are not reported for 13 establishments.

SUGAR MILLS WHOSE PRODUCT AMOUNTED TO 1,000 PESOS OR MORE IN 1902.

[From the Philippine census. For statement regarding currency see page 739.]

Power.	Number of establishments.	Capital (pesos).	Em- ployees.	Monthly wages (pesos).	Value of product (pesos).
Steam	528	12,229,547	31,327	265,462	4,850,043
Water	77	1,532,207	4,001	36,720	609,378
Hand or animal	470	3,171,741	9,924	86,635	1,143,585
Total	1,075	16,933,495	45,247	388,817	6,603,006

Plantation as well as mill labor is evidently included in the table. Average monthly earnings of workers of all classes and both sexes are 8.59 pesos. In the Philippine currency now in use, the cost of plantation and mill labor would be under the equivalent of \$4.50 a month in gold. This rate is stated by the census authorities to include the value of rations served to the laborers.

Farm statistics in the Philippines show that the cultivated land is mostly held by native owners, in very small holdings. Nearly half of the occupied parcels (49.8 per cent) are less than one hectare (2.471 acres) in extent. The average area of farms in the Philippines is 8.57 acres, as compared with 146.6 acres in the United States. The large proportion of ownership, under such circumstances, does not imply any special degree of well-being on the part of the rural population, but rather a low stage of industrial development. The exact character of tenures in the Philippines, moreover, has not been investigated, and the extent to which occupancy and nominal ownership of peasant holdings may subject the tao to unspecified economic obligations to others is not known. Therefore the following comparison of tenures in the Philippines and the United States, while of passing interest, is not especially significant:

FARM TENURES IN THE PHILIPPINES AND IN THE UNITED STATES COMPARED.

	Owners.	Cash tenants.	Share tenants.	Labor tenants.	No rental.
Philippines.....	80.8	1.8	16.2	0.1	1.1
United States.....	64.7	13.1	22.2	.....	.....

The following table shows the number of agricultural holdings, classified by race of occupier, tenure, total area, and cultivated area:

NUMBER OF AGRICULTURAL HOLDINGS OF EACH CLASSIFIED SIZE AND CULTIVATED AREA, BY RACE OF OCCUPIER AND TENURE.

Race of occupier and tenure.	Total farms.	Agricultural holdings having a total area of—				Agricultural holdings having a cultivated area of—				Total area of farms (acres).	Total area cultivated (acres).
		Under 1 hectare (2.5 acres).	1 to 15 hectares (2.5 to 37.1 acres).	15 to 50 hectares (37.1 to 123.6 acres).	Over 50 hectares (123.6 acres).	Under 1 hectare (2.5 acres).	1 to 15 hectares (2.5 to 37.1 acres).	15 to 50 hectares (37.1 to 123.6 acres).	Over 50 hectares (123.6 acres).		
RACE.											
White	778	139	292	117	230	269	275	99	135	238,434	57,807
Mixed	308	50	164	39	55	139	110	28	31	40,608	14,431
Brown	813,332	405,430	385,975	16,724	5,253	531,399	274,222	6,109	1,652	6,682,535	3,123,257
Yellow	959	288	532	103	36	397	473	68	21	24,233	13,924
Unknown	26	18	4	2	2	23	3	.....	.....	1,446	27
TENURE.											
Owners.....	658,543	337,079	304,677	12,974	3,813	441,971	210,821	4,613	1,138	5,282,444	2,385,128
Cash tenants..	14,403	4,050	9,265	684	404	6,653	7,181	315	254	271,004	141,952
Share tenants..	132,444	60,623	63,214	2,644	963	77,769	53,169	1,159	347	1,208,018	605,699
Labor tenants	1,233	1,071	151	7	4	1,149	78	4	2	4,569	1,408
No rental.....	8,830	3,102	4,660	676	392	4,685	3,834	213	98	221,221	75,259
Total ...	815,453	405,925	386,967	16,985	5,576	532,227	275,033	6,304	1,839	6,937,256	3,209,446

The percentage of owners is 86.4 among mixed occupiers, 84.9 among those of the yellow race, 80.8 among the natives, and 78.1 among the whites. The average size of holdings, however, is nearly 124 hectares (306 acres) among the whites, 53 hectares (131 acres) among the mixed, 10 hectares (25 acres) among the yellow, and slightly over 3 hectares (7 acres) among the native occupiers. Mongolian farmers cultivate on an average 57.5 per cent of their holdings, the natives 46.7 per cent, the mixed races 35.5, and the whites 24.2 per cent. But the average amount of land cultivated by every white farmer is over 74 acres, while the mestizo farmer cultivates 47 acres, the Chinaman 14.5, and the native farmer less than 4 acres. Cash tenants cultivate the largest proportion of their holdings, or 52.4 per cent. Share tenants cultivate 50.1, owners 45.2, and labor tenants but 30.8 per cent of the land they occupy. These last figures indicate the disposition of the native to content himself with a mere living. If he is not a landowner he cultivates a somewhat larger proportion of his holding in order to pay the rent.

It is very difficult, however, to distinguish between cultivated and wild-crop land in many parts of the Philippines. Bananas and other fruits, sweet potatoes, and hemp grow without cultivation, and in some places propagate from cultivated tracts into untilled country. The area and approximate product of the chief cultivated crops is given by the census as follows:

AREA AND PRODUCT OF CHIEF CULTIVATED CROPS.

Crop.	Area cultivated (acres).	Product.
Rice	1,464,725	24,402,368 bushels.
Hemp	538,199	147,172,166 pounds.
Cocoanuts	α 366,313	91,434,707 pounds copra (b).
Indian corn	266,821	3,391,776 bushels.
Sugar cane	177,628	397,311,047 pounds sugar (c).
Tobacco	77,631	37,499,043 pounds.
Cotton	7,544	2,914,769 pounds.
Coffee	2,469	164,431 quarts.

α Not including isolated trees and uncultivated groves.

b Not including 12,033,765 quarts tuba, 1,660,162 quarts oil, and 2,323,148 nuts from the estimated annual product of cultivated trees.

c Unrefined sugar, not including 471,385 gallons of molasses.

These figures must be considered approximations, but they probably show very fairly the relative cultivated areas and product of the principal crops. Crop distribution in the Philippines is rather interesting; on account of the extreme concentration of certain forms of planting in particular districts. Nearly half of the land devoted to rice lies north of Manila, in the central and eastern part of Luzon, and considerably more than half the product comes from this district. About three-fourths of the hemp raised in the dependency comes from the four southern provinces of Luzon, and the islands of Leyte and Samar, and more than 75 per cent of the land cultivated for this crop lies in the same districts. Half of the copra produced in the islands comes from

the province of Tayabas, while the adjoining province of La Laguna, not far from Manila, produces over one-fifth of this commodity. Cebú produces one-third of the corn raised in the archipelago and East Negros, a province separated by a narrow strait from the former island, supplies nearly one-eighth of this crop. West Negros raises approximately half and the provinces immediately north of Manila one-fourth of the sugar produced in the islands. Luzon supplies over 14,000,000 kilograms (30,864,690 pounds) of the 17,000,000 kilograms (37,478,560 pounds) of tobacco raised, while the island of Cebú, also a corn-growing province, produces one-tenth of the insular crop of tobacco. Practically all the cotton reported is grown in the 3 north-western provinces of Luzon. The cultivation of coffee is carried on principally in the vicinity of Manila. Luzon, Negros, and Cebú are practically the only islands that figure prominently in agricultural statistics, except in the cultivation of hemp.

The total value of live stock and poultry in the Philippines is estimated by the census authorities as 72,223,989 pesos, of which 50,347,586 pesos is the value owned by farmers. The carabao or water buffalo is the principal draft animal. For every 100 of the population there are in the islands 9.2 carabao, 1.8 other neat cattle, 2.1 horses and mules, 0.4 sheep, 1.8 goats, 16.9 swine, 78.3 chickens, and 1.3 other fowls. According to the best statistics available, the number of carabao in the archipelago increased from 595,632 to 640,871 between 1891 and 1903; but the number of head of other neat cattle fell from 402,630 to 127,559. The accuracy of these figures is subject to some doubt, however, while the shortage of live stock since the recent epidemic of rinderpest requires no verification. The number of carabao on the island of Masbate decreased from 10,800 to 4,546 and the number of other neat cattle from 65,490 to 1,837 during the period just mentioned, a loss which was personally ascertained to have occurred within two or three years, and to have been due entirely to epidemics.

The census of 1903 affords interesting data as to the character and tenure of homes. There were 1,475,828 families reported in the dependency, for whom there were 1,253,015 dwellings. Of these 202,927 were unoccupied. Nineteen out of every 20 houses were of thatch construction, the relative numbers being 1,177,869 "nipa" and 60,020 permanent, besides 3,340 boats or vessels used as homes, and 11,786 not reported. Ownership and rental statistics are as follows:

OWNERSHIP AND RENTAL OF HOMES.

	Owned.	Rented.	Per cent owned.	Per cent of rent paid in—			
				Money.	Labor.	Share of crop.	Un-known.
House and land	717,507	52,327	93.20	39.0	52.5	2.4	15.1
House only	427,097	12,543	97.1	68.4	24.2	.2	12.2
Land only	1,067	230,619	.46	19.0	67.5	8.3	5.2

The predominance of labor rentals will be noted. All these figures probably require to be qualified by considerations involved in prevailing conditions of agricultural service. The peon tenant or squatter holder on large estates might be, by a legal fiction, a cash renter, when in fact he paid his rent by his labor or by his crop. It is a customary condition of tenancy in many parts of the islands that renters shall sell their crop, for an agreed or conventional price, to the landlord. Conditions of urban tenure are probably more fully reported than those in rural districts, and the percentages in the "Unknown" column would presumably increase the relative proportions of labor and crop rentals in the table if they could be assigned to their proper position. The distribution of monthly cash rentals is as follows:

PER CENT OF MONTHLY RENTALS, BY CLASSIFIED AMOUNTS PAID.

[From the Philippine census. For statement regarding currency see page 739.]

	Under 1 peso.	1-2 pesos.	2-5 pesos.	5-10 pesos.	10-25 pesos.	25-50 pesos.	50-100 pesos.	100 pesos or over.
House and land.....	3.3	5.7	16.1	16.4	24.5	16.2	9.5	8.3
House only.....	3.2	7.1	22.5	18.7	24.8	12.5	6.4	4.8
Land only.....	67.5	16.4	11.8	2.5	1.2	.3	.2	.1

Bearing in mind that cash rentals for house and land or for house only are chiefly paid in Manila and a few of the larger provincial towns, 57 per cent of urban renters pay between 5 and 50 pesos monthly for their homes, and the average rent probably lies somewhere between 10 and 25 pesos. In proportion to incomes, city rents appear to be higher than in America.

AGRICULTURAL AND UNSKILLED LABOR.

The chief industries of the Philippines are agricultural, and the most important of these the planting of hemp, sugar, tobacco, and cocoanuts, if we consider the present export capabilities of the islands, and the cultivation of rice and, to a less extent, of Indian corn and sweet potatoes, if we regard more especially the relation of agriculture to food production for local consumption. The former four are also the principal employing industries, as garden and grain crops are usually raised by small planters or upon some system of tenant or share planting, and their cultivation does not necessitate money exchanges or the employment of wage-earners. Of the four industries thus emphasized as export and employing enterprises, the cultivation of sugar presents the most conditions analogous to those occurring in other countries where the problem of labor for tropical agriculture is important; it is the one that affords the most satisfactory data for a comparison of wages, labor efficiency, and standards of living with those prevailing elsewhere or at former periods in the same islands, and it is the industry where there has occurred the most

movement of labor from one place of employment to another, and therefore the most change from the semicomunal social and industrial environment usual among the Malay races.

Sugar was for many years the most important article of export from the Philippines, and the United States was the principal buyer of this product. For the 5 years ending with 1887 the average annual exports were 175,775,792 kilos (193,759 tons), of which the United States took 115,252,460 kilos (127,044 tons), or over 65 per cent. During the subsequent 5 years the average yearly exports increased to 185,062,816 kilos (203,997 tons), but the American purchases fell to 67,303,243 kilos (74,189 tons) per annum, though they still exceeded by nearly 9,000,000 kilos (nearly 10,000 tons) those of any other single country and were fifteen times as great as those of Spain.

All the sugar made in the Philippines is manufactured with antiquated machinery and by the open-kettle process. In one or two mills there are centrifugal driers, but no vacuum pans. An English company at one time projected establishing a large central mill for manufacturing high-grade sugar by modern processes near Manila. It was even proposed to extract the juice on the plantations and convey it to the central factory by pipe lines, but the whole scheme fell through without being realized. The principal improvements in manufacture during the decade preceding the American occupation—and the industry has been at a standstill since that time—was in the gradual substitution of iron-roller mills driven by steam or water power for the ox mills, often with stone or wooden rollers, that were formerly in use and are still employed to some extent in the remoter portions of the islands.

The two principal sugar centers of the Philippines are in West Negros and in the country tributary to Manila, around portions of Laguna de Bay and northward into Pampanga province. There is more or less isolated cultivation elsewhere, and several relatively important plantations in Cebú and Panay, as well as in East Negros, are to be included in the Visayan district.

These two regions are distinguished from each other not only by geographical location, but also by different methods of plantation organization and administration. Partly, perhaps, by reason of local tribal traditions, because of the greater extension of the friar lands, or because of the exigencies of the labor situation, the Luzon plantations have usually obtained their cane through leasing their lands to share tenants, while the Visayan plantations have depended to a large and constantly increasing extent upon hired labor or piecework contractors. In Pampanga, which in 1890 exported \$2,000,000 worth of sugar, wages, when hired labor was employed, were 25 cents silver currency a day, or at the rate of exchange then prevailing about 19 cents American currency. Sugar boilers were paid 75 cents silver

currency a day, this probably being the highest plantation wage. At the present time wages in the Luzon sugar provinces are 40 to 50 cents silver (⁶) currency (17 to 21 cents American currency) a day, not really higher than in 1890-1894, prior to the American occupation, though nominally nearly twice the former amount. In case of tenant planting the proprietor furnishes land, implements, seed, and all capital, including advances of food, and receives in return from one-half to two-thirds of the crop. The tenants usually eat up their share of the proceeds of their labor in the form of advances by the time the cane is harvested and, as will be mentioned later under peonage, remain permanently in debt to their employers. This system, then, is essentially the same as the "colonia" system of cane cultivation in Cuba. The product is very small in proportion to the land cultivated, some estimates placing it as low as 8 piculs (about one-half a ton) of sugar per hectare (2.471 acres), or only about one-twentieth the average production in Hawaii. Other estimates make the average 30 piculs (1 $\frac{1}{2}$ tons), which is probably nearer the true amount. This small return is due, of course, to defective extraction and wasteful methods of manufacture, as well as to poor cultivation, but the effect in low compensation for labor falls with full force on the peon tenant or share planter.

A similar system of share planting in sugar seems to have been common formerly in West Negros, but has largely if not entirely died out for economic reasons. The proprietor furnished the stocked land, including seed, cattle, and implements, and in early days received one-third of the crop as rent; but the owner's share had fallen to one-fourth or even one-fifth in 1893, on account of the low returns from the land. The tenant had no interest in keeping up the fertility of his temporary holding, the owner was seldom in a position to provide fertilizers or found it practicable to do so, and as a result the soil was rapidly exhausted. The friars seem to have been most tenacious in opposing the introduction of a wage system, and kept their hands on a share-planting or rent-paying basis as long as possible. But the cases where a fixed rent, either in money or kind, was paid have always been rare. On new lands the landlord's share in the crop was usually larger than that just mentioned. Where the renter owned the animals used, he planted and harvested, but the owner carried cane to mill; if the owner supplied the animals, the renter was obliged to carry to the mill. In both cases the crop was shared alike, but from 15 to 17 per cent interest was charged on all cash advances made to tenants.

⁶Silver pesos or dollars of Mexican, Philippine, and eighteenth century Spanish coinage were in circulation in 1903 and were accepted at equal values. They were worth about 42 cents in American currency in commercial exchange that year, and in the present article this equivalent has been used throughout the following text discussion of wages and prices for 1903. The value fixed by the Philippine Commission was not observed in business transactions.

Contract planting, though probably decreasing relatively to the employment of wage labor, has been more persistent in Negroes. The axa, or contractor, agrees to plant and bring to maturity a certain number of plants or stools of cane. The conventional unit is a laxsa, or 10,000 plants, slightly more than an acre of ground, for which, when he furnished his own cattle, he received about \$14 silver in 1894, the equivalent of \$10.50 American currency. For cultivating rattoons, \$6 silver currency (\$4.50 American currency) was paid. Wage men were lodged in cuartels, or barracks, and received a rice or maize ration of 5 chupas (3½ pints), worth about 6 cents silver currency, and 3 or 4 cents' worth of fish. The cash wages, in addition to rations, were from \$.75 to \$1.50 silver currency (approximately \$0.56 to \$1.12½ American currency) a week, and were paid monthly in money. Advances were made to contractors up to 60 per cent of their contract, and to wage men up to \$15 and \$20 silver currency, of which probably 20 per cent was lost by illness and desertion. No planting contracts similar to those just mentioned came under the observation of the writer when Negroes was visited in the fall of 1903, and probably they are comparatively rare at the present time. The movement toward the wages system in sugar planting, quite obvious toward the last years of Spanish rule, was probably greatly accelerated by the war and insurrection and the consequent shifting of population and unsettling of the established habits of resident labor. Moreover, many of the evils of war, the loss of cattle especially—and this was accentuated by the subsequent ravages of the rinderpest—have deprived the small farmer and contractor of his capital, a loss which his limited credit has not enabled him to replace, while the landowner and large planter has been in a position to restock his plantation with borrowed capital.

Cutting and carrying cane, carrying sugar to the wharf, and sometimes grinding are done by contract. Grinding agreements of this character are now less common, because the mills are larger and the number of hands engaged and the division of labor among them is much greater than formerly. In 1850 Negroes had 7 wooden sugar mills and produced 3,000 piculs (about 188 tons) of sugar; by 1893 the island possessed 274 steam, 47 water, and 500 iron sugar mills driven by oxen, with an annual product of 1,800,000 piculs (112,500 tons) of sugar. According to the census statistics of 1903 there were 291 steam, 45 water-power, and 195 hand or animal mills in West Negroes, with a total output of 87,000 tons. The largest mills now have a capacity of 40,000 piculs (2,500 tons) per annum, and naturally are administered upon a wage-labor basis.

As illustrating how one of the smaller mills, grinding under contract, was formerly operated the following statement for the period just prior to the American occupation is given:

In a wooden mill the cutter received \$1.12½ silver currency a week for cutting 1,690 kilograms (3,726 pounds) of cane, or enough to make 12 93-liter kettles of juice (about 295 gallons). A carter was paid 75 cents a week for carrying this cane to the mill. The feeder received the same sum as the carter for feeding the same quantity of cane through the mill the four times necessary to extract the juice. The sugar boiler received \$1.25 silver currency for boiling the 12 kettles of juice, and his assistant and one skimmer received 75 cents each for the same work. The product was estimated to average 223 kilograms (492 pounds) of sugar.

In case of iron mills, where a single grinding was sufficient, double the amount of cane was handled with a double staff of men, except in case of the sugar boiler, who received \$1.50 silver currency a week, and the feeder, who received \$1.25 silver currency a week for handling this double amount of cane and juice.

Imported labor is employed both in Cebú, where the source of supply is the neighboring island of Bohol—although Cebú itself is overpopulated—and in West Negros, whose planters obtain their men largely from the province of Antique, in the island of Panay. It has been a standing complaint for many years that the methods of recruiting employed entail many losses upon the planters, and are in other ways costly and undesirable. Employers find it difficult to obtain reliable agents to recruit labor in other islands, especially as it is the custom for the men hired to be advanced a considerable portion of their coming wages before leaving their homes. The sums intrusted to recruiters for paying these advances and the expense of transportation are often misappropriated or unwisely used. Even when laborers are finally secured they frequently desert and find work on a neighboring plantation, where they receive full wages with no deductions for these previous advances from their new employer. Planters appear to be unable to cooperate to prevent this abuse. The Spanish authorities tried by stringent regulations to remedy the difficulty, but with imperfect administrative machinery and without the loyal assistance of the planters themselves little was accomplished. In 1890 General Weyler, then governor-general, issued a circular which was evidently intended to be preliminary to a more thorough regulation of the relationship of planters to their tenants and contract laborers. The main provisions of this circular were:

(a) Planters and landowners were required to give their tenants and workmen a document in the form of a contract. In case of tenants this paper contained a description of the land to be worked and the terms of tenancy; in case of workmen it stated the rate of wages, whether to be paid in money or goods, and stipulated that accounts should be settled in full at least once a year. These contracts must

contain the name and cedula number of the tenant or laborer in question, and a description sufficient for his identification, and must be signed by two witnesses before the district governor (*gobernadorcillo*) or the local judge.

(b) The court must keep a record of all such contracts.

(c) Each year the planter must give his tenants and workmen, at the termination of their contracts, quittance papers showing that these contracts have been completed.

(d) The expired contracts must then be filed with the provincial governor.

(e) Planters were forbidden to employ or accept as tenants any person not having a quittance paper, as described above, or a certificate from the district governor showing that the proposed tenant or workman was free from any similar contractual obligation to another party.

(f) A planter making advances to tenants or workmen was allowed to retain their cedula receipt for security, giving the tenant or workman a receipt for the same.

The identical provisions in regard to tenants and laborers indicate that these two classes of agricultural workers were not yet differentiated in the Philippines, that the system of employment was in a transition stage from a feudal or servile relation of the laborer to his employer to a freer contractual relation upon a wages basis, but at the same time that the laws and administrative machinery were not strong enough of themselves to enforce effectively either class of rights on the part of the master against his servants. The law was primarily for the benefit of the employer. It was to afford him the same sort of protection (*mutatis mutandis*) that the fugitive-slave law afforded the southern planter by preventing his laborers from selling their labor elsewhere. But his rights over these laborers were acquired under a different form from rights over slaves. They were purchased, as a rule, by advance money prepaid the workmen themselves, or represented the equivalent of a debt—perhaps of generations standing—due the master from his peon. The provision that there should be a yearly settlement of accounts was presumably for the interest of the workman, as every indefiniteness or confusion in these accounts naturally served the interest of the employer.

When the writer was in West Negros, at the beginning of the grinding season of 1903, it was estimated that there were 4,000 imported laborers in the province, and numbers were seen arriving on chartered steamers subsequently. This importation was in no wise due to a lack of resident labor, for the roadside huts almost always contained one or two able-bodied men without employment, but because the spur of necessity or some unreasoning habit of migration causes the Antique natives to seek work abroad, while those of Negros refuse it at their doors. The cost of importing these laborers was \$2 silver currency

(\$0.84 American currency) a head, and the advances paid them amounted to \$10 silver currency, (\$4.20 American currency) upon an average, an individual. The wages paid for field labor varied from \$1 to \$1.50 silver currency (\$0.42 to \$0.63 American currency) a week, in addition to rations and lodging. The hours of labor were from about 4 a. m. to 6 p. m., with 2 hours' rest at noon. On some plantations the men were assembled Sunday for an hour's nominal work, but this was merely an administrative measure to prevent laborers from wandering off to distant places and forgetting to return.

There is very little differentiation in occupations and wages on a Philippine sugar plantation. Hand labor or primitive machinery is used in the fields, carabao (water buffalo) are the only draft animals employed, and the overseers are frequently sons or relatives of the planter, who receive homes and only nominal salaries for their services. Even on one of the largest plantations, with the finest open-kettle plant seen in operation, the pay roll appeared to be practically uniform, wages ranging between the figures stated for all hands except two or three white employees, and men being shifted at convenience from cultivation to cutting, carting, or mill work. On one plantation the two nephews of the proprietor had control of field operations and kept the books, receiving \$30 and \$40 silver currency (about \$12.60 and \$16.80 American currency) a month, respectively, besides a home in the family. On another plantation four or five residences, all possessing equally the comforts and elegancies of plantation homes, occupied the same grounds and were tenanted by the proprietor and his sons and son-in-law with their families, all the men sharing the burdens of supervision and administration.

When mills are not under the direct oversight of the planter or a member of his family, a white or mestizo sugar boiler is employed, who may receive as high as \$100 silver currency (\$42 American currency) a month, and remains on the plantation in some capacity during the entire year. There is no chemical control of the mills, and such a thing as a sugar laboratory was not seen in the islands. Several plantations have light tram lines, but none uses steam traction. Neither are steam plows employed. Much of the imported agricultural machinery is said to be English, the heavier models of that country being better adapted to pioneer work, especially with native drivers and carabaos, than the lighter American makes.

A few traction engines were seen, employed to furnish the power for grinding—a first step forward from the former ox mill. Many a sugar factory in the Philippines, some of them on paying plantations, would recall the conditions of fifty years ago to a Hawaiian or a Cuban planter. A palm-thatched shed without floor or walls shelters a small two or three roller mill, driven by a small engine or water wheel, the whole in a state of dilapidation that suggests some abandoned pumping

or derrick outfit left by a contractor by a worked-out quarry or deserted excavation. A few wooden casks are arranged to receive the juice, and a row of shallow iron kettles with wooden rims, set in an adobe furnace, represents the boiling apparatus. The *masse-cuite* is allowed to dry out on shallow wooden troughs or in draining barrels. Such a mill, erected in 1902, cost the proprietor, complete, about \$4,000 silver currency (\$1,680 American currency); and though the plantation was all on new ground, and this was the first crop, and development was done with borrowed capital, a clear profit was earned on the first crop ground.

An explanation for this somewhat idyllic state of things is to be found in the low labor cost of production and the fact that this open-pan sugar has a direct consuming market in China, where it is not cornered by brokers and pays no refiner's profit. The actual cash wage of a field laborer is the same or less for a week in the Philippines than for a day in the Hawaiian Islands. Though rations are provided in the former country and not in the latter, the Hawaiian planter has a far greater expense for importing labor, medical attendance, and for quarters and other living conveniences than has his Filipino rival, and he must pay interest on a much higher investment for each ton of sugar produced. The writer saw a nipa barrack capable of accommodating 50 Filipino plantation laborers that cost the planter between \$25 and \$30 American currency. The cost of producing a picul (one-sixteenth of a short ton) of muscovado sugar was given by the proprietors of two plantations in different locations and of different capacity at \$3 silver currency (\$1.26 American currency) a picul, and the cost of marketing at Iloilo at 50 cents silver currency (21 cents American currency) in each case. This would make the cost in American currency of sugar placed in the shipping market about \$23.50 a-ton as against an average cost—for a somewhat higher grade sugar—of over \$45 a ton in Hawaii and \$28 a ton in Java. The average selling price of sugar in the Iloilo market in the autumn of 1903 was about \$32 American currency a ton.

The following comparative figures, in American currency, allow some inference to be made as to the relative cost of labor and the profits in sugar production in the Visayan district prior and subsequent to the American occupation:

WAGES OF FIELD HANDS AND PROFITS IN SUGAR PRODUCTION IN VISAYAN DISTRICT,
1893 AND 1903.

	1893.	1903.
Weekly wages of field hands	\$0.56 to \$1.125	\$0.42 to \$0.63
Weekly rations of field hands .....	.50	.70
Iloilo price of sugar per ton	48.00	32.00
Planter's cost of sugar per ton	24.00	24.00
Planter's profit per ton	24.00	8.00

The data for 1893 are taken from the *Boletín Agrícola*, an official publication of the Philippine government, for that and the following year. The value of the Spanish peso was fluctuating between 70 and 80 cents American currency during 1893-94, and reductions have been made on a basis of 75 cents American currency, while in 1903 the value of the Spanish peso averaged about 42 cents American currency. Therefore, while nominal wages have not changed materially when reckoned in the currency of the country real wages have decreased, but on account of a real increase in the cost of provisions the labor cost of production has remained about stationary. The fall in the price of sugar, of course, has greatly lessened the planter's profit.

The imperfect methods of manufacture employed in the Philippines are the occasion of great waste, and the product of cane per acre might be indefinitely increased by scientific fertilizing, stripping, irrigation, cane selection, and possibly by deeper plowing and more thorough cultivation. On a single plantation visited the writer estimated that sugar to the value of \$45,000 American currency was being burned up in the bagasse through imperfect extraction alone, and the governor of the province estimated that the loss from this source averaged 45 per cent of the sugar content of the cane. Foreman gives the average juice extraction as 56.37 per cent of the full weight of the cane and the weight of the dry bagasse as 26.84 per cent. This would mean that slightly more than 70 per cent of the total juice was extracted, as against 96½ per cent on Ewa plantation in Hawaii; but it is very doubtful if there is more than 55 to 60 per cent extracted in a majority of the Philippine mills.

While hemp is the most important crop raised in the Philippines, considered from the standpoint of money value and profits, its cultivation does not involve, like sugar, complicated problems of labor administration. The *musa textilis*, or abacá, or Manila hemp, is closely related to the banana; it belongs to that class of plants that have a close cousinship with the jungle, thrives on untamed land, and comes up as easily as a second growth in a new clearing. Moreover it loves broken country, and after it once gets a start, provided there is fairly fertile soil and a well-distributed rainfall, it easily holds its own against most competing plants. Locusts can not eat it, blight does not attack it, and so a going plantation largely takes care of itself. Finally it is not servilely subject to seasons, does not require to be harvested at a certain time, and in general its cultivation stands about midway between forestry occupations and an ordinary agricultural industry.

Though hemp thrives in nearly all parts of the Philippines there are certain centers where its cultivation is most profitable, and the quality of the product is normally better than elsewhere. The first of these is in the three southern provinces of Luzon and the second is in the islands of Leyte and Samar, in the west Visayas, which, with the plantations of northern Mindanao, are tributary to the city of Cebú.

The cost of clearing a hectare (2.471 acres) of land for hemp in Albay was estimated at \$20 silver currency (\$15 American currency) in 1894. The cost at the present time would probably be higher, though wages have fluctuated so erratically in this hemp district during the past year that it would be very difficult to estimate what the exact difference would be. Wages in 1894 were 25 cents silver currency a day, equivalent to about 45 cents in the same currency in 1903. During the latter year and 1904, however, in the few instances where men were employed for wages in the south Luzon hemp provinces the rate of pay was about \$1 silver currency, or 42 to 45 cents American currency a day, evidently double the amount paid ten years previously. The hemp plants are placed about 5 to 6 feet apart, and in opening new plantations enough trees are left standing to shade the ground. Setting out 100 plants is considered a day's work, and this operation is usually performed by contract. The laborer generally resides upon the ground he tills, where he has free house room and the natural products of the land, and sometimes raises sweet potatoes between the rows of young hemp. If well cultivated this plant can be ratooned—allowed to grow up from the old stools without replanting—indefinitely. Good soil is not rapidly exhausted, and as the fiber is usually prepared in the field and most of the vegetable matter returned directly to the ground the same land can be recropped for a number of years. The soil physicist of the insular bureau of agriculture, speaking of conditions in part of Sorsogon province, Luzon, says: "Fields of abacá were seen in this vicinity that are known to have been in cultivation for more than 70 years, and while the yield per hectare (2.471 acres) has undoubtedly greatly decreased, the quality of fiber has correspondingly increased and this region produces white abacá of a fine quality."

The following estimate of the cost of bringing a hectare (2.471 acres) of hemp into production, made by the Spanish authorities in Albay in 1894, throws some light indirectly upon the respective profits of capital and labor in this industry:

COST OF BRINGING ONE HECTARE (2.471 ACRES) OF HEMP INTO PRODUCTION, 1894.

[Figures in this table are in Spanish currency, which was at about 25 per cent discount from American currency in 1894.]

	Initial expense.	First year.	Second year.	Third year.	Fourth year.
Cost of land	\$10.00				
Plants, at 25 cents per 100	7.50	\$1.25			
Amortization capital					\$1.10
Interest at 6 per cent.		2.04	\$3.55	\$4.88	4.70
Labor:					
Cultivating, at 25 cents a day	7.50	7.50	7.50		
Planting, at 25 cents per 100 plants	7.50	1.25			
Caretaking for the year		6.50	6.05	6.05	5.00
Laborer's share crop, at \$7 a picul ($\frac{1}{16}$ ton)				5.18	21.42
Total	32.50	18.54	17.10	15.61	32.22
Owner's share crop				10.50	42.84
Net profit over interest and repayment of capital					10.62

In this estimate the value of the natural fruits taken by the laborer from the land is reckoned under "caretaking," as is also the cedula tax, usually paid by the landlord. In practice the owner makes a profit out of his tenant's hemp, which is sold to him at a reduced rate under the contract, and frequently out of the goods which he sells the tenant. Considering these gains, however, as legitimate profits of exchange and the 6 per cent interest and amortization as the compensation of capital, it is evident that something over 32 per cent of the cost of operation, or 14 per cent of the capital invested, is taken by the planter as profit of exploitation or wages for administration, whichever term is more agreeable to the reader. The figures given are in Spanish currency, which was at about 25 per cent discount from American currency in 1894. To bring the table up to date allowance should be made for an increase of about 120 per cent in wages and of 60 per cent in the price of hemp, reckoned upon a gold basis. The laborer now receives one-half instead of one-third of the crop, as formerly. As a result the position of the worker, as compared with that of the planter, has evidently improved in this province and industry during the decade.

In many parts of the Philippines hemp grows wild and propagates itself over considerable areas so as to form really a jungle product. While the fiber of this wild hemp is inferior to that of the cultivated plants, it is still a marketable product, especially at a time when even the cultivated varieties have greatly deteriorated as a result of lack of labor and imperfect cultivation. This condition affects labor profits or wages in some districts, for the laborer will make terms with his employer nearly as favorable as if he were gathering hemp upon wild lands. The advantage of the planter employing share workers sometimes lies chiefly in the fact that the planted hemp is of a slightly better quality and more accessible to market or the home of the laborer than jungle hemp, or that the employer has some hold upon the service of the laborer through old debts or advance payments of money or provisions. These conditions favor the retention of the system of share cutting and cleaning as compared with day's wages, for, nominally, compensation is higher under this system than it would be if money payment was made for services, though it is probable that in most instances the laborer really receives less than he would if he were working for a fixed wage, for the planter is said to make so large an exchange profit out of buying the worker's share of hemp, selling or advancing him supplies, and keeping his accounts for him, that the latter seldom has an opportunity, even were he so disposed, to accumulate a surplus out of his earnings or better his standard of living. The system of share working also suits better the natural disposition of the Filipino, inasmuch as it allows him to control his own hours of labor. An efficient worker can clean about 25 pounds of fiber in an

8-hour day, but the average product of the men employed rarely exceeds 75 or 100 pounds a week. The men usually work in pairs, and the amounts mentioned make allowance for the time taken in cutting and stripping the fibrous surface layers from the plants as well as the time actually taken in cleaning the fiber. During some actual cleaning experiments made at Gubat, Sorsogon, in 1903, it was shown that during the first hour $3\frac{1}{2}$ pounds of high-grade fiber, valued at about 35 cents American currency, could be produced with a smooth-blade cleaner, and about 7 pounds of lower grade fiber could be cleaned with a serrated-blade cleaner. The value of the latter was about 47 cents American currency. It would appear, therefore, that a workman employed at cleaning alone and receiving one-half the fiber extracted could earn about 20 cents American currency an hour at the hemp prices then prevailing. The governor of Sorsogon province stated in official testimony in 1902 that good workers could earn \$4 and \$5 silver currency a day on the hemp plantations, and in 1903 hemp merchants and exporters generally stated that a share cleaner, at the prices then prevailing, could easily earn \$2.50 and \$3 silver currency (\$1.05 and \$1.26 American currency) a day. There has been some movement of labor in the south Luzon hemp provinces during the past year, especially between Albay and Sorsogon, as local labor stringency raised wages or made conditions of contract more favorable in one place than in another. The prevailing high price of hemp has made this field of agriculture exceedingly profitable, and therefore has encouraged extension of hemp cultivation and drawn heavily upon the resident labor supply. In no other agricultural industry is there so much complaint of lack of labor.

Hemp drying and bleaching or warehouse handling, sorting, and pressing employ a large number of men in the principal hemp shipping ports. Pressers at present are paid 40 cents silver currency (about 17 cents American currency) a bale for pressing in Cebú. This is practically the same price that the men received in 1888, when the price paid was 18 cents silver currency and the local dollar was at a slight discount. But in case of one firm whose books were seen, where in the former year 14 Chinese workmen pressed from 440 to 520 bales, at present 27 Filipino workmen, with the same facilities, press from 220 to 240 bales a day. The manager of a large hemp exporting firm in Manila reported that he was paying \$1 and \$1.25 silver currency (\$.42 and \$.53 American currency) a day to hemp balers, besides furnishing covers, and that men in his employ had earned at piecework rates as high as \$4 silver currency (\$1.68 American currency) a day at this occupation. One firm was paying Chinese hemp pressers \$50 silver currency (\$21 American currency) a month and lodging. The manager said that it was impossible to secure Filipinos who would work steadily on a salary.

A large amount of hemp is consumed locally in weaving native cloths, but its industrial importance for the dependency is caused almost entirely by foreign sales. The exports of hemp have risen from about 30,535 tons in 1870 to an average of 63,332 tons during the six years ending with 1890, and 119,349 tons during the last four years of the American occupation. The exportation during the fiscal year ending with June 30, 1904, was 129,742 tons, valued at \$21,794,960 American currency. The lowest price reached by hemp since 1870 was \$4.75 silver currency a picul ($\frac{1}{8}$ ton) in 1879, and the highest price \$17.12 $\frac{1}{2}$ a picul ($\frac{1}{8}$ ton) in 1889. The best grades were worth about \$24.50 silver currency a picul at the close of 1903, and the average valuation, according to customs statistics, was \$164.13 American currency a ton.

Persistent complaint is made that the quality of Manila hemp received by the exporters is deteriorating, and that this fact is likely to prejudice the reputation and lessen the demand for this fiber in the world's markets. There have been special government investigations of the conditions accounting for this deterioration, and a system of inspection similar to that adopted with such beneficent results in New Zealand has been recommended. The native seldom strives after excellence in his produce. He prefers a low price for an inferior and easily obtained product to a high price for a fiber prepared with care and skill. Therefore he cuts his plants at random in half-cultivated fields or in the jungle, cleans the fiber with a coarse-toothed knife, dries it carelessly in the sun, and does not protect it from subsequent wettings, so that the interior of the hanks often rots. He therefore brings to the market a product clotted with gum and vegetable matter, and dark brown or spotted brown and yellow in color, instead of the soft, glossy white or flaxen gold fiber, clean, uniform, and strong, of the finer quality. It is said that the Spanish authorities used at times to confiscate this poorest hemp and burn it as a warning that it should not be offered for sale; but no such drastic measures are likely to find favor with the present government. The Chinese merchants are held by some to be responsible for the increase of low-grade hems, as they will buy in stuff that would not be touched by European merchants. The following figures show the percentage of different grade hems in representative shipments by a single firm in 1881 and 1903, respectively:

PER CENT OF HEMP OF EACH GRADE SHIPPED BY A SINGLE FIRM IN 1881 AND 1903.

Grade.	1881.	1903.
First	0.4	.....
Second	61.8	3.8
Third	31.0	85.8
Fourth	6.8	48.4
Fifth .....	.....	17.0

The relation of labor supply to this hemp deterioration is thus presented by the fiber expert of the insular bureau of agriculture: "With the present shortage of labor not only are large areas of hemp land allowed to go entirely to waste, but also much of the land that is cultivated is not properly cared for, resulting in the growth of imperfectly developed plants and the production of an inferior quality of fiber. With a shortage of labor unsatisfactory results are noticeable in all stages of the industry; the land is improperly cultivated; cleaning knives are used which will increase the output at a cost of quality; and the fiber when produced is often hastily and imperfectly dried. These evils can only be remedied by the introduction of machinery which will supplant hand labor, by some method of inducing the native laborer to work more than two or three days a week, or by the introduction of foreign labor."

Although tobacco is grown for local consumption in many parts of the Philippines, the districts where this plant has been raised for export are confined almost exclusively to northern Luzon, and the chief of these is in the Cagayán Valley, in the extreme northern portion of that island. In 1782 the Spanish Government established a tobacco monopoly, introducing a system of forced culture very similar to that adopted by the Dutch 50 years later in Java. In certain villages and provinces, which experience had shown were especially favorable for its cultivation, the natives were required to plant a certain area of tobacco each year. Indeed they were sometimes forbidden to plant sweet potatoes or other food plants in the vicinity, in order that they might be entirely dependent upon the proceeds of their tobacco for their support and devote their energies exclusively to this crop. The cultivation of tobacco was forbidden in other parts of the islands. The methods of cultivation and curing were under government regulation, and every operation was inspected and the product was graded by public officials. The crop was purchased by the government at a fixed price, and manufactured and sold in public factories and through public agents. This system, while furthering tobacco culture greatly in the districts selected, and providing a revenue for the government that freed it forever from its former dependence upon subsidies from the Mexican exchequer, was exceedingly oppressive for the natives and gave occasion for fraud and illegal gains by officials. Tobacco was purchased under one grade from the natives and turned over to the government receivers under a higher grading, the official purchaser pocketing the difference in price, or dividing it with his willingly deceived superiors. The quantities respectively purchased from the natives and delivered to the factories were falsified, and a large amount of government tobacco found its way into the hands of private parties. At least all these charges are made by Spanish writers familiar with the system and its administration. It is certain that the tempta-

tion to abuses was very great, and in 1882, a century after the monopoly was established, it was finally abolished by the Spanish Government. The deficiency in revenue thus resulting was met by the *cedula* personal, or poll tax, a burden resting more evenly upon all the inhabitants of the organized districts and continued by the American authorities.

The soil and climate of northern Luzon appear to be especially well adapted to tobacco culture, and only the neglect of selective plant improvement and the inefficiency of the labor employed is said to have prevented the best grade grown in that country from equaling the finest Cuban leaf. In the latter island tobacco cultivation and harvesting is largely in the hands of white farmers and laborers, who devote to their crop the extreme care and attention demanded when a high-grade product is to be obtained. In the Philippines, even under the stringent regulation and supervision of the monopoly, it was impossible to counteract the effect of the indolence and carelessness of the natives, who seldom strive for superior excellence in any form of cultivation and have no conception of the importance of detail and attention to little things in every kind of production. It is probable also that a reaction from the unpopular supervision of the monopoly made many villages associate a violation of every precept of scientific cultivation with their newly acquired liberty. However this may be, it is commonly reported by those interested in the industry that scientific tobacco culture is retrograding rather than progressing in the Philippines. But this opinion is contradicted by the fact that the amount of tobacco produced increased rapidly after the monopoly was abolished, probably through the extension of cultivation to districts where it had heretofore been forbidden, and by the entry of large corporations into the industry. The average annual export of leaf tobacco more than doubled between the first and second 5-year period after the abolition of the government monopoly, while the exports of manufactured tobacco increased nearly 75 per cent. During the 6 years ending with 1890 the Philippines exported upon an average 16,461,589 pounds of leaf tobacco, valued at \$1,090,157, and 2,644,486 pounds of cigars and cigarettes, valued at \$1,071,194. These values are in American currency. During the last 4 years of the American occupation the annual exports have averaged 19,662,043 pounds of unmanufactured tobacco, valued at \$915,716, and manufactured tobacco of an average annual value of \$1,221,911.

The indifference of the native to careful cultivation was thus described by a Spanish author, writing prior to the American occupation: ^(a) "In general the native allows all kinds of weeds to grow in his fields, tranquilly regarding them as they mature into a jungle of noxious plants in full seed. When the sowing time comes, and he can delay no longer, he spends an hour or two a day in cutting down this

^a Translated from Boletín Agrícola.

rank growth, allowing the seeds to cover the ground. Then he devotes about an equal amount of energy to plowing, and finishes by planting—usually having to buy his sets, because his own seed beds are a mass of weeds. Thereafter his wife and children take a hand at a perfunctory cleaning of the field occasionally, paying little attention to the worms that devour the leaves, as they have a superstition that 20 worms are created for every one they kill. After the tobacco has passed its prime maturity it is finally cut and usually hung under the native's hut, where it receives the full benefit of all the flavors and odors in such a desirable location for curing."

In the province of Isabela, in northern Luzon, both resident and imported, and tenant and day laborers are employed. The tenants are given a house, lot, and garden free of rent. Maize and tobacco are often cultivated in equal areas, or in alternation, and the farmer receives the maize and one-third or one-half the tobacco crop for cultivating. The planter usually buys the tenant's share of the tobacco—at about the "aforo" price—part or all the proceeds of which are often absorbed in repaying advances. The latter are made in money, supplies, animals, and agricultural implements. Day men are housed in temporary nipa sheds or barracks, and receive a ration of rice or maize and a wage that varies according to the scarcity of labor and the exigency of the demand. Some residents of this province reported in 1903, "absolutely no day labor to be had." At the present time Isabela contains 5 principal plantations, 3 of which are owned by a single corporation. This company has many resident tenant laborers, whom it allows the produce of one-half to two-thirds the holding in food crops, like rice and maize, and one-half the tobacco raised. This tobacco, however, is purchased by the company at the old "aforo" or Spanish Government price, which varies from 5 to 9 cents a pound for the broken "Romana" grade to 20 cents a pound for the escojido or selected leaf. Of course the nominal aforo price is a lower real price than it was before silver was at its present discount. These laborers receive advances—often their cedula tax is paid by the company—and they are given credit against their share of the crop at the company's stores; so their cash receipts at the end of the year are very small and sometimes nil. Shortly after the war a higher price than the aforo was paid for the tenant's tobacco, but the old traditional price is said to have been reestablished. A German planter, who has spent \$5,000 within 5 years trying to import Ilocano labor into the province with but indifferent success, charges his tenants no rent, but simply requires them to sell their entire crop to him at aforo price. The Filipino planters have a variety of contracts with their tenants. The large amount of unoccupied land upon which the peasant may squat and eke out an existence without much labor, and the inherent indolence of the Cagayán natives, which renders necessary the importation of workmen

from the neighboring provinces and tribes, are said to account for the labor scarcity in this occupation.

The method of cultivation presents no local peculiarities. Seed beds are made and sown in November, and when the plant is about 18 centimeters (about 7 inches) high it is transplanted, usually at sundown, and kept shaded, generally with a banana leaf, and watered daily for the first 8 days. It is cut in February or March. A man and his family can cultivate about a hectare (2.471 acres), or 10,000 plants—allowing one plant to every square meter (1.196 square yards). The tobacco is often of poor quality on account of improper curing. The German planter mentioned has experimented with raising tobacco under cover, securing a small but fine and exceedingly delicate leaf.

In Spanish times wages were, for sowers, transplanters, cutters, and packers, 20 cents silver currency (15 cents American currency) a day. Selectors received double this wage. When day labor can be secured in the tobacco provinces at the present time, the wage is about 40 cents silver currency (17 cents American currency).

Tobacco raising is an industry that would appear to afford a field for the employment of Japanese labor in the Philippines. In the same latitude and under climatic conditions not widely varying from those of northern Luzon, the Cuban plantations are largely worked by white Cubans, Canary Islanders, and South Europeans. The tobacco districts, especially those of the Cagayán Valley, are so thinly populated that nonresident labor, whether secured from within or without the islands, must be employed for their development. The census of 1903 gives a population of but 31 per square mile in Cagayán and 15 in Isabela, as compared with 34.6 per square mile in Pinar del Rio, Cuba. It is probable that under normal conditions Japanese labor would be available to supplement such native labor as could be obtained, though at a higher rate of wages than at present prevails. In Cuba there is a considerable immigration of Canary Islanders each year, who come over expressly to harvest the tobacco crop, and during that season wages as high as \$3 to \$5 American currency a day are sometimes paid in the *Vuelto Abajo*, while a wage of \$2 American currency is by no means unusual. For a smaller compensation the almost equally efficient Japanese might be secured, providing the commercial conditions of the industry justified their immigration, and a movement of population and trade intercourse might be established advantageous to both countries and calculated to extend the market for Philippine tobacco in Japan. Tobacco cultivation is probably the least onerous form of tropical agriculture, and the one that affords the highest remuneration for intelligent labor and the least exhausting field work of any important crop of the Torrid Zone.

Cocoanut products, especially copra, contribute a large and rapidly growing fraction to the export trade of the Philippines, and both the

fruit and a crude wine called tuba, derived from the flower of the tree, are important articles of local consumption. The exports of copra amounted to 215,193,333 pounds during the fiscal year ending June 30, 1903, an increase of nearly 400 per cent over the previous year, and its value was \$4,473,029 American currency, or next in importance to hemp, and exceeded sugar by over half a million dollars. The demand for copra and cocoanut oil has increased rapidly during recent years on account of the extension of their use in the preparation of food compounds, especially artificial butter.

There is no portion of the Philippines where the cultivation of the cocoanut is so strictly a local industry as is sugar planting in Negros or hemp gathering in Albay or the eastern Visayas. There are groves in the coast country of all the important islands. The government farm at San Ramon, Mindanao, contains a very fine plantation. The island of Romblón is almost as exclusively devoted to the cocoanut as is Banda, the old East India station in the Netherlands possessions, to the nutmeg. In some of the districts around Laguna de Bay, near Manila, and in the neighboring province of Tayabas gathering copra and pressing cocoanut oil are the principal industries of the country. The oil presses are most numerous in the vicinity of Santa Cruz, but the product is not exported in any appreciable amount. Nut gathering and copra drying are usually done by contract or on a share system, much like the cleaning of hemp, and a man can earn 50 cents American currency a day at this occupation. Chinese contractors often lease groves from the owners at a fixed price per tree per annum, and employ native labor for gathering and preparing the crop. The customary rent of a tree was reported to be \$1 silver currency (42 cents American currency) in the districts visited. So largely is this business in the hands of the Chinese in parts of the islands that it is difficult to secure detailed information as to the respective earnings of laborers and contractors and the details of their agreements. The natives work in this, as in other occupations, very irregularly, and while their possible earnings are a peso a day it is probable that their actual earnings average considerably below this figure, on account of time lost and slack working.

Tuba, or cocoanut wine, is usually gathered on shares, each party receiving one-half the product. A tree yields about a liter (1.0567 quarts) of wine a day for 50 days of the year. This sweet sap of the flower ferments quickly and requires to be marketed immediately in order to reach consumers before souring. Therefore this industry does not attain great importance in any single locality, a few gatherers and venders sufficing for the needs of the community; but in the whole archipelago the number of persons employed in this industry must be considerable. The sour tuba is said to be a very palatable, high-grade vinegar, and this product, when methodically exploited, may come to

have considerable commercial value. On some plantations visited custom allows the collector to refresh himself from every receptacle—a joint of bamboo tube—that he gathers, and this occupation is said to be very popular for that reason.

The bark of the cocoanut palm is gathered, as it is in Cuba, for covering tobacco bales; but this is not an employing industry.

The nipa palm furnishes a sap which is not used directly as a beverage, but is the source from which a distilled liquor is procured. This is an aromatic alcohol, locally known as bino (*vino, vinum*), said to work quick moral and physical destruction upon the user. In some districts, especially in the vicinity of Malolos, in the province of Bulacán, north of Manila, these distilleries are sometimes fairly pretentious establishments, with quite as much machinery as a local sugar mill. The business is largely controlled by the Chinese, and was formerly untaxed. A new law recently enacted, imposing an excise upon the spirits manufactured, is expected both to increase the price of this liquor, which would certainly be a social benefit in the Philippines, and to produce a considerable revenue for the provincial government. In 1876, when there were 24 distilleries in Cagayán province, producing 548,522 liters (579,623 quarts) of spirits annually, the local price of this drink, as strong in alcoholic content and more pernicious than rum, was 12 liters for \$1, or about 8 cents a quart. While the price is higher at present, at least in market centers, a few cents will purchase a large bottle of bino, making the price of bestial intoxication about as cheap as a package of cigarettes. In the autumn of 1903 10 distilleries in Malolos district were producing 900 gallons of this spirit daily. The Chinese employ workmen of their own nationality on a share or profit-sharing system, and it appears to be usual to provide board and lodging for all employees. Day workmen in a native distillery visited received 50 cents silver currency (21 cents American currency) a day. This same palm furnishes material for the nipa shingles used for thatching and siding houses. A person receives 2½ cents silver currency for sewing 100 shingles, and can make about 600 a day; but this work is usually done by women and children during odd hours, the material being appropriated from the most convenient trees, without much regard for their ownership.

There is another palm, called the burí, whose flower sap yields a palatable beverage, which is sometimes fermented with bacauan bark to make a bitter and slightly intoxicating drink known among the Visayans as basi. The unfermented juice, when boiled down, gives a brown palm sugar popular with local consumers but of no export value. The burí is exhausted by the flower tapping, and after producing some 5 gallons of tuba daily for three months dies. The pith yields a form of sago, and the leaves are boiled and bleached for weaving hats. The preparation of all these products, however, is a house-

hold industry, and only indirectly affects conditions of employment by giving home occupation to laborers.

No coffee plantations were visited in the Philippines, and data as to employment in this industry are very scanty. In one or two localities in Batangas coffee has been until very recently the chief money crop, though the market is confined to the islands; but formerly coffee was exported in considerable quantities. The average annual shipments were 6,544,904 kilos (14,429,026 pounds) during the 5 years ending with 1887, but they fell to 4,237,536 kilos (9,342,157 pounds) per annum during the subsequent 5-year period. At present they are practically nothing. The decline of this industry is almost entirely due to blights and insect pests. The area under cultivation in 1876 was 36,085 hectares (89,166 acres), and doubtless increased subsequently. The census of 1903 reports the area, largely in small garden plots, to be 999 hectares (2,469 acres). Most of the coffee consumed in the Philippines is still of local production, and the number of trees in the islands, scattered about the homesteads of the natives, would make a very respectable total.

In the highland province of Lepanto-Bontoc, in north Luzon, where climatic and soil conditions are said to be peculiarly adapted to coffee and tea culture, as well as to the production of many garden crops commonly cultivated in the temperate zone, the Igorot laborers at present receive a wage equivalent to about 8 cents in American currency a day. These workmen, though of shorter stature than the Ilocanos and Tagalos, are said to be fairly steady and industrious workers. Most of them are still non-Christians. An expert of the Bureau of Agriculture who has investigated conditions among this people, says: "They are good workers, far better than the negro of the South, their honesty is proverbial, and their imitative faculty is largely developed." The population is adequate for the preliminary development of the country, as there is a population of 36 to the square mile in the province of Lepanto-Bontoc according to the census of 1903.

Rice is by far the most important of the food crops cultivated in the Philippines, and indeed it is normally, from all points of view except export, the chief crop of the islands and engages most of the labor of a very large peasant population. Rice is the principal food of the Malay as well as of the Mongolian races, occupying a much more important place in their dietary than does any single grain or vegetable in that of Caucasian peoples. For this reason it possesses a unique importance in the Orient, far beyond that of any one crop in the United States, and more comparable with that of all our cereals taken collectively. Rice, more than any other commodity, determines trade relations in the East, and creates the bond of mutual dependence among oriental nations. A universal failure of the rice crop would bring

famine directly to the doors of a large majority of the human family. Fortunately this grain is usually raised on irrigated ground, and in the Tropics. It is therefore cultivated under unusual stable conditions of climate and moisture, and it is not subject to the same extent as many other cereals to the ravages of plant diseases or insect pests.

Both upland and lowland rice are cultivated in the Philippines, after the methods common in the Orient. These methods suggest garden rather than field operations to the American farmer. The ground is prepared by plowing under water, with a stick plow and carabao (water buffalo), or in case of small terrace tracts is spaded. A rude harrow, sometimes made of bamboo, is used to pulverize the soil, which often cakes and puddles when plowed under water. The Filipinos are more dependent upon draft animals in this and other field operations than are the Javanese and the Chinese either in their own country or in Hawaii. The ground for the aquatic varieties of rice is prepared in late April or early May in districts where the rainy season is marked, and the rice plants, which are first sown in seed beds, are transplanted in June. Trenching and banking—that is, diking the overflowed fields—naturally precedes or accompanies the earliest operations connected with the crop. Transplanting is usually done by contract, the unit of work being the “manajo” or bundle of 500 plants. In the Philippines these plants are cut down to one-half their length when transplanted, a custom that is not generally followed in Java, where in other respects the method of rice cultivation is very similar. The plants are placed in rows a foot apart, and a foot apart in the row, with two plants in a set. This work is usually done by women and children. The cost of preparing land is estimated at \$10 Philippine currency (\$5 American currency) a hectare (2.471 acres), of preparing a seed bed for this area of crop, \$1.50 Philippine (\$0.75 American), and of transplanting, \$4.75 to \$5 Philippine (\$2.38 to \$2.50 American), a hectare. The grain is harvested with a small knife, the stubble being left very long, and the straw on the head usually being merely sufficient to enable the rice to be gathered into convenient bundles. This work is done on shares, the harvester usually receiving one-sixth of the rice he gathers. To a casual observer harvest time has the appearance of a gala season for agricultural labor. The crowds of people of all ages and sexes, in bright colored garments, distributed over the golden grain field, not over strenuously occupied in making little bouquets of rice heads, remind one rather of a blackberrying excursion than of our prairie harvest fields. Chinese rice cutters make a much more serious matter of this occupation. But in general one of the most noticeable features of agricultural labor among the Malays, whether in the Philippines or elsewhere, is the social aspect they give to their work. They like to be in crowds. The solitary laborer, of course, is often seen; but

the communal, gregarious work instinct is obviously very strong among them. It constitutes a phase of sentiment to be consulted in labor administration. During the rice-harvest season the wages of agricultural and of all unskilled rural laborers usually rise in the Philippines.

Primitive methods of cultivation, of course, add to the labor cost of production and keep the population poor. A revolution in these methods would do much to solve the problem of labor supply. Rice, more than any other crop, suffers from peasant conservatism on the part of its producers—a backwardness due in no small part to the fact that this crop has never invited the attention of organized capital and wholesale methods of production. The intelligent exploiter is usually an improver. When he comes into a country he often reduces the laborer for a time to a position of greater dependence than he formerly occupied, but he starts a process that ultimately leads to an amelioration of the worker's condition by giving his labor a constantly increasing value. On the other hand, an agricultural industry left to go its own way among an unprogressive people must invariably retrograde at the present day and the economic condition of the worker constantly grow worse, because no product is free from competition of the intelligent producer, or can long remain so in the twentieth century. The relative position of the Filipino paddy-field tao and American agricultural laborers working the same crop is thus presented by the rice culturist of the insular bureau of agriculture: "The labor of a Filipino in the rice fields of the Philippines has been estimated at \$20 gold and board per annum. The amount of land he can cultivate is $2\frac{1}{2}$ acres, yielding 1,500 pounds of paddy. In Texas or Louisiana, on the other hand, a laborer receives \$200 and board, but he cultivates 80 acres of land, and the cultivation is so superior that with irrigation alone he produces 160,000 pounds of paddy. In short, he receives ten times the wages but he produces one hundred times more rice than the Filipino laborer."

While Philippine rice lands yield well and cultivation presents no especial difficulties, and the area under this crop might be very greatly extended, the local product has seldom equaled the demand for home consumption. This appears to have been due to the fact that the measure of total labor expended by the native population very slightly exceeds the measure of their demand for the primary necessities of life; that is, they work as a people very little more than would be required to produce the rice they eat, plus their slight consumption of clothing and a few very simple luxuries. Therefore the labor expended on export crops, valued at what the laborers receive for their production, is furnished by the possible rice-crop labor and leads to a deficit in the latter. There is no accumulation; the labor expenditure only meets current demands; the working people do not grow richer. Most of the wealth added to the islands accumulates in the process of

exchange. This is true also of other tropical countries, but not, for instance, of a country like the United States, where a large part of the wealth produced by an excess of labor over that required to support existence in accord with the prevailing standard of living remains in the hands of the primary producers and is statistically demonstrated by the increasing value of live stock, farm improvements, public works, and urban homes owned by the working people, as well as the more indirect investments of these people through savings banks, life insurance companies, and other corporate enterprises. It is no occasion for the surprise often exhibited by Americans in the Philippines, or, as the latter assume, an indication of an abnormally unhealthy economic condition of the country as compared with other tropical countries, that the Philippines import a large quantity of rice. Of course, the extraordinary importations of the last few years, caused for the most part by drought, locusts, and the rinderpest, which destroyed the draft animals of the natives, are not here considered. These misfortunes account in part for the increase of importations, but such importations occurred in Spanish times under perfectly normal conditions. The amount of rice purchased from abroad and its value in American currency as compared with the total value of exports have been as follows during two corresponding years of each period:

QUANTITY AND VALUE OF RICE IMPORTED AND VALUE OF TOTAL EXPORTS BEFORE AND AFTER AMERICAN OCCUPATION.

Year.	Rice imported.		Value of total exports.
	Pounds.	Value.	
BEFORE AMERICAN OCCUPATION.			
1893 (a).....	90,390,529	\$628,434	\$22,240,550
1894 (a).....	98,922,810	563,653	16,535,212
AFTER AMERICAN OCCUPATION.			
1903 (b).....	677,238,885	10,061,323	39,668,366
1904 (b).....	c 727,139,614	c 11,548,814	34,411,623

a Calendar year.

b Fiscal year ending June 30.

c Not including free imports by the Government, which amounted to 7,798,800 pounds in 1904.

Undoubtedly it is for the interest of the Philippines that the islands should be made self-supporting in the matter of rice production, providing this can be done without lessening the export crops. Compared with each other, the latter are probably more profitable for all parties concerned than the former. A table given later shows that the excess of export value per capita of population over the value of food imports has remained almost constant during the past decade, despite the larger quantities of rice brought from abroad since the American occupation. And if a greater net export balance were produced by the Filipinos, through increasing their rice production without lessening the production of export crops, the gain would largely

be absorbed, as it is in Java at present, by the profits of exploitation—that is, it would go into the pockets of the Chinese, European, and American residents. The class instinct of the tao that makes him limit his labor to that absolutely needed for his support is not entirely at fault under present conditions. The only distribution of the profits of surplus labor that has as yet been made among the primary producers of any tropical colony known to the writer—excluding coolies under contract—has been in the form of public works and sanitary control. Even in such instances this surplus labor has usually been applied directly to the works in question, as in the herrendienst in Java, and has not involved the intermediation of a money exchange. But the thought suggests itself that comparatively heavy taxation, if the resulting revenues are conscientiously applied for the good of the whole community, is almost the only effective immediate remedy for the inequitable compensation of the workers of inferior races that constitute the exploitation of “cheap labor” in the Tropics. Such exploitation is a necessary condition of tropical industry at first. It involves no moral culpability on the part of the employer. It is a condition established by competition and broad economic laws, from which no single territory can free itself, and, above all, no single industry or employer. Among people not further advanced than the Filipino tao high wages promote idleness and generosity drives away labor from enterprises, unless the altruism of the proprietor is tempered by exceeding wisdom. Everyone understands that wages are determined very largely by labor efficiency. But it is sometimes forgotten that they are also determined by the intelligent appreciation of the uses of money by the laborer. Where this second factor is more important than the first it may depress labor remuneration below labor value and the profits of exploitation rise correspondingly. The government can, however, encourage communal where it can not enforce individual accumulation by crystallizing labor in permanent public works, and it probably can remedy this whole adverse condition of society to a large extent by making the people lift themselves collectively to higher standards of thought and living, through education paid for by the community at large. The figures showing the importation of rice, then, are only a statistical memorandum of a fact that comes prominently forward under whatever aspect we consider the labor question in the Philippines. The collective wealth of the working people does not increase. If they produce more to sell abroad, they produce less to consume at home; if they raise more fiber, they raise less food.

Indian corn is cultivated throughout the Philippines, and is even the staple cereal in limited districts. In East Negros mountain sides, knolls, and upland plateaus were seen covered with a thrifty corn crop and the fields were clean and very well tilled; in fact they might afford

a model for many American farmers. In Cebú maize is a principal crop. One occasionally gets excellent green corn, boiled on the cob, when traveling through the islands. Corn is alternated with sugar cane in Cebú and with tobacco in northern Luzon, and occupies nearly as important a place as rice in the diet of the people of the latter districts. In some localities the natives are said to prefer maize to rice as a ration. The Igorots, a mountain people of northern Luzon already mentioned, raise much Indian corn, and also sweet potatoes, squashes, and other vegetables. Irish potatoes can be raised in the north Luzon highlands, and in the early days wheat enough to supply the Manila market was raised around Lipa, in Batangas province. But this crop has vanished from among Philippine cereals, probably as a result of Chinese and American competition. Fifty years ago this grain was raised in Timor, in the Sunda Islands.

It is not proposed to give a summary of the agricultural industries that may be established in the Philippines, or that may already exist in some neighborhoods without affording a field of employment as yet for hired laborers. Cotton is grown in a number of places and is probably destined ultimately to become a crop of some importance. Over 400,000 pounds were produced in the single province of Ilocos in 1894. Cacao for local use is grown in all parts of the islands. Ilang-ilang is rapidly becoming an important article of export. Various varieties of the rubber tree are indigenous in Mindanao and are grown successfully in the Sulu Islands, and, it is said, even as far north as Masbate. Indigo was at one time an important export crop. While the future of any one of these industries can not be safely predicted at present, it is almost certain that some of them will develop to great importance in the future.

There are certain general conditions affecting the condition of agricultural labor in the Philippines that apply equally or with slight modification to all field workers, whether peasant proprietors or employees on large plantations engaged in the production of export crops. Labor and land tenure are very closely connected among all the East Indian races. Many survivals of a relation of status existing between the tiller of the soil and his employer still remain as a purely indigenous system of serfdom or slavery in the Moro province, mitigated, possibly under Spanish-American influences, to peonage, which has not yet passed away in the Christian provinces, and dissolving into a condition of fixed tenancy, on the one hand, or of wage labor with certain qualifications of dependency, on the other, in the vicinity of large towns or in the industrially more advanced districts of the islands. It would be a mistake to consider this state of subordination on the part of the worker as necessarily an abuse to be abolished immediately and by abrupt measures, however desirable it may be—especially in view of our aim to make the islands politically self-direct-

ing—to substitute a freer contractual relation between master and servant as soon as possible. The Filipinos are much more Europeanized than any other group of Malay peoples, without being materially in a better position for the change. A glance backward into the institutional life of these allied races of the East Indies may help to explain why certain habits of thought and action, in regard not only to the economic but also to the political relations of the different classes of Filipino society—habits that are quite at variance with all our own ideals and traditions and discordant with our institutions—constantly manifest themselves and are sure to continue a nonnegligible factor in whatever civilization results from the more or less successfully accomplished superimposition of our own upon the people. Without such a review one can hardly describe intelligibly the condition of the Filipino rural laborer at the present time.

Whatever its origin, the village community—the *kampong* of the Netherlands Indies or *barangay* of the Philippines—has been the primary economic and political unit of the East Indian social system. Normally the natives do not live scattered over the country, like the Porto Ricans or Cubans, but in small villages. These villages, now known as municipal centers and *barrios*, were originally more than mere agglomerations of families; they responded to something else than the gregarious instinct of the people, and had an economic as well as a social significance. So far as the personal investigation of the writer goes, there is no direct evidence in present customs and forms of land tenure in the Christian provinces of the Philippines of an older system of communal property holding and administration by the village authorities, though such might well remain without his knowledge; but there is historical evidence that such a system formerly existed. The original village community, like the same institution in British India, the Russian *mir*, the Teutonic and Anglo-Saxon township, was a property-holding public corporation, possibly the sole landowner; but while in Europe the administrative authority over this property was vested in the members of the village—and this is occasionally true in Java—it is probable that this authority was a hereditary privilege of certain families constituting a class in the Philippine Archipelago. The dominant races of Malay invaders produced a multitude of petty rulers—sultans and *datos*—who in some instances united under their sway a number of villages, claiming a certain title by conquest over the land and the people, and the institution of slavery disturbed still further the symmetry of the village organization and its system of equal communal rights.

In Java, where an orderly progression from communal to individual land tenure is gradually taking place under the wise and experienced direction of the Netherlands authorities, and where many of the valuable features of the village organization have been carefully conserved,

one finds all stages of development from the land-holding and self-governing community typical of an earlier social stage to the purely political though still partly self-governing township of a modern organized state. By way of parenthesis, however, it should be remarked that possibly Hindoo elements, from the higher and more brilliant civilization of the eighth and tenth centuries A. D., may have been incorporated into the original Javanese village institutions, and have survived the subsequent period of Mohammedan rule. If this is so, some features of the Java village organization may be traceable to the same sources as that of British India, and it is possible to surmise here a distant and indirect by-influence of Aryan political genius. There are still some villages of degenerate Hindoo antecedents in the East Java mountains and in the broken and sparsely peopled district of Bantam, in the extreme western portion of the island, but their political and social life is said to present no features that throw light upon this question. In general, in considering the land tenure of a Javanese village, three kinds of ground are to be distinguished: House and garden land; crop land; pasture and wild land. In the order named, these three classes of ground become individual holdings; so that normally one never finds individual holdings of crop land when house and garden plots are common, and never individual holding of the "waste"—pasture and wood lands—where crop lands are held in common. Furthermore, there are various degrees of community in tenure—that is, communal rights are more or less extensive, and no abrupt transition occurs from communal to individual tenure. So we may have (a) undivided communal land. This land is used in common by all members of the *desa*, or village district. Waste lands are usually held in this form, and in the district of Bangewangi and in remote portions of Preanger and Bantam, where there is no individual ownership whatever, the house and garden land is thus held in common without delimitation, a single hedge, often of fruit trees and thorns, sufficient for a tiger break, surrounding the house group, with the rice lands lying outside. The first step forward from this primitive tenure is (b) communal land, with periodic partitions and periodic assignments. This may apply to any ground, but as a rule especially affects crop lands. These are divided annually or at stated intervals and assigned to the different members of the *desa* by the village authorities. The next transition is to (c) communal lands, with fixed divisions and periodic assignments. In this case the fields remain permanent, but the holders change. The final stage, nearest individual ownership, is where the lands are (d) communal, with fixed divisions and fixed assignments. The difference between the last form of communal tenure and an individual holding might appear to be very slight, but the legal rights flowing from the two are quite different. There is no documentary title in communal tenure,

nor in individual tenure providing the holding has come down through long inheritance; but in the former instance the title rests in the possession of communal rights, is verified as are other communal rights and obligations, and is subject to the interpretation of the village headman, while the inherited individual holding is under the jurisdiction of ordinary tribunals. The headman has more authority over the communal than over the individual owner, and in some cases can demand certain services from him which are not required of the freeholder. Where the Mohammedan law is not customarily observed, the right of succession is different in the two cases. If the possessor of a communal holding of the class mentioned dies childless, the widow does not, as in case of individual holdings, inherit unconditionally, but must give a guaranty that the services resting upon the land—the so-called *desa* and *herren dienst*—will be rendered; and sometimes she can not inherit at all. If sons inherit an individual holding, it is usually divided among them; if they inherit a communal holding of the kind in question, the village headman decides which son or sons shall succeed to the land. While the sale of individual holdings to other natives is allowed, communal holdings can be alienated only under local restrictions; so sometimes the purchaser must be a resident of the village, or he must take up his residence there in order to make good his title. Fish ponds and *nipa* groves, as well as lands, are subject to all these phases of communal tenure.

There is another aspect, besides that of real property rights, under which the village community in Java plays an important part in the economic life of the people. This is in the nature of certain public services which must be rendered to the community or the headman by the *desa* members, and which were originally a burden upon the land rather than upon the individual. One might express this by saying that each person enjoying the use of a portion of the village domain paid his rent in personal services to the village. These services consist in building and maintaining roads, bridges, irrigation ditches, markets, cemeteries, watchhouses, and other public works, in guarding dikes and ditches in time of flood, in watch duty, and in certain personal services to the village headman, such as cultivating his ground, caring for his horses, bringing fuel, repairing his house and sheds, cleaning his grounds, and accompanying his wife to market. All these services are assigned and regulated by the headman or village chiefs, and usually may be bought off, like the road tax in America, for a fixed amount. Such services may rest on all the able-bodied men in a community, on married men alone, on holders of cultivated land, on holders of communal land alone, or may be assessed against all real and personal property. In these matters local custom varies almost infinitely in the different villages. Where individual

tenure supplants communal tenure in Java, this tax is usually transferred from the land to the person, and becomes a real poll tax.

In the "independent" principalities of Java, a series of services is demanded by the sultan. Originally this was a tribute of two-fifths of the crop and one day's labor a week. These services, resting upon the land, are usually transferred with the land; so that if a sugar planter, for instance, leases a tract of ground from the Sultan of Djokjokarta, he is supposed to lease also the labor that goes with the ground. When a sultan transferred his possessions to the Netherlands Government, these services lost their personal character as a tribute to the ruler and became a contribution or tax imposed for the benefit of the public—the herren, as contrasted with the village or *desa dienst*.

When the Spanish friars were extending their influence throughout the Philippines, they probably found a social organization among the natives possessing a very close resemblance, in fact in many respects identical with that just described in Java. Such a system still remains in a modified form among the Moros. But there were no great sultanates, such as those still surviving, albeit in strict dependence upon the Dutch Government, in the latter country. Each Philippine village possessed greater autonomy, and had its ruler or ruling caste. The friars modified but slightly the existing social machinery. The petty rulers still ruled, still demanded rents and services from the tillers of the soil, still stood as the administrators of both the economic and the political organization. But instead of the Dutch resident in each district—the "elder brother" and the power behind the throne of the native regent—there was a priest in each village, a spiritual father at the ear of each petty potentate, directing affairs in the interest of his order and of the Spanish Government. The order, represented by the friar priest, became a holder of village lands, even the possessor of entire villages—as the Dutch East India Company became the possessor of villages and peoples in Java—and demanded its tithe of services and taxes, as the village heads had done before. This burden was at first not onerous, not so much a rent as a tax, and, as we have already seen, hardly amounted to a tenth of the proceeds of the land in some instances. Meantime the native adjutants of the friars, the local nobility or principes, were not deprived of their nominal rights and functions. Annual "elections" of village officers were introduced, under the supervision of the priest and the lay officials of the Spanish Government, but these officers were always selected from the governing class. A remnant of this class authority is still recognized in the new municipal code enacted by the Philippine Commission, in the unconditional reservation of electoral rights to holders of village office under the Spanish Government. These native agents—

to emphasize the point by repetition—administered the village not only as a political, but also as an economic unit. The business of the community was in their hands. Like the village headmen of Java, they assessed and collected taxes. While no system of forced culture, like that of Java, was inaugurated and built up by the Government upon these traditions, if we except the tobacco monopoly, each village head and his official confreres devised a little system of forced culture of their own, requiring labor or produce from their subjects, the latter as a tax in kind or at a low purchase price, and maintained a monopoly of the trade of their district. This alcade monopoly was strong enough to contribute largely to the failure of its rival, the Royal Philippine Company, and was dominant in the archipelago until the middle of the last century. That traces of it still remain, and that ideas derived from this period continue to prevail in the minds of many native officials, especially in the remoter municipalities, is not strange. The association of political authority with economic privileges is inherited, and is not immoral from an East Indian point of view. It is probably almost as prevalent in Java, under the long established and searching discipline of the Dutch Government, as it is in Luzon or the Visayas. Max Havelaarr, the story of Dutch East Indian life that roused all Holland to the question of reform in her oriental possessions, could have been read in almost all its details of the Philippines. And in the latter country the traditional abuse of public office will doubtless continue for a considerable period, until gradually corrected by higher ideals of government, derived from familiarity with occidental political institutions.

This attitude toward public office constitutes a condition affecting agricultural labor, for it is the peasant who is made the victim of irregular official exactions. So long as the system of working the roads by communal labor remained, this service was exploited by the presidentes for their personal benefit. A single incident, related by the superintendent of La Granja Modelo, a Government experimental farm in West Negros, affords a concrete illustration of another form of this oppression. Shortly before the visit of the writer to the farm in question, the superintendent had in his employ as a field laborer a tao from the neighboring municipality of La Carlota. One day a party of native policemen from the town in question put in an appearance, arrested the man for debt due the presidente, and carried him back to the village. There he was flogged and put to work on the presidente's plantation. Evidently freedom of contract exists in very slight measure where incidents like this occur.

The old distinction between principes and peasants remains as the distinction between ilustrados and taos. All agricultural laborers belong to the latter rank, and are not to be confused with mechanics and factory operatives, who hold a middle position and are not so often

subject to official exactions. However, a case was reported to the writer where a native governor was building a residence with labor that was induced to work "through respect for his position." This fact could not be verified upon the ground when the place was visited, but the rumor suggests a suspicion evidently based upon previous experience.

The idea that ownership of land carries with it certain quasi-political authority over the occupants, such as the *desa* head exercises over the members of a village, is still common in the Christian provinces of the Philippines. Indeed, many large landed proprietors own and practically administer several villages upon their estates. But this hold of the landowner over his dependents is greatly strengthened by the system of peonage.

Peonage is common in Spanish-American countries, but nevertheless may be as much an indigenous as an imported institution in the Philippines. Slavery for debt is as common among the Moros, whose customs have been modified little, if any, by Spanish influence, as it was among our European forefathers, and seems to be typical of a certain stage of the evolution of credit. Peonage, which is a sort of middle stage between slavery and an ordinary debtor and creditor relation, has no legal sanction in the Philippines, and so far as it exists rests on custom and tradition, the ignorance or more or less voluntary acquiescence of the peon, and the arbitrary assumption of illegal rights by minor officials, as in the *La Carlota* incident mentioned above. The last legal mainstay of the system disappeared when the new penal code, which abolishes imprisonment for debt, was enacted in 1884. The essence of peonage is the liability of a man to work for his employer so long as he remains a debtor to the latter, coupled with the practical impossibility of ever paying off this indebtedness. In some parts of the Philippines such a debt still runs, by custom only, in *solidum* against the members of his household; that is, if a debtor dies without means to settle the debt to his employer, the debt is binding upon all the surviving members of his family, who step at once into the peon relationship. To illustrate, the following incident was related to the writer by the governor of Lepanto-Bontoc province: A *tao* came to the governor to complain because his master had flogged him severely. This occasioned an investigation of the conditions under which the man was employed, and it was found that he was working to pay off a debt incurred by his grandfather to the former owner of the plantation—a debt that had not been materially diminished since it was first created, as the earnings of the laborer were usually absorbed in paying for the food and clothing he received from his employer.

Peonage is a condition of tenancy as well as of hired labor. In one case there is the fiction of a wage, in the other of rent, but these

money measures enter only in a perfunctory way into the transactions of the two parties. A large proprietor told a government official in Luzon that his tenants owed him about \$10,000, and that he would be ruined if they were suddenly enabled to pay up their debts. The same official, who had come into practical touch with the agricultural labor problem in connection with his regular work, stated that proprietors valued their land, as a rule, according to the number of families settled upon it. He said: "I know of a piece of property offered for sale by a man living in Manila. He wants \$50 per hectare (2.471 acres) for his land, which is of the very best quality, but during the insurrection his labor drifted away and there are no families upon it. In the same vicinity is a tract of poorer land, but well tenanted, which is for sale at \$150 an acre, and will probably be sold first. Nothing is said of such tenants and their debts in a deed, but both are understood to be transferred with the land."

Peonage and the fact that the rents of tenants' holdings are usually paid in kind and not in money make any measure of value of a day's work in country districts very indefinite. A person who tried to secure farm laborers in Batangas province, Luzon, inquired from neighboring proprietors what the usual wages were, but no one could tell him. He then made inquiries among the taos themselves, but found them equally unable to state what a day's work was worth. There was no money measure for hired labor in that particular locality, because hired labor did not exist.

So long as the roads and similar public works undertaken in the provinces were constructed by communal labor—that is, by requiring the inhabitants to perform the work as a road tax, or similar incident—the conception of a day's wage for unskilled labor hardly arose in the minds of most of the peasants in the remoter provinces of the Philippines. Such communal labor has been abolished by the American authorities, so that no *herren* and *desa dienst*, as it would be called in Java, now remains; and a more vigorous policy of public improvements, especially of road building, has been pursued than formerly. This has necessitated the establishment of a day's wage in many places where it formerly did not exist. The rate varies according to the local conditions of labor demand and supply in the different provinces, being highest in the hemp districts, where the share cleaner can make \$2 or \$3 a day during the present high prices, and this condition determines wages in other occupations. On account of the destitution reported to have occurred in certain districts as a result of stock diseases and crop failures, relief works were undertaken in some localities. The labor thus employed was usually paid in rice. There was a tendency to pay a rather more liberal rice wage than would have been customary had money been used. On the other hand, in some sparsely settled islands, like Mindoro, where stores are distant

and supplies uncertain, men will work much more readily for rice than for money. Where wages are given in private employment, in such cases native or long-resident employers usually pay in supplies, through the system of store advances already mentioned. But cash advances are usually necessary when laborers are imported from one island to another, as from Panay to Negros. Often the cedula receipt is retained by the employer as security for the cash advanced to the laborer for paying this tax. As showing the rather arbitrary hold which such a cash advance is theoretically supposed to give the employer over the laborer, the following receipt for a cedula receipt, given the workman whose tax has been paid by his employer, is quoted from a native periodical published in Manila: ^(a) "The bearer of this paper has deposited with me his cedula personal, and I request the authorities, if they discover him outside the boundaries of our plantation, to seize him and bring him here." Signed by the manager.

It must not be assumed that a complete substitution of the wage system for the varying degrees of industrial dependency now existing in the agricultural districts of the Philippines would be an unmixed blessing for the working people. This is hardly a practical question, as no such complete substitution of one system for another can be effected except through a very gradual process of transition, accompanied by a growing knowledge of his rights on the part of the laborer. American and some English employers prefer, as a rule, to pay wages. This system has been introduced to a very small extent even in the hemp-cleaning industry. But three ill results often come from the change. In the first place, the laborer, seeing his compensation actually in his hand, in a form of value which he can readily measure, is frequently dissatisfied with a wage higher than the one he would willingly enough accept if it were concealed in some involved system of credit or payment in kind. He ignorantly overestimates the worth of his services.

So he strikes, or idles listlessly, and his productive capacity is lost to his family and the community. In the second place, he invests his money unwisely, like a child. What would have been more than sufficient for his support if paid in supplies is now insufficient. This is not because he adopts a higher standard of living when he has a money wage, but because he gambles away his earnings or spends them in fruitless pastimes. Or, in the third place, he may use his money with a morally better but industrially more pernicious purpose. He buys leisure with every cent he receives that is not absolutely necessary for his support while working. With one day's wage he buys rice and idleness for two. Not only is one-half his potential labor lost, but the labor supply is rendered erratic and insufficient, industrial development is checked, and ultimately the workers themselves suffer most

^a La Redención del Obrero, October 29, 1903.

from the condition of business apathy they have thus created. Population increases most rapidly in a tropical country, and the general condition of well-being is highest where, as in Java, there is an orderly and well-regulated industrial progress—as far from a *laissez faire* relapsing into barbaric indolence on the one hand as it is from ruthless economic exploitation by a higher race on the other. The Philippines can not be “boomed” into a civilization as advanced as that of Europe or America, nor can the Filipino working classes be driven by the stern scourge of necessity, as in European countries or the United States, to strenuous and sustained industrial activity. Slavery and peonage are the product of social conditions, not of the intentioned malice of employers. The latter institution, like the former, has its paternalistic as well as its exploitative side. It is gradually disappearing, because there is and there has been, long prior to the American occupation, constant social progress in the Philippines. The people in many districts are probably not better off materially than they were two centuries ago; their standard of living has not risen appreciably and their income bears the same relation to their expenditure as formerly. But ideas have been incubating in their minds, and in many of them an aspiration for social betterment has been awakened. The demands thus created constitute a condition favorable to a greater independence of the laborer than formerly existed, but it will take some time for him to learn to use this independence wisely. He can develop the qualities attending a higher social status only by practice. It may take a generation to make him as industrious a wage hand as he was a peon. But as a wage hand he can, possibly in two generations, possibly in several, become a far more effective producer, and its necessary converse, consumer, and a much more valuable member of society than he could as a peon. The large number of employers who in the midst of the manifold discouragements attending the establishment or conducting of new industrial enterprises in a period of both social and political transition, fall back upon the theory that the Filipino laborer is unimprovable, and that the only hope for the future development of the islands lies in replacing him by a more industrious race, may be justified in this view as far as the enterprises with which they are immediately connected are concerned, but to assume this as a general proposition is to deny the applicability of the law of social progress to the Philippines and to disregard the past experience of the country.

This past experience is only partially recorded in actual figures; but a broad inference may be drawn from the scanty data at our disposal. If exports of staple commodities have increased more rapidly than population, and imports of food, especially rice, have not increased so as to prove an entirely countervailing factor, it may be assumed that the product per capita employed—in other words, the industrial

efficiency of the laborer—has increased. Were we to consider the exports of agricultural commodities alone, it might be that these represented in part labor transferred from the cultivation of paddy and corn to the cultivation of the crops marketed abroad. The relatively greater exports might also be due to improved methods of cultivation, the use of fertilizers, or better stock and machinery. But we know that in the Philippines these factors have been of influence in increasing the product only in case of sugar. Furthermore, if the real wages of agricultural laborers have increased upon the whole during the period considered, this may be taken as a further indication that the efficiency of the laborer has not decreased.

In the following table the population figures are from the census enumerations of 1887 and 1903, and from compilations made from partial returns of the census of 1896. Naturally these divisors are somewhat arbitrarily assumed in obtaining the per capita statistics, but they are probably sufficiently accurate to show the broad variations indicated in the table. The quantity and value of commodities for the Spanish periods are taken from reductions to American weights and currency given in a bulletin upon the trade of the Philippine Islands published by the Agricultural Department. Figures for 1903 and 1904 are from the Monthly Summary of the Commerce of the Philippine Islands; and for these years the quantity, in pounds, of manufactured tobacco exported is estimated from the official valuation, upon a basis of the most recent Spanish figures. Under "Per capita exports" are included only primary products and manufactured tobacco, and no item has been included that has not at some time during the period given reached an annual value of \$100,000. In order of average importance these commodities are hemp, sugar, tobacco, cocoanut products, coffee, ilang-ilang, and fibers other than hemp. Had all exports been included, relative values would not have been changed materially, and on account of the amount of bullion and of reexported products that appear among the items omitted, the resulting figures would have been a less accurate index of the amount of productive labor represented, which it is the main object of the table to show:

AVERAGE ANNUAL PER CAPITA FOOD IMPORTS AND AGRICULTURAL EXPORTS, 1886 TO 1890, 1893 AND 1894, AND 1903 AND 1904.

Period	Population.	Per capita rice imports (pounds).	Per capita food imports (value).	Per capita exports (value).	Per capita excess exports (value).
1886 to 1890.....	a 5,984,727	26.3	\$0.67	\$3.06	\$2.39
1893 and 1894.....	b 6,261,339	15.1	.55	2.94	2.39
1903 and 1904.....	c 6,987,686	100.5	2.38	4.41	2.03

a Census of 1887.

b Census of 1896.

c Census of 1903.

Considered purely from the point of view of market values, therefore, the productive capacity of the Filipino laborer has decreased

within a decade. But labor efficiency is measured by the quantity rather than by the value of output. The following table shows the amount of the principal export commodities produced per capita during the same periods, disregarding domestic consumption:

PER CAPITA PRODUCTION OF STAPLE COMMODITIES FOR EXPORT, 1886 TO 1890, 1893 AND 1894, AND 1903 AND 1904.

Article.	Average number of pounds per capita annually exported.		
	1886 to 1890.	1893 and 1894.	1903 and 1904.
Sugar.....	63.7	83.1	29.5
Hemp.....	24.9	33.5	41.7
Copra.....	(a)	8.2	23.9
Tobacco.....	3.2	3.6	2.9
Coffee.....	2.1	.2	(b)
Other fibers.....	.1	.3	.6
Rice.....	c25.4	c14.6	d100.5

a Coconuts only reported.

b Less than 0.1 pound.

c Excess of imports; exports estimated from partial returns.

d Excess of imports.

Even allowing for the fact that these figures are subject to some correction—at least that they are only approximations—it is evident that the principal employing agricultural industries, sugar and tobacco planting, have made no progress relatively to the increase of population during the last decade. Copra and hemp, which are gathered usually upon some system of share-working, have responded to high market prices with an expanding production. It is probable that if an accurate estimate of domestic consumption could be made, the figures for 1903-4 would be still more adversely affected, for importations of fabrics, especially cotton cloths, are increasing, probably because a larger proportion of the domestic fibers produced is exported during the prevailing high prices, and manufactured goods from Madras and Japan have rendered keener foreign competition in the textile market. On the other hand, the value of food imports, which include malt and spirituous liquors, has been increased by the presence of Americans among the consuming population. The large imports of rice are due to conditions that are very exceptional. The loss of draft animals by the rinderpest has also checked production of sugar and probably of tobacco, while it has had comparatively little effect upon the cultivation of hemp and copra. The practical disappearance of coffee from export statistics is due to natural and not to industrial causes. The final conclusion from the two tables, therefore, must be largely negative; but after making allowance for the special conditions adverse to agricultural progress that have existed during the past few years, there is no reason to suppose that the advance in per capita production that occurred between the periods mentioned under Spanish rule may not be repeated in the future, without calling in the assistance of outside labor.

It is a matter of common knowledge that wages have risen in many districts and industries in the Philippines since the American occupation. The census authorities estimate the prevailing rates at present as substantially double those prevailing under the Spanish dominion, and a table from their report, quoted in full in the appendix, supports this statement in considerable detail. But this increase has been due to the political changes attending the war and special demands for labor made by the campaign, to the increased cost of living, and to currency fluctuations, rather than to what might be termed legitimate economic causes following the increased labor efficiency of the worker or a demand for his services caused by the normal industrial development of the country. Indeed, currency fluctuations alone account for any increase in nominal wages reported in the sugar districts, and real wages have fallen rather than risen in that industry. This is due probably to the falling price of sugar, which has lessened the profits of the planters and created a special motive for lowering the remuneration of labor, while it has prevented the expansion that might otherwise have occurred in sugar cultivation. In the coffee districts of Luzon the destruction of an industry has naturally lessened the demand for workers. In the hemp districts, on the other hand, higher prices for the crop have resulted in higher prices for labor. Ten years ago common laborers in Albay were paid from 25 to 37½ cents silver (19 to 28 cents American currency) a day; women received 20 cents silver currency (15 cents American), children 10 cents silver (7½ cents American). These wages were paid when food was not given the workmen. Hemp cleaners received from 30 to 62½ cents silver (22½ to 47 cents American currency) a day under the same conditions. Wages, therefore, if compared with those reported for 1903, appear to have tripled or quadrupled during the decade in this industry, though the increase is probably not so marked in many other hemp-growing regions. The data that we possess as to wages, therefore, do not point to any definite conclusions as to an increase or the reverse in labor efficiency. If we were to go back 30 years instead of 10, however, considerable change would be noted in many provinces, all pointing to a higher earning power of labor. A "real" (12½ cents Spanish currency) was the nominal wage for agricultural labor throughout the Luzon provinces in 1875. A peseta (20 cents Spanish currency or 15 cents American currency) was about the corresponding wage 20 years later. It is not far wrong to assume that there was a uniform increase of 20 per cent in the real wages of unskilled labor in the Philippines during the last quarter of the nineteenth century. Even where these rates of pay are no more than measures of labor value in agreements with peons, they nevertheless reflect the laborer's growing worth as a producer to some extent. But a rising market

price for commodities produced in the Philippines may have been more potent than the increased labor efficiency of workers in determining the rate of wages in the archipelago. What these facts show must therefore be largely a matter of individual opinion. They indicate general industrial progress, but only create a presumption that the efficiency of Filipino laborers is now greater than formerly.

A word remains to be said with reference to slavery, which still remains in existence *de facto*, if not *de jure*, in Moro province. Peonage insensibly shades off into slavery, and it would be impossible to say where one begins and the other ends. All the Moro peasantry render certain personal services as well as pay taxes or land rents to their *datos*. These obligations are combined with a certain political subjection which is itself of a more or less economic character—that is, the subject and the slave are not so far apart as our preconceptions would lead us to believe when a *dato* chances to be the ruler and master. However, a man without the political authority of a *dato* might own slaves in the Moro countries. A man may become the slave of another for debt or may be adjudged into slavery for crime. Children of slaves are also slaves, as the children of peons are peons. A slave for debt ceases to be a slave when the debt is paid; but while there is a *pro forma* wage in case of the peon, there appears to be no semblance of a wage in case of the Moro debt slave. An employer may, by custom, flog a peon, but is liable to punishment by the court, and so seldom ventures to carry this punishment to extremes. But Moro slaves are sometimes punished by their masters with mutilation, or even death. A slave came into Jolo with his cheeks slit from ear to ear because he told the secrets of his master. The main difference between peonage and a large part of the Moro slavery seems to be one of degree. The influence of the church and the government has been active in mitigating the institution in the Christian provinces, while it has retained its barbaric form unmodified among the still unsubjected Moros.

Girl slavery, as in China, even in ports under British jurisdiction, and in San Francisco, is common not only among the Moros, but even in Manila. A 13-year-old girl was recently offered for sale in Siassi. Her master wanted \$60 silver currency (\$25.20 American currency) for her, but had a cheaper girl that he desired to dispose of for \$40 silver currency (\$16.80 American currency). The following is a receipt for a male debt slave, bought in Jolo by an American official and allowed to work out his freedom:

“TANJONG BAILAM, *January 11, 1902.*

“This is to certify that I, the undersigned, received by H. H's, the Sultan of Jolo, order the sum of dollars sixty only (Mex.) payment for the freedom of the Moro, Hussin, and a child called Nauwang.

“E. SCHULTZ,
“*Off. Interpreter and Translator.*”

Many people familiar with the Moros say that all Moro labor is slave labor, but by this is simply meant that the working people live in the condition of politico-economic dependence already described. It is true in the sense that no wage system exists, and all agricultural labor is performed by tenants who pay tribute, in both kind and services, for their holdings. American employers desiring to engage local labor in the Moro province would do well to recognize this fact, and treat with the people at first upon a basis of their existing institutions as the quickest way of educating them up to more modern views of industrial service. They should deal with the dato for the men they want, and compensate him for the labor privileges he sacrifices, which, though they may not be recognized by our legal canons, are privileges grounded in his own ideas of right and natural justice. Such a policy will not prevent a fair-minded employer from dealing directly with the men who enter his service as if they had been hired in an open market, and the expense of compensating the dato for his rights will be amply repaid in the moral influence he may be made to wield over the workmen in favor of their employer.

A debt is said to double by Moro custom every 7 days that it remains overdue, but apparently it ceases to increase as soon as the debtor enters the service of his creditor. The domestic slaves of the Moros, corresponding to the "criados" of the Christian provinces, are said usually to be quite contented with their lot, and would probably consider emancipation a hardship. Their duties are not heavy, and they live with the families of their masters on a familiar footing, almost of social equality, rather as minor sons than as slaves, in the more common sense of the word. There are certain conditions of society where slavery exists, so to speak, in its natural environment, and as an institution strikes no social discords. Probably in those early Roman days when the word "familia" came to have the double signification of family and body of slave dependents, or among the early Germans, when men carelessly gambled away their freedom in a game of chance, little thought of social degradation was associated with this status. It was only when the institution had outlived this period and survived into a period of more complex industrial development that it became an instrument of exploitation, all social sympathies between the free and servile classes were estranged, and the system was universally recognized to violate our sentiment of natural right and justice. Our ideas of slavery are derived from this period of moral revolt against it and do not apply very aptly to the kind of slavery that exists among the Moros. The latter people have practically no trade and commerce and have not learned to worship mammon. They do not regard slaves as wealth producers so much as insignia of honor. One of the Javanese sultans has 15,000 attendants in his palace compound. A large body of followers, in a more modest way, is equally the ambition of every man of means among the Moros.

Slavery as a legalized institution has been abolished by the provincial council of the Moro province, acting with the assent of the Philippine Commission. Like peonage, however, it is likely to remain a practice for many years to come.

Grazing, fishing, lumbering, mining, and road, harbor, and railway construction are or have been the principal unskilled and semiskilled occupations, besides field work, pursued in the country districts of the Philippines. Formerly in a few of the northern islands, especially Mindoro and Masbate, there were several large herds of cattle, but these were almost exterminated by the rinderpest. On Masbate, the writer was informed by residents, there were nearly 200,000 head of cattle three years ago. At present only 1,837 remain. Northern Luzon contains vast tracts of ideal grazing country, already cleared and in succulent native and bunch grasses and only awaiting stocking to become at once productive. The writer rode for 30 miles over well-watered, grassy plateaus in crossing the Negros Mountains. Central Bohol and many parts of Mindanao are said to offer equal opportunities to the grazier. A local corporation already has a number of cattle grazing in the grassy valleys around the bay of Mati, in southeastern Mindanao. Carabao (water buffalo) and buffalo are the usual draft animals employed in transportation and agriculture. Small ponies and cattle are bred to some extent in Batangas province, and in the highland portions of that district cattle are used for plowing. But stock raising is as yet only an inviting opportunity in the Philippines, to which very alluring natural advantages beckon. It can hardly be said to be an employing industry at present.

Fishing, likewise, is not an occupation affording employment to wage-earners in the Philippines, although fish are a staple article of food with the natives. Almost every man in the coast districts is at times a fisherman, and cured, half-cured, and fresh fish find their way to the interior through small hawkers and children, who sometimes act as vendors for the older members of the family. At the point where the Laguna de Bay empties into the Pasig River there are a number of fish corrals owned by natives, who sell their catch in the local markets and Manila. Bales and baskets of very small, half-cured, and malodorous fish usually form part of the cargo of river and coasting steamers. *Bêche-de-mer*, or trepang, is found in considerable abundance in the coast waters of the Moro province and forms a valuable article of export to the China market. These drying sea worms, exposed to the sun on mats, form a most unappetizing street display in the Chinese quarters of all the little Sulu towns.

The pearl fisheries of the Sulu Archipelago and other southern waters of the Philippines may become a source of considerable wealth to the dependency, especially if the industry is properly regulated and artificial bedding can be successfully introduced. The shells and

pearls are of superior quality and reasonably abundant. The Moros possess traditional rights over some of the coast fisheries that have been recognized by the American authorities, but these do not extend as a rule to distant reefs and uninhabited islands. Each dato claims a percentage of the shells taken in the coast waters tributary to his village. This share is usually 10 per cent—a tax which white pearling captains consider it a matter of honor to evade or override if possible. The Sultan of Jolo also claims as a royalty all the fine pearls taken, but naturally is unable to enforce this pretension among white fishers, and can do so with only partial success even among his own subjects. Moro shell fishers dive without apparatus to 15 fathoms. This appears to be a traditional profession, handed down from father to son in a few localities, and all the Sulu divers are said to come exclusively from three villages of the group. In deeper water the natives use a five-pronged bamboo rake, and they are said to dredge to 50 fathoms in very still and clear water with a three-pronged dredge of the same material, attached to a long rattan in place of a cable. Besides these Moro fishers there are 11 regular pearling scows in the Jolo fleet, each with a crew of 6 to 8 men. These boats employ modern diving apparatus and make cruises of about a month from port, visiting all the waters of the archipelago. The wages of seamen range from \$12 to \$15 silver currency (\$5.04 to \$6.30 American currency) a month and board. On one boat the tender to the diver received \$40 silver currency (\$16.80 American currency) a month, and the diver himself received \$30 silver currency (\$12.60 American currency) a month and \$20 silver currency (\$8.40 American currency) per 100 shells. On another boat a diver who could go down to 30 fathoms was paid \$28 silver currency (\$11.76 American currency) a month and \$20 silver currency (\$8.40 American currency) per 100 shells, the tender received \$25 silver currency (\$10.50 American currency) a month, the guard \$25 silver currency (\$10.50 American currency) a month, and the supercargo \$12 silver currency (\$5.04 American currency) a month, in addition to board and medical attendance. Good shells are worth about 25 cents American currency each. The catch of the Jolo fleet is about 15 tons of shell a month, and the price varies from \$375 to \$1,000 a ton, according to the color, uniformity, thickness, and even grading of the shells. These prices are in American currency. Each ton of shell yields in addition an average value of about \$190 American currency in pearls. The trade is injured by the practice of taking small shells, which is causing some fields to become exhausted. One pearling captain thought that conditions were very favorable to artificial cultivation, providing proper concessions and protection could be secured from the government, and that were all the available reefs thus occupied the trade would give employment to no less than 2,000 boats. All men directly interested in this industry or having knowl-

edge of it from other sources agreed that it might be greatly extended, and become a source of much employment and wealth to the Sulu Archipelago, as well as of revenue to the government. The trade in pearl and *bêche-de-mer* is almost entirely in the hands of Chinese merchants, though there are one or two Spanish firms incidentally engaged in this business in connection with other commercial undertakings. The shell is exported via Singapore.

The timber resources of the Philippines, while by no means as vast as some enthusiastic prospectors have reported, or as extensive as a mere statement of the wooded and wild land area of the islands would lead an American lumberman to believe, are considerable enough to afford, with proper administration and development, a large and probably constant field of employment. Tropical forest areas do not afford so homogeneous or, in proportion to their area, so large a body of timber as do those of colder zones. While the bulk of vegetable growth may be enormous, the amount of waste matter is very large. Not only is a great part of the soil occupied by ferns, vines, and other useless undergrowth, but of the larger trees only a portion are suitable for milling, and these are often so burdened with vines and parasitic growths that the expense of cutting and cleaning them is greater than their market value. The cost of getting timber out of this forest is also larger than in a pine or fir country. There is no winter for sledging, and the islands are not so abundantly endowed with rafting streams as the North American continent. Some of the most valuable tropical timbers are heavier than water, and therefore can only be floated in barges. The dense jungle of undergrowth in most parts of the Philippines makes the maintenance of temporary roads or of permanent ones a matter of great expense, and yet the road mileage in proportion to the timber cut must be larger than in a country with a more uniform growth. Only in the Benguet and northern Luzon pine areas, which are themselves especially inaccessible, are the local conditions for cutting at all similar to those prevailing in the United States. Against these disadvantages may be set the fact that almost all the hauls are down hauls from the mountain to the seacoast, and that tide water is seldom a great distance from the cutting limits at present exploited. The timber resources of the interior will hardly be opened until permanent means of transportation are provided.

The difficulties just mentioned have been underestimated by some lumbermen whose prior experience was confined to America, or who were wholly inexperienced and formed their conclusions after a merely theoretical study of the cost and methods of timber getting in the United States. As a result there have been some unwise attempts to open unprofitable country. The forestry laws, which remain in force since Spanish times, while devised with the commendable purpose of protecting the timber resources of the islands from just such ruthless

spoliation as has occurred in America, appear to be needlessly complex, and to present administrative difficulties that are a real clog upon healthy development. These laws, however, are in a process of revision, and so need not be described. They are not likely in their present form to constitute a permanent condition affecting the lumber industry; though it is not the policy of the government to sell timber lands outright, and licenses to cut upon the public land will always involve a fair compensation to the public for the property taken, and aim properly to protect the future timber resources of the dependency.

Cutting and logging is usually done by contract. Peonage prevails to a great extent among workmen employed by contractors or licensees who are natives or long residents in the islands. The chopper is "grub staked" by his employer, and never works regularly or persistently enough to get out of debt. On account of the difficulties of transportation already mentioned, only medium-sized logs are taken out, the small ones not paying for the labor, and the large ones being impossible to handle with the facilities at the native laborer's disposal. Logs are hewn square in the forest, and wasted for from 18 to 36 inches at the end, where they are pointed to facilitate snaking through the underbrush. Workmen are usually paid by the Spanish cubic foot, the price varying according to the locality, the hardness of the timber, and the size of the log. Thus a very large log of hard timber may be paid for at the rate of 12 cents silver currency (5 cents American currency) a cubic foot, while a small, soft log would bring only 6 cents silver currency (2½ cents American currency) a foot. Sometimes contractors require the logs to be delivered in standard dimensions, varying from 24 by 1 by 1 Spanish feet to 30 feet by ¼ by ¼ foot, and pay according to size and quality of timber from \$1 to \$2.50 silver currency (\$0.42 to \$1.05 American currency) a log. It is almost impossible to estimate what a native laborer earns at this work. He makes a living and is content with that. Two American sawyers who took a contract which they worked themselves, using a crosscut saw, averaged 250 cubic feet a day, or 125 feet each, at 4 cents American currency a foot. They were therefore able to earn about \$5 American currency a day each on their contract. American employers encourage their cutters to leave the log round, in order to avoid wasteful hewing. Labor might be economized in other ways by intelligent workmen. There are indications that an ample labor supply exists in this industry in many places if the men are fairly treated. At a mill visited in the Moro province difficulty was experienced at first in securing enough logs. Finally a discharged American soldier took a contract and made a fair profit. When the Moros saw that the contractor really got money for his work, and liberal pay according to their standards, "every man that could buy or borrow an ax took to the woods." When this place was visited, six months later, the mill had been constantly in operation at

full capacity, and more logs were being brought in than could be used. Seven thousand feet of lumber were being sawed daily, seven days a week. On one of the northern islands, where log getting is a main industry, timber was worth 35 cents silver currency (15 cents American currency) a cubic foot on the beach. Separate contracts were made for cutting, hewing, and dragging by carabao to the landing. Several American choppers and loggers have been employed upon wages by the larger mills. A foreman of a gang of 14 men so engaged said the workmen remained in good health, and professed to feel better than when in the Army or on the police force, where they got less exercise, though their labor was severe and was in the forest, where the heat is more oppressive and the air closer than in the open. These men were paid \$50 American currency a month, with board, for an 8-hour day, and were considered cheaper than average Filipino laborers at 21 cents American currency a day and rice rations. Two American contractors are supplying logs to another mill in northern Luzon, but they employ native labor.

The mining enterprises hitherto undertaken in the Philippines on an extensive scale have miscarried, though for reasons that do not preclude the possibility of success in future ventures. A partial list of these unsuccessful undertakings, and the reasons for their failure, is given in the following quotation from a letter from the president of the Philippine Chamber of Commerce, of Manila: "Various mining companies have existed, which later dissolved and abandoned their workings. To mention some: The gold mines of Pinutan failed after much labor and expenditure on account of lack of skilled workmen and adequate machinery; the coal mines of Sugod were abandoned for the same reasons, though they were especially hampered by the fact that they began by sinking a number of pits, which consumed all their scanty capital and left them without means to secure necessary hydraulic machinery. The gold mines of Mambulao failed because of lack of capital, inadequate machinery, and other reasons. Miners formerly worked 10 hours a day, and their wages varied greatly. They never organized unions, and no strikes occurred in this industry." Lignite or soft coal exists in Cebú, where mines were at one time worked for a period and finally relinquished for want of capital to continue development and because the land transportation facilities necessary for profitable operation did not exist. The military authorities are now attempting to develop a coal mine on Bataán Island, in Legaspi Harbor. Japanese miners are employed. This mine was not visited, but the few miners engaged are said to receive \$30 American currency a month and board. Filipinos will not work underground, and the islands will probably depend upon Japan for mining labor, except that employed in surface excavation, until example and custom have made the native workmen willing to go down a shaft. Detailed

information as to the coal-bearing areas of the dependency is to be found in a report, published by the Bureau of Insular Affairs, upon the Coal Measures of the Philippines. This industry at present affords no employment worth considering, and therefore is not a factor in determining general labor conditions in the islands.

There are surface indications of petroleum, sometimes accompanied by natural gas, in Panay, Leyte, Negros, and Cebú, and probably in other portions of the archipelago. Possibly the Philippines lie in the periphery of the Burma-Borneo field. At the present time the natives of western Cebú gather surface petroleum in bamboo tubes for illuminating purposes. An attempt at more systematic development of the field thus indicated is said to have been made some years ago by a Dutch company, which withdrew from operations after sinking several unsuccessful wells.

Iron ore occurs frequently in most of the larger islands, and in the eighteenth century, when great expense and delay attended the importation of arms and machinery from Europe, some mines are said to have been worked with profit. Cannon even were founded from the local metal. Copper is found in paying quantities in north Luzon, and occurs in several of the other islands. The Igorots have a primitive way of smelting this metal in little clay furnaces, after a method not unlike that employed by the Dyacks of Borneo for smelting iron. Only the best ore is taken; charcoal fuel and a valveless piston bellows are used. Copper money and pipes are run in clay molds. In making the latter a model is first fashioned out of wax, and the clay mold built in and around this. The wax is then melted out, and a solid mold results. Among this non-Christian people miners constitute a special class, and are initiated into their craft with special religious ceremonies. Where they are employed by American prospectors they receive a wage equivalent to 24 cents American currency a day. The Igorots bring to market from 18 to 20 tons of copper annually. For a time a Spanish company systematically worked certain mines in this district, exporting about 180 tons of copper a year, but operations were discontinued in 1875, on account of lack of labor. There are deposits of a fine-grained native copper in northern Luzon, similar to alluvial gold-dust deposits, which can be very easily worked.

Gold to the value of \$8 to \$10 a ton accompanies most of the Luzon copper ores. This metal is said to occur in paying quantities in many other parts of the Philippines, but has not yet been discovered in sufficient quantities or in a form to cause a rush to any particular field. Large bodies of low-grade ores, but richer than those of the Transvaal, have already been located, and promise amply to repay systematic development. In some places the natives make a living by crushing the gold-bearing rock with stones and washing out the particles. In one of the Mindanao provinces the placer workings of the natives

yield about 150 ounces of dust a month. A quartz mine is being developed by Americans in Masbate. The vein was said by the proprietors to consist of a free-milling ore running from \$30 to \$50 American currency a ton. This mine is situated almost on tide water. There is very little local labor. Miners are paid 80 cents to \$1 silver currency (34 to 42 cents American currency) a day, without advances or rations. Wages are paid weekly, and there is a company store as a matter of necessity, as no local merchants are doing business in the vicinity. The men work in two shifts, night and day, and in this case the natives are successfully employed in tunneling. Except for their irregularity the Filipinos are said to be fairly satisfactory workmen. One difficulty with the Filipino miner is that the food he eats does not fit him for the more strenuous physical exertion required in this occupation. In some of the more arduous mechanical trades also, the native is not able, for physical reasons, to compete with advantage with the hardier Asiatic immigrants.

While American residents are very optimistic as to the possibility of developing valuable mineral resources in the Philippines, this industry will probably suffer more than any other from lack of suitable local labor. Javanese coolies, very akin in physique, diet, and habits to the Filipinos, prove efficient miners in the Netherlands Indies, though a portion of the miners employed in the government tin mines on Banca are indentured Chinese. During Spanish rule mining undertakings, and especially gold workings, were not given much encouragement in the Philippines. The friars were never favorable to the introduction of such enterprises, because they feared the possible consequences of a sudden influx of foreign capitalists and white prospectors and laborers. It is impossible to say whether or not this hostile influence helps to account for the reported difficulty in securing native miners in the past, but this possibility can hardly be overlooked in drawing inferences from former experience as to the probable labor supply of the future. If exceptionally profitable mines are discovered in the Philippines, we may assume that a standard of wages will be established in this occupation that will attract outside labor to supplement the local supply. The Philippines are nearer Japan than are our Western States, where Japanese miners are so numerous at present. Underground miners are not so subject to climatic influences as surface workers. At Charters Towers and Croyden, in North Queensland, only white miners are employed, though these places lie the same distance from the equator as Luzon, and have a hotter and possibly more trying climate for Caucasians than do the principal mineral districts of the latter island. The distribution of known mineral districts, according to latitude, is shown by the table following.

DISTRIBUTION OF MINERALS IN THE PHILIPPINE ISLANDS.

Island.	Latitude.	Known minerals.
Luzon	18° 40'	Coal, gold, copper, lead, iron, sulphur.
Catanduanes	14 8	Gold.
Marinduque	13 34	Lead, silver.
Mindoro	13 32	Coal, gold, copper.
Cacararay	13 31	Coal.
Batán	13 19	Coal.
Rapu Rapu	13 15	Coal.
Masbate	12 37	Gold, coal, copper.
Romblón	12 37	Marble.
Samar	12 36	Gold, coal.
Sibuyán	12 30	Gold.
Semerara	12 7	Coal.
Panay	11 56	Gold, coal, petroleum, gas, copper, iron.
Biliran	11 43	Sulphur.
Leyte	11 35	Coal, petroleum, mercury.
Cebú	11 17	Gold, coal, petroleum, gas, lead, silver, iron.
Negros	11	Coal, petroleum.
Bohol	10 10	Gold.
Panaón	10 10	Gold.
Mindanao	9 50	Gold, coal, copper, platinum.

The white marble found on the island of Romblón has never been quarried extensively. The stone obtained is said to be too friable for structural uses, though baptismal fonts for the Manila churches were made of it, and a fine and apparently durable lintel of this marble was seen in the main portal of the church at Romblón. There is a whole mountain of this stone at the very edge of the harbor, which would seem to present inducements for systematic development. At present these quarries afford no employment. Brick and coarse pottery clays are common almost everywhere in the Philippines, and there is quite a brick and tile making center on the upper Pasig, not far from Manila. The fear of earthquakes prevents the use of roof tiling, so common in Cuba and Porto Rico. Rude pottery is made near all the market centers where suitable clay is to be found. This is a household industry, carried on by families with their criados. Skilled potters and quarrymen near Manila earn \$1 silver currency (42 cents American currency) a day, working about eight hours. Brickmakers receive about the same pay as common laborers in the same vicinity, or 50 cents silver currency (21 cents American currency) a day. Women are paid half as much as men.

Salt is made from sea water in northern Luzon, Batangas, and among the Moros. In Ilocos fishermen make salt by washing with fresh water in bamboo troughs beach sands that are heavily impregnated with salines. The brine is boiled down in sugar kettles. During the dry season, February to May, a family can make about 32 cavanés (67½ bushels) of coarse salt, worth about 75 cents a cavan, or earn \$24 silver currency (\$10.08 American currency) by four months' work. In parts of Batangas province there are large evaporating ponds, where a very poor salt is produced by the peasants for local consumption.

A field of employment of considerable present and much greater future importance is afforded by public works and railway construc-

tion in the Philippines. A large amount of harbor work is now under way, and much more requires to be undertaken as soon as funds for that purpose are available. Road building is still in its infancy. Irrigation works and water-power development promise to go hand in hand in augmenting the production of the islands. Though the field for railway building is not large compared with our continental enterprises in America, it is extensive enough to create a large labor demand relatively to the available supply as soon as the imperatively and immediately necessary lines have been commenced. Even in a group of islands with abundant ports and ample water communication, railways are the Roman roads of modern civilizing influence. Holland has experienced this in the islands adjacent to the Philippines, and in Java and Sumatra is rapidly perfecting a system of communication that brings peace, law, and order to her remote provinces and "adds fat to the cooly's rice" wherever it carries its blessings of ready markets and higher prices for his commodities. In West Negros, in many respects the most developed province of the Philippines, the provincial governor estimates the cost of carrying sugar at from $1\frac{1}{4}$ to 3 cents silver currency a picul a kilometer, or from 14 to 34 cents American currency per ton per mile. It costs 60 per cent more to transport a ton of sugar 30 or 40 miles from Negros to the local market at Iloilo, though three-fourths of this distance is by sea, than to ship a ton of sugar from a plantation in Hawaii to a refinery in San Francisco, 2,100 miles distant. A great share of this money comes ultimately out of the pocket of the laborer. Interest, rents, and profits are not correspondingly lower in the Philippines than in Hawaii. In some instances Negros planters are said to pay as high as 40 per cent per annum on loans. The added security of a country where intercommunication is cheap tends to lower interest, and therefore other forms of profit, by encouraging investment of capital. The current profits from the economies in transportation resulting from railway development go very largely into the pockets of the workingman in the form of higher wages. Therefore such development is a most important factor in bettering the social and economic condition of labor. Such development, in the second place, while not always lowering the cost of living, is apt to make the cost of essential articles of consumption more uniform throughout the season and to raise the standard of living both by placing higher wages at the disposal of the laborer and by the variety and extent of the wares displayed in the local market, thereby increasing his desires. Furthermore, railway development increases the effective labor supply in a country by making labor more mobile. With the opportunity for travel comes the habit of travel. Nearly 97 per cent of the 13,000,000 passengers carried by the railways of Java in 1902 were natives—people who were as village-shy as the Filipinos 25 years ago. Industrial enterprises are

thereby less restricted to resident labor. The specialization of labor, and all the attendant advantages of division of labor in production, are only possible where there is more or less mobility of the working classes and a ready interchange of products. The reason that nearly all labor in the Philippines is unskilled labor is that each person has to do so many things that he never becomes handy at any one of them. Much of the want and temporary suffering from insufficient nourishment that occurs periodically in that country might be remedied gradually by the influence of good roads and railways. Sawyer (^a) rightly remarks that the rice-growing districts of the Philippines are the districts where the condition of the people, physically, socially, and morally, is the worst, because they live in alternate periods of labor and idleness, abundance and want. The personal observation of the writer, both in the Philippines and elsewhere in the Tropics, confirms this judgment. In Spanish times the price of paddy immediately after the harvest was as low as 50 cents silver currency a cavan in some districts. A cavan is about 2 bushels, and a cavan of paddy is equivalent to about 60 pounds of clean rice. A few months after the harvest the price of paddy sometimes rose to eight times the former amount. Had the cost of transportation not been prohibitive, this cheap rice would presumably have been marketed after the harvest at a fair price, and if an excessively dear period occurred subsequently rice would be imported until a normal price was restored. This temporary abundance of unmarketable food is itself an inducement to idleness and invites a habit of irregular labor. The following description of a typical rice peasant, taken from a Malay periodical, and therefore probably free from European bias, applies aptly to the small rice grower in the Philippines: "The peasant has the understanding of a 6-year-old child. He works only when he is forced to do so. After the harvest, so long as he has plenty of paddy, he will not exert himself even to prepare the land for a new crop. He sits contentedly at home and spends the whole day singing or 'fly-catching' (seneng saban harie njanji atawa tjan koetoe). When he has eaten all his provisions, he begins to think of hunting for work and must hire out as a cooly. At present coolies are glad to get 7 cents American currency a day, and they do not consider the wife and children at home—an average of six persons to be properly fed."

Railway and road development, therefore, are a matter of such vital importance for the Philippine people as to make labor conditions at present prevailing in the group of occupations relating to their construction and maintenance of especial interest. There are almost no roads in a majority of the Philippine provinces, and those that do exist are generally near the sea and frequently parallel water carriage.

^a F. H. Sawyer, *The Inhabitants of the Philippines*. 1900.

In the central Luzon provinces, near Manila, there are serviceable country highways between the larger towns. In the vicinity of some of the provincial ports, also, there are short stretches of fairly good roadway. Some military roads have been built in Mindanao and elsewhere for the purpose of carrying supplies to the larger camps. During the dry season one can get about in a vehicle in the principal sugar districts, following cane roads or public highways maintained in part by the private enterprise of the planters. Elsewhere only trails are available, and these are deteriorating in places. Although the insular government has spent considerable sums in road construction, residents in some districts reported that trails and highways were in much worse condition than under Spanish rule, and the writer had an opportunity to observe evidences of this in some instances. Two reasons are cited to account for this backward movement. The money spent by the insular government has been devoted to building good permanent roads in a few places; but these are not extensive enough as yet to form important links in the prospective larger system of communication or to be of practical service to more than a small fraction of the public. And the American authorities, acting upon the suggestion and advice of leading Filipinos, have abolished the old system of communal road labor, which has already been described. Many municipal officials looked upon this service as a sort of personal perquisite. It is said that the taos used to be assessed more days' work than was due from them, to be required to work out this labor tax on the private plantations of officials, and to be encouraged or forced, when this was for the interest of those in power, to commute this service for a money payment, which naturally went into the president's pocket. Still, more or less road work was done, trails through the forests were kept open, fords were cleared of obstructions and marked, and a system of passable bypaths was maintained between the barrios and villages. In districts where there were large planters, the influence of these was powerful enough to secure a reasonable amount of work upon the roads necessary for shipping produce and importing supplies. Now that this labor is no longer available, many roads and trails that formerly received attention are neglected.

The roads of the Philippines are either municipal or provincial. As a rule municipal supervision extends only to streets and highways within the municipal center, while the connecting roads and those leading to outside barrios and villages are in charge of the provincial supervisor. Sometimes the latter officer, in order to maintain uniformly good highway throughout a certain distance, makes some necessary repairs within the municipality itself. Where there is an able and energetic supervisor and a lax municipal administration, the curious anomaly occurs of better roads in the country than in the town. As already noted, there was exceptional activity in road building in 1903

on account of the construction and repairing undertaken for relief purposes. The insular government distributed the rice purchased for the destitute population of certain districts through the provincial authorities. In order to avoid so far as possible encouraging a spirit of dependence among the recipients, provisions were not supplied gratuitously, but in return for labor. Of 195,881 piculs (12,243 tons) of rice issued by the authorities up to November 1, 1903, but 407 piculs (25 tons) were distributed free, and nearly half of this amount went to fire sufferers. In road work 76,252 piculs (4,766 tons) were expended. These rice wages were regulated by the current market price of the commodity rather than by the price paid by the government, each laborer receiving as much rice as he could have purchased with a wage of the standard set for the work to be done had it been paid in money. Consequently, as rice became more abundant about harvest time in 1903, the supervisors usually had to increase the amount they issued for a day's labor, even paying a little more than the wage equivalent in new-crop rice, as the old rice on their hands was less desirable. Laborers therefore received more rice than was necessary for their own sustenance and that of their family, it being the policy of the government to pay not an abnormally low but an average wage on the works undertaken for relief purposes. Therefore the workmen were usually able to sell a part of their rice earnings for enough to provide them with the other necessities of life, and this rice went into the market to the relief of other consumers, but to the disadvantage of certain speculators, mostly Chinese, who in some districts had cornered the supply and were exacting famine prices from their customers. The wage paid for road labor in 1903 varied from 30 to 50 cents silver currency (13 to 21 cents American currency), according to prevailing wages in other occupations in the vicinity. It was not the policy of the government to withdraw labor from established private enterprises by offering a wage with which the latter could not compete, though in practice the tendency was for the presence of government works to raise wages by establishing a new demand and, as already mentioned, by fixing a price for labor where no wage system previously existed. In Bulacán province, between Malolos and Hagonoy, some 700 men were employed in raising and macadamizing a road through low country. These were fairly representative workmen. As it was the rice-harvest season, when wages run higher than at other times, 50 cents silver currency (21 cents American currency) a day was paid for about ten hours' work. Very primitive methods of transporting material were observed, though some workmen were using wheelbarrows, and the supervisor had devised a small dump car out of chance material at one point on the works. The loads wheeled were very small, and a lighter and narrower barrow would evidently have been more conveniently and effectively handled by the little laborers. When wheelbarrows

were first introduced for road work in the Igorot country, the natives could not coordinate their muscles properly in handling them, so that the wheels would repeatedly "skew" over to one side and dump the load. It was only by practice that the laborers learned to guide a barrow straight and without thus involuntarily discharging its contents at the outset. Prior to the American occupation the only excavating tool used by these people was a short crowbar. They readily appreciate, however, the advantage of the picks and shovels recently introduced. On the Malolos road, where fills were being made, much earth was carried in baskets and in some cases was scraped together and loaded with the hands. The natives like to take contracts individually or in groups for separate jobs, such as culvert making. One curious fact observed on this road was that boys 14 or 15 years old were employed at the same wages as men. Probably this was partly to simplify accounts, but the supervisor said that these boys usually worked more actively and energetically than their elders and so accomplished as much work in a day as the adults, in spite of their inferior physical strength. Undoubtedly primitive tools in the hands of primitive workmen tend to equalize output. Inequalities in industrial efficiency are partly the product of a more advanced stage of civilization.

The supervisor estimated the cost of fills upon this road, which was built through swampy country with material taken from drainage ditches on each side or from old dikes in the immediate vicinity, at 25 to 30 cents silver currency a cubic meter, or about 10 to 12 cents American currency a cubic yard. The manager of the Manila Daguapan Railway, which was constructing extensions at the same time, in a district not remote from Malolos, placed the cost of grading at 9 to 12 cents silver currency a cubic yard, or only a little over a third the former amount. In the estimates recently made by a railway engineer, at the instance of the War Department, of the cost of building a system of railways throughout northern Luzon, the cost of earth grading is assumed to be 25 cents American currency a cubic yard; but this is allowing for work in thinly settled and mountain country, where there is no resident labor supply. Japanese "shuis," or butty gangs, were grading on contracts for plantation railways in Hawaii, in 1902, for 20 cents American currency a cubic yard. At a moderate estimate Filipino road labor, measured by results, can hardly cost more than one-half the price of similar work performed by imported Asiatics in the Territory of Hawaii.

No extensive irrigation works were observed under construction in the Philippines, and this is not yet a field occupied by the government. Rainfall is usually sufficient for the crops cultivated, and only occasionally, as in 1901 and 1902, has there been a general crop failure on account of drought. Quite complicated systems of ditches and drains

have been built by the natives in irrigated rice country, especially on the former friar lands. On some of these monastic estates near Manila the irrigation plants were formerly extensive and constructed with engineering skill; but they have recently fallen into a state of bad repair.

Bridge building has not been extensively undertaken by the American Government. A number of bridges destroyed during the insurrection have been repaired or rebuilt, and new bridges were constructed by the military authority when needed for the transportation of supplies and the movement of troops. Some of these earlier bridges were necessarily of a temporary character and are already unserviceable or in need of repairs. There is no special advantage in constructing expensive works of this character ahead of permanent road building. In a tropical province, subject to periods of heavy rainfall and short but violent floods, thorough experience with the country is necessary before making final bridge locations. The cost of transporting material ahead of permanent roadway is also very heavy. The exigencies of a campaign, requiring a wide distribution of troops, necessitated building a number of timber wharfs at important landings. These served their original purpose, but hardly come under the head of permanent works. Many were of necessity constructed out of materials at hand. American timber and the most accessible native trees are not calculated to withstand the attacks of ants and the multitude of marine enemies that soon destroy most unprotected woodwork in the Tropics. Practically all public works of this character, therefore, remain to be undertaken, as the Spaniards had built piers only in a few ports open to export trade, and there is no place in the Philippines where improvements of this sort have made direct loading of trans-Pacific steamers possible.

The insular government has proceeded energetically with the improvement of Manila Harbor. A good portion of the work is already accomplished, and enough is under contract to make the Philippine metropolis one of the most convenient as well as one of the safest commercial ports in the Orient. This work consists of reclamation, dredging, breakwater, and wharves. Native labor is largely employed. The manager of the company having this contract in charge thus summarized his views regarding Filipino workmen and general labor conditions in this group of occupations:

We employ a number of white mechanics. Some Americans can do as much work here as in the States, but very many can not. Drink is the curse of white workmen in the Tropics. Unskilled white laborers are of no use here. Neither are Negroes, as they won't work with the natives, and Negroes drink badly. Foreign firms, who are selfishly interested, want work as cheaply as possible, and favor Chinese, who will work for 40 cents silver currency [17 cents American currency]

a day. Yes, Chinese carpenters are employed by us in making barges. Higher wages than those prevailing in the past must be paid if the people are to make social and economic progress. If the American people want to help the Filipinos, let them give us free trade. We have to compete with the rest of the Orient, and high wages are only possible if our industries are made profitable by opening the American market to our products.

We have about 1,000 Filipino laborers employed, and they are steadier than any equal body of white laborers with whom I have ever dealt. Yes, they work without holidays. But when we have had to take them away from their homes, as at our Mariveles quarries, we have built new villages and a cockpit for them, and made them feel that they are part of the company. This labor is a success with us, and we are the largest private employers in the islands. They will stand pushing at need. We have white foremen. That is indispensable. They (the natives) have no initiative, and can not work without direction. Our men work 9 hours for \$1 silver currency [42 cents American currency] a day. We pay \$3 silver currency [\$1.26 American currency] to our better Filipino mechanics. A full-blood Filipino engineer is running that big tug. It has a triple expansion engine, with an 11-inch high-pressure cylinder. He gets \$150 silver currency [\$63 American currency] a month. The captain is the only white man on board that boat.

The largest government road building undertaking being conducted at present is the construction of a macadamized highway from the foot of the mountains at Pozorrubio to Bagio, the proposed summer capital in the Benguet highlands. Difficulty has been experienced in securing labor for this enterprise, and the partial failure to carry out the work with Filipinos is in some quarters considered a demonstration of the necessity for Chinese labor. At one time in 1903 a large number—stated at anywhere between 1,000 and 3,000—Filipino taos were assembled at Manila by the proprietor of *El Grito del Pueblo* (The Cry of the People), a journalist enthusiastic in the cause of native labor, and shipped out to the Benguet road. But the men were homesick and dissatisfied, and dispersed to their native villages after their first pay day, or in some cases before beginning to work. At the present time construction is progressing slowly at the hands of a miscellaneous collection of resident Filipinos, Chinese, Negroes, and discharged soldiers, though under greater difficulties and at more expense than was anticipated. The wages paid are reputed to be \$1 silver currency (42 cents American currency) for a 10-hour day.

The men employed on the Benguet road are said to be obliged as a rule to live away from their families. The organizer of the expedition of native labor just mentioned stated in an interview at the time that the men would be accompanied by their families, furnished with houses, and paid 25 cents American currency a day in addition to food and rent. Such an organization of labor, however, is hardly feasible in case of road formation work, where gangs have constantly to be transferred from one locality to another. And the native is certainly a

home lover. Governor Taft said: "The native is like a cat; he can't be kept away from his home." However, tactful labor administration will do much to overcome this difficulty. The Dutch railway builders in Java have encountered the same problem, and have met it successfully. They understand the secret of sailing with the current of native sentiment in order to attain their ends, and do not futilely strive to make an Irishman of a Malay. Even in sparsely settled districts, where there is no resident labor supply, they have been able to secure an adequate supply of workmen without adopting compulsory measures. When the workmen arrive on the scene of operations they find quarters ready for them, as similar as possible to those to which they are accustomed. Their pleasures as well as their necessities are consulted. A market, theater—the simple provisions needed for their social demands—are supplied. It is not expected that a man will stay away from his family indefinitely. He returns home; but if his work has been made profitable and agreeable for him in the new locality he does not remain away from it for a long interval. Often he brings his family and settles in the vicinity of his work.

The Malay races have been in a sense rovers. They have roamed the seas, settled distant islands, and lived by commerce and piracy, like the primitive Greeks. But they are also as local in their interests, tastes, and patriotism as were those Greeks. The boundary of his kampong, barangay, or barrio is the periphery of a native's active interests. His village is like his family; in fact where the sacredness of the family tie is looser the village tie sometimes supplements this, and gives a certain coherence that would otherwise be lacking to society. The contractor or employer who thinks that he can step in and in a day erase all the instincts and sentiments that are imprinted on the mind of a native at a certain stage of social evolution, or who thinks he can make an individualist of a man who has never had an individual idea, and has never thought except collectively as part of a group; or the employer who fancies that he can make a day wage-earner, homeless and callously cosmopolitan, of a man whose whole life interest is local and embodied from childhood in habitual personal intercourse with a small group of people, and who has never interpreted the value of labor in money, but in the direct satisfaction of a few physical needs—such an employer betrays an ignorance of social and psychological laws as dense as that of the laborer with whom he is dealing. Only by force—by slavery or by an analogous method of cooly contract compulsion, enforced by physical pains and penal punishments—can a man be changed in the way such an employer demands. By these methods one can secure physical, though not mental, obedience, and outward conformity to our industrial standards. But it is at the expense of destroying the native's psychological organism, his complex of social and ethical ideals. He may have been, according to

our standards, unmoral before; he becomes immoral now. Whatever primitive virtue he had—whatever germ capable of natural social evolution, however rudimentary—is destroyed. One meets many of these wrecked barbarians, who have become simply labor machines, in a country like Queensland, where there has been a large importation of Polynesian contract labor. Sometimes a well-meaning attempt is made to Christianize and educate these forced laborers—to substitute something new inside the man for what has been taken away. White man's ideas, however, generally get sadly disarranged when put into a brown man's head. If we could get an inside view of a tao's conception of our conceptions we should probably find them about on a par with the hymnal understanding of the little girl who sang about "The consecrated cross-eyed bear." And yet some foremen dealing with Filipino laborers consider their failure to grasp at once our ideals of the relation of employer and employee as a reprehensible moral lapse, and sometimes seem inclined to ascribe it to a willful and malicious affectation of mental obtuseness.

Moreover, methods of urging workers that might succeed with our common laborers in America, who have come to regard violent imprecations as a necessary stimulus to energy, only daze and bewilder the Malay. In the social ethics of the latter race dignity is always an attribute of authority, and people of higher rank are distinguished by habitual composure more than by any other quality. Consequently the unsophisticated tao, seeing a man whom he is supposed to respect for his color and to obey on account of his position, indulging in antics and an emphasis of language that he is accustomed to associate with irritated buffalo punchers, and but half understanding what is wanted in any case, often ascribes a foreman's elevation of feeling to mental weakness rather than to his own delinquencies. The writer observed one instance of this sort among a gang of stevedores in Iloilo. A white boss was pouring forth a torrent of American-Spanish contumely upon a group of bewildered workmen. *Borracho ó loco* (drunk or crazy) was the muttered comment of a Filipino spectator.

Appropriations have been made for harbor improvements at Iloilo and Cebú and the contracts partly let; but no labor had been employed upon these undertakings when the cities in question were visited. The contractor who was to do this work is conducting several large enterprises in the Philippines, and previously had several years' experience as a large employer in Spanish America. His observations upon labor conditions were therefore of especial interest on account of the comparisons he was able to make between the working people of these different countries. He said:

The reason for the pro-Chinese agitation a year ago was that we were expecting that Congress might do something. There is plenty of labor, such as it is. Personally, I get fairly good work out of the

Filipinos; but they need jollyng. At present I am employing 200 men in Manila, about 200 in Camarines, and about 100 in Mindoro. Labor scarcity has not prevented my taking contracts. The Chinese won't work over water. In climbing about, as in building bridges and that sort of thing, the Filipinos are better than the Chinese. The Mindoro people are very poor workmen. They will work for rice down there when they will not work for money—the latter is an almost useless commodity because there is nothing for them to buy with it. The Filipino is not lazy; but he is not ambitious. He is a philosopher, and when he has enough stops working. I think this is partly due to the influence of the friars. As soon as a countryman got a little property ahead they used to get it away from him—for funeral masses, weddings, or something of the kind. So the natural acquisitiveness of the people, such as they may at one time have possessed, has gradually been extinguished. Where there is an admixture of Chinese blood there is more of the saving instinct. The mestizos are the property-acquiring class among the natives. White blood does not persist in mestizos. The third generation is pure Filipino again. The Chinese is the only race that implant permanent characteristics upon mestizo offspring.

In Central and South America, away from the coast, I paid workmen 25 and 50 cents silver a day. The Indians are much better workers than the Filipinos. They have better physiques, are stronger and more vigorous, feed better, and eat more meat than the natives here. The Filipinos are inferior to any people I have ever employed in Central or South America as workers. But the American natives are slower intellectually—they don't pick up book learning and languages as quickly as Filipinos up to a certain age. The cost of construction and of contracting works is less in South America than in Manila, but perhaps not less than in the provinces at present, or in Manila before the war with Spain. The American Indian peon is more faithful and steady—he shows much more fidelity to his patron than the Filipinos. But the latter are cleaner in their persons, neater in their habits, and kinder to their children and families than the American peons. The Filipinos are very honest among themselves, and there may be less petty theft among them than among American natives. On these little Filipino steamers in all parts of the islands people have thousands of bundles, and there are no losses, although they are not checked or watched by their owners. I have seen Filipino passengers leave a boat and wander around a village for an hour or two while waiting over at a port, leaving their parcels uncared for behind them, and they never lost anything. Some of my South American peons would carry 7 arrobas [about 175 pounds] all day.

Municipal works, especially in Manila, also afford employment to a number of unskilled workers. The pay roll of the Manila department of public works is appended in a footnote. In Jolo, which is representative of smaller provincial towns, street laborers are paid \$10 American currency and policemen \$12 American currency a month. The Manila city engineer, speaking of conditions in his department and related industries, said:

On big jobs the expense of construction work is nearly the same as in the United States. This is true of quarrying. Machine and black-

smith work costs two or three times as much as in America. I mean by this the actual cost to the consumer. Contractors' profits are higher in the Philippines, but they take greater risks. They must import machinery which they may not be able to use again, and even build shops. So when estimated profits of 10 to 15 per cent are a safe margin in America, from 15 to 25 per cent would not be exorbitant in the Philippines. We have had no strikes. There are Spanish and Chinese as well as American machine and joinery shops. Timber is often taken in the log to the place of construction and worked up into beams and planking there. This is partly because of the old custom of buying logs cheap in the country when a man expects to build, and partly because the timber is so hard to cut. For some of the hard woods one has to pay 38 cents silver currency a cubic foot for sawing [\$13.30 American currency per 1,000 feet].

The superintendent of streets, speaking more directly of laborers, said:

We have trouble with the language difficulty. Among every 100 laborers there may be 7 different languages or dialects spoken, so the men and our native foremen can not understand each other. I was in Habana for 2 years in the same capacity as in Manila, and have now been here 3 years, and my experience is that the Filipinos are better workmen than the native Cubans, though not better than the Spanish laborers in Cuba. They are not so devoted to politics as the native Cubans and are more regular workers. The Filipinos do good work when they once understand what is wanted of them. Misunderstandings on the part of the men is the greatest difficulty, and it is not common to get a foreman who has the patience to explain to laborers exactly what he requires.

There is but one railway in the Philippines, if we except a short dummy line in the Manila suburbs. This road is owned and operated by an English corporation, and at present runs from Manila to Dagupan, a port on the Lingayen Gulf, about 120 miles north of the former city. Permits for a number of branch extensions have also been granted, and some of these are at present under construction. The road is a paying venture, and runs through fertile valley country for the entire distance, in the basin of the Rio Grande, Rio Chico, and Agno rivers, which has an area of some 3,000 square miles. It has been in operation since the early nineties, was in the possession of the insurgents for a few months of 1898, and passes through country that suffered exceptionally during the campaign against Aguinaldo. But it has prospered and added greatly to the wealth of the provinces through which it passes. Although the construction is light and the fastest train runs at a rate of only 15 miles an hour, the country tributary appears to be satisfactorily served, and traffic is heavy enough to justify two through and two local passenger trains daily, in addition to freight and mixed trains. Filipinos are employed almost exclusively in operating this road, except in administration and super-

vision. Speaking especially of the labor used in construction and maintenance, the manager said:

Americans are themselves responsible for most of the present labor troubles. They came into a country where the prevailing rate of wages, adjusted to the standard of living and to the cost of production in competition with other countries, was about 32½ cents silver currency, or what would be 14 cents American currency at present exchange rates. Actuated partly by motives of sentiment and by inexperience with tropical labor, the government authorities, in employing men, raised wages nearly 600 per cent, or to \$1 American a day in many cases, and, I may add, they raised the labor cost of works a nearly equal amount. The Filipino, like other tropical laborers, does not increase his output to correspond to higher wages, neither does he raise his standard of living and personal expenditure with increased pay, but he works fewer days and spends more time in idleness. So if you multiply wages by five or six, you divide your supply of labor by almost the same figure. You can not suddenly make a new and artificial wage standard or lift up the standard of living by main force in a country like this. Such changes must extend over a long period—over generations. So we are able to get what men we want to work for us for a wage equaling 15 or 20 cents in American money at a time when some government workingmen are receiving five times that amount. And our men are probably better contented than the others. There has been an increase of about 30 per cent in the rate of wages paid by the railway for formation work, such as grading, to correspond with the higher cost of living on account of the cattle plague and the two short rice harvests. We pay our construction gangs by the amount of work done—from 9 to 12 cents a cubic yard. They do about 2 cubic yards a day, where an English navy would do 8 cubic yards. So while wages are one-fourth, the cost of the work is nearly the same as in England.

We don't want Chinese. The railway concession from the Spanish Government contained a clause permitting us to import Chinese coolies, and we did bring some in for grading on one section, but they were not as successful as the Filipinos. So we employ only Filipinos. Our present construction is delayed some, but not much, by lack of labor. We have to use local labor—that living in the vicinity. I want to repeat, I don't believe an excessive wage attracts the Filipino, and it rather upsets labor.

The remarks just quoted must be understood to apply only to districts where there is a large resident population and labor for construction can be obtained in the immediate vicinity of the works. Malay races keep near the water. Attention has been called in the section of this report dealing with population and statistics to the relative congestion of population in the vicinity of lakes and the sea-coast. The railways needed in the Philippines, however, both for commercial and for strategic purposes, are those which would connect now isolated districts of coast and valley country, and would necessarily run through the interior and cross mountain ranges in order to effect this object. They would not be built for the mere purpose of competing with

coasting vessels over equal distances, but to economize distance, and so time and expense, or to provide constant shipping facilities on portions of the coast now provided with scanty or insecure harbors, or to feed local ports, or to develop fertile interior districts at present inaccessible to markets. Of all these purposes probably the last is the most important. But these interior regions, these mountain ranges, and in general the undeveloped parts of the Philippines, are not well settled. The local labor supply would be entirely inadequate, even were it industrially disciplined and disposed to engage in wage service, for the construction of extensive public works, such as railways and bridges, and for building the highways for transporting materials and supplies, which in most places would be a necessary preliminary to such construction. Therefore the labor problem presents an entirely different aspect from that just quoted for the railway undertakings of the future.

In this last connection the following extract from the report of the engineering expert sent to the Philippines to investigate the question of railway development in Luzon, in 1903, is pertinent:

This (labor) is by far the most important question in connection with the construction of railways. The average native laborer of Luzon does not take kindly to any sort of work except planting and harvesting rice and fishing. An increase in rate of wages does not stimulate him to earn more money, but to put in less time. He is averse to hard manual labor and to working regular hours under direction of a foreman. The labor supply has been reduced by war and pestilence, and what exists is composed of men who are undersized and weak as compared with the laborer of other countries. There is no possibility of building the proposed lines of railway, or any of them, within a reasonable length of time except by the importation of Chinese or other foreign labor. A measure that would aid to some extent would be the passage of a law requiring all able-bodied men residing within a given distance of proposed lines to work a certain number of days per month or year upon their construction, receiving a fair wage for so doing. Some of the government railways of Central America were largely built by laborers of this class, and there was a constantly increasing number of them who remained voluntarily on the works after having served their allotted time. Estimates have been based upon the completion of the three lines within three years after commencement of actual construction, which will undoubtedly require foreign labor. Without such labor the prices given will not apply, as dragging the construction over five or ten years' time would so largely increase the administrative expense and interest charges.

The climatic conditions attending railway construction in northern Luzon, to which special reference is made in the above quotation, would not be materially different from those attending the construction of the Central Railway, recently completed in Cuba. Upon the latter many Gallegos were employed; indeed, the hardest labor was invariably done by Spaniards. The cost of securing a few thousand

South European laborers would be large, but it might be justified upon a government enterprise by the stimulus the settlement of even a few hundred of these people in the Cagayán tobacco country would give to the industry of that valley. The possibility of using a limited amount of Negro labor from the cotton districts of the South, especially if the proposed Batangas railway were undertaken, with the idea likewise of inducing them to remain and introduce cotton cultivation according to the methods with which they are familiar, would be worth considering. As to the general proposition of introducing colored labor from America into the Philippines, an adverse judgment is expressed, with the reasons supporting it, later in this report.

The following table, showing the rate of wages in American currency for unskilled labor prevailing in the principal agricultural provinces in 1903, is formed from data furnished by the insular bureau of agriculture, supplemented and verified by personal investigation. Most of the information was originally supplied by provincial supervisors. Where conflicting testimony appears, two or more sources of information are indicated, and usually each statement is true of certain localities in the province.

CROPS, PRICE OF LAND, AND WAGES IN PRINCIPAL AGRICULTURAL PROVINCES, 1903.

Province.	Principal crops.	Price of land per acre.	Rate of wages per day.
Albay	Hemp, copra, rice	\$0.85-334.00	\$0.42
Antique	Rice, cane, hemp	8.50-25.50	\$0.08½- .12½
Bataan	Rice, cane	17.00-47.60	a .17 - .21
Benguet	Coffee, potatoes	(b)	(c)
Bohol	Hemp, copra	2.55	a .04½- .08½
Capiz	Maize, rice, hemp, copra	17.00	.12½
East Negros	Cane, maize, hemp	3.40-34.00	a .06½
Iloilo	Cane, rice, tobacco	1.70-13.60	a .42
Jolo	Cassava, sweet potatoes, rice, tobacco, copra	(b)	.21 - .42
Lepanto-Bontoc	Rice, sweet potatoes	(b)	.12½
Leyte	Hemp, copra, tobacco	(b)	.21
Mindoro	Copra, hemp, rice .....	.34- 8.50	.21
North Ilocos	Tobacco, rice, maguey	13.60	.12½
Nueva Ecija	Rice, maize, cane, tobacco	1.70- 8.50	.17
Pampanga	Rice, cane, maize, indigo .....	.85-42.50	.21
Pangasinán	Rice, cane, maize, copra	17.00-34.00	.21
Pangasinán	Rice, cane, tobacco, copra	8.50-17.00	.21
Paragua	Rice, copra, hemp, tobacco	1.70	e 1.26- 2.10
Rizal	Rice, cane, vegetables	85.00	.42- .68
Samar	Hemp, copra	(b)	e 2.10- 6.30
Santa Cruz	Copra, cane, rice, hemp	(b)	.21
Sorsogón	Hemp .....	.85-20.40	.42
South Ilocos	Cane, rice, maguey	17.00-58.00	.08½- .17
Surigao	Hemp	8.50	.21
Tayabas	Hemp, copra	17.00	.21
West Negros	Cane, tobacco	4.25-25.50	a .05½- .10½
West Negros	Cane, rice, maize, hemp	1.70-25.50	a .07 - .17

a With board or rations.

b No land in market.

c No wage labor.

d Per week, with board or rations.

e Per month.

In several of these provinces agricultural labor is almost exclusively employed on the share system, and the wages given are those paid for road work. Sometimes the lower wage is the nominal pay for field work, while the higher is that paid for public labor. The lower wages reported in West Negros are for rice, and the higher for cane-field

laborers. The laborer's share in Santa Cruz is one-fifth of the coconuts, and one-fourth of the sugar, hemp, or rice crop. Usually in the hemp districts workmen receive one-half the crop. In Pampanga the laborer's share is from one-fourth to three-fifths of the crop. Lower-priced land is usually fitted only for grazing. In several instances the price given is the assessed valuation, and in some cases even lower. The high price in Rizal province is accounted for by the fact that the tilled land is occupied by vegetable gardens selling in the Manila market. The Paragua (Palawan) lands are native holdings without title. In reports from only two provinces is lack of labor mentioned. One supervisor says: "Men with money and brains are not going to put them into a 16-hectare [30-acre] farm"—the maximum public land homestead that can be acquired under the present law.

The following table of wages in all the provinces has been compiled by the census authorities from more extensive data than have been obtained elsewhere. Discrepancies between the two tables are probably due to the local character of the information contained in the first. The averages in the second are computed from returns from all the municipalities in each province. The high rate paid mechanics as compared with common laborers at some places, like Siassi, is caused by the fact that skilled workers come from other provinces or districts. There are some points in the second table that need to be queried, as, for instance, the high rate of pay for farm labor reported from Antique, relatively to the pay of common and skilled labor in the same province, and to the pay of plantation labor in West Negros. The latter province imports many laborers from Antique every crop season, at a wage varying between \$1 and \$2 Spanish currency and rations, but usually nearer the lower rate mentioned. Probably in such instances the wages of special classes of farm workers have been reported. For instance, plowmen often receive a higher rate than ordinary farm hands.

AVERAGE DAILY WAGES IN SELECTED OCCUPATIONS, BY PROVINCES AND COMANDANCIAS, 1903.

[From the Philippine census. The figures are given in pesos and equivalents in United States currency have not been computed on account of the fluctuations in value of the Philippine currency, as shown on page 739.]

Province or comandancia.	Average wages per day, in pesos, of—					
	Farm laborers.	Ordinary laborers.	Carpenters.	Masons.	Painters.	Blacksmiths.
Philippine Islands	0.55	0.51	0.90	0.89	1.06	1.11
Abra .....	.30	.24	.44	.52	.40	.50
Albay	1.01	.89	1.41	1.49	1.88	2.19
Ambos Camarines.....	.82	.57	1.11	1.10	1.38	1.45
Antique .....	.52	.30	.51	.42	.71	.....
Basilan .....	.63	.50	.69	.....	.....	.50
Bataán .....	.71	.54	1.04	.99	1.01	2.00
Batangas.....	.42	.42	.70	.79	.94	.92
Benguet .....	.20	.70	.54	.....	.....	.50
Bohol .....	.59	.49	.85	.54	.99	.94
Bulacán .....	.73	.62	1.01	.99	1.23	1.12
Cagayán .....	.71	.60	.86	.49	.99	1.04

AVERAGE DAILY WAGES IN SELECTED OCCUPATIONS, BY PROVINCES AND COMANDANCIAS, 1903—Concluded.

Province or comandancia.	Average wages per day, in pesos, of—					
	Farm laborers.	Ordinary laborers.	Carpenters.	Masons.	Painters.	Blacksmiths.
Cápiz	0.33	0.26	0.49	0.52	0.67	0.83
Cavite .....	.67	.79	1.23	1.20	1.45	1.85
Cebu .....	.42	.32	.60	.56	.79	.95
Cotabato .....	.51	.50	.95	.98	1.00	.83
Dapitan .....	.50	.48	.94	.75	.....	.....
Dávao .....	.26	.25	.68	1.00	.....	.75
Ilocos Norte .....	.43	.33	.51	.63	.74	.71
Ilocos Sur .....	.46	.35	.67	.59	.84	.79
Iloilo .....	.44	.31	.53	.70	.82	.92
Isabela .....	.96	.72	.91	1.25	1.21	1.10
Joló .....	.40	.40	1.50	1.50	1.50	1.50
La Laguna	1.02	.93	1.36	1.31	1.47	1.45
La Unión .....	.72	.50	.80	.91	.97	.90
Lepanto-Bontoc .....	.23	.21	.43	.50	.....	.75
Leyte .....	.70	.86	1.45	1.33	1.64	1.72
Manila	1.00	.80	2.00	1.50	2.00	2.50
Marinduque .....	.60	.49	.92	1.75	1.05	1.75
Masbate .....	.54	.65	1.06	1.25	2.00	1.10
Mindoro .....	.37	.35	.55	.58	.63	.75
Misamis .....	.58	.66	.97	.74	.81	1.15
Negros Occidental .....	.33	.37	.54	.67	.91	1.06
Negros Oriental .....	.33	.34	.65	.63	.63	1.09
Nueva Ecija .....	.43	.40	.70	.63	.88	.99
Nueva Vizcaya .....	.33	.33	.58	.75	.58	.78
Pampanga .....	.78	.43	.65	.78	1.01	.78
Pangasinán .....	.53	.45	.76	.71	.79	.76
Paragua .....	.25	.26	.33	.28	.25	.38
Paragua Sur .....	.31	.50	1.00	.75	1.00	1.00
Rizal	1.09	.79	1.33	1.35	1.28	1.41
Romblón .....	.43	.55	.73	.68	.83	1.17
Samar .....	.67	.87	1.21	1.04	1.38	1.69
Siasi .....	.25	.25	2.00	.....	.....	.....
Sorsogón .....	.88	.99	1.40	1.36	1.50	1.73
Surigao .....	.45	.35	.97	1.00	1.10	1.01
Tarlac .....	.55	.52	.82	.81	.94	1.00
Tayabas .....	.71	.66	1.17	1.21	1.71	1.62
Zambales .....	.36	.37	.59	.62	.75	.86
Zamboanga .....	.52	.52	.78	.80	.81	.94

URBAN AND SKILLED OCCUPATIONS.

Skilled occupations are not confined entirely to the larger towns of the Philippines, but they constitute a much less important element of rural employment than in a more highly developed country. The only factory industries found outside the cities and their suburbs are sugar mills, distilleries, oil presses, rice-cleaning mills, and sawmills; but these are as a rule so small, and so large a fraction of the labor they employ is unskilled, that they give no color to the working classes as a whole. One might almost say that every manual worker outside the cities and larger towns was a tao.

There is one exception to be made to this general statement, and indeed an exception that may convey a significant hint as to the future industrial capacity of the Filipino working people. Many thousands of women—it will be remembered the number of looms was reported as 42,000 in 1876—are engaged in weaving the various native fabrics of hemp, cotton, and silk that are employed for local use. These products give evidence of a much higher skill and delicacy of taste than do those woven on native looms in many other parts of the world. Possibly they are only excelled by Chinese and Indian bro-

cedes. Moreover, these textiles are *sui generis*, necessarily original in texture and quality, as they usually contain Manila hemp as one of their materials. Some of these cloths—especially *jusi*, a fine organdie-like fabric of silk and hemp—though not durable, are well calculated, on account of their beauty and delicacy and the chaste and artistic patterns often employed, to find a market in other countries. While the custom of household weaving is found everywhere, and the loom is as universal an article of furniture as the bed in many parts of the Philippines, there are certain provinces that seem to be especially devoted to this industry. Around Iloilo, in Panay, and along the West Negros coast, the loom, with its brilliant, half-finished roll of *jusi*, is to be seen through almost every cottage window. This is equally true in some of the Luzon provinces. There are weaving mistresses who keep several looms busy in their house, employing a number of women and girls as weavers at a wage that in Spanish times was usually a real (12½ cents Spanish currency) a day, but is now more usually a *peseta*, or the equivalent of 8 or 9 cents in American money. These embryo factories are probably increasing in number in Iloilo and Manila, for an active American demand exists for certain patterns and textures of this cloth, and the price has risen. More frequently, however, such work is paid for by the piece, and is bought in or woven on shares for small dealers. A *jusi* merchant woman in Bulacán informed the writer that she gave her weavers material for 10 pieces, receiving 5 pieces of cloth in return. A woman constantly employed can weave a 5-vara (4.57 yards) piece of the plain *jusi* in three days, though, of course, the time required varies with the pattern and quality of the cloth and the deftness of the weaver. These 5-vara (4.57 yards) pieces were of a fabric sold in the local market for native use at \$1.25 silver currency (53 cents American currency) each, or about 11½ cents in American money an English yard. A woman constantly employed would therefore earn about 18 cents in American currency a day. Upon an average they receive much less, because they work short time. The informant in question estimated their daily earnings at 20 cents silver currency (8½ cents American currency) a day. She stated that a woman with a baby could not earn so much as one without this unfortunate impediment.

The Moro women still weave bright plaid and striped sarongs of cotton, using a loom simpler than that of the Filipinos, and more resembling those used by some American Indian tribes for weaving blankets. This industry is passing away under the competition of Manchester cloths. Among the varieties of cloth woven by the Filipinos are: *Sinamaye*, a cheap hemp fabric, used for shirts and blouses, selling for about 10 to 25 cents silver currency (4 to 10½ cents American currency) a *vara* (about nine-tenths of a yard); *tuiampipi*, a very fine hemp cloth, worth 40 to 50 cents silver currency (17 to 21 cents

American currency) a yard; and jusi, which has already been described, which contains silk, usually in combination with cotton, piña, or very fine hemp, and which is woven in pieces of 24 varas (about 22 yards), usually three-fourths of a vara wide, and sells at from \$10 to \$15 silver currency (\$4.20 to \$6.30, American currency) apiece in the local market. In La Unión and Ilocos provinces, in northwestern Luzon, very fine cotton and silk shawls are woven. Some of the latter sell for \$100 in silver currency (\$42 American currency).

A cotton mill, erected by English capital and using English machinery, has been in operation in Manila since 1897. This establishment was closed temporarily at the time of the writer's visit on account of the high price of cotton. The mill employs about 250 Filipinos, spinning yarns and weaving cloth. The natives learn easily, and machinery is run at full speed, but the best workmen attend only half as many looms as an English operative. The main objection to the Filipinos is that they are not steady, though some have been in the mill since it commenced operations. Many employees leave as soon as they have become fairly expert at their occupation and there is no surplus of trained hands upon which to call, so the mill is always hampered with a large body of learners—like a textile school. This is an important point to be considered with respect to all factory enterprises and other enterprises requiring skilled labor in the Philippines. There is no industrial army of trained men ready to be ordered to the front, as in older and more developed countries. Every employee is a raw recruit. Only time can overcome this obstacle to industrial development in the Philippines. In the establishment just mentioned, men who do not leave the mill permanently take advantage of their practical monopoly of skill to enjoy holidays at will or foment petty strikes—though no serious disputes have arisen in this industry. During 1903 there were three minor strikes, all against piecework, but they were unsuccessful. The Filipinos appear not to like the system of payment by results in factory operations. All these difficulties occurred among younger employees—the ring boys and girls—but were probably instigated by older workmen in other departments. Male weavers are preferred, as the native women are not strong enough to fix their own beams. Weavers never attend more than four looms. Employees refuse to work nights or overtime. All payment is by the piece and earnings therefore vary, but the amounts received by operatives for a full week's work were between the following figures, for 9 and 10 hours a day:

MINIMUM AND MAXIMUM WEEKLY WAGES OF WEAVERS.

	Minimum.	Maximum.
Boys	\$1.26	\$1.85
Women (tenters, reellers)	1.68	2.52
Male weavers	3.36	4.20

The cotton used is mostly imported, though the managers of the mill are encouraging the production of native cotton, and distribute free seed to intending cultivators. The mill has used a combination of one-fourth native with three-fourths imported American cotton satisfactorily. The cotton at present raised in the islands, while employed to some extent in native fabrics, has too short a staple for factory use. The competition of Japanese yarns and of Madras cotton cloths is felt severely, and the capacity of the plant would be doubled were it not for the presence of these rivals in the local market. Fire insurance premiums are 2 per cent, taxes are high, labor is dear in proportion to its productive capacity, and coal, which is imported from Japan, costs \$15 to \$16 silver currency (\$6.30 to \$6.72) a ton delivered. For these reasons, the manager stated, free trade with the United States would close the mill under present conditions, as cotton yarns and cloths can be manufactured in America cheaper than in the Philippines, despite the lower rate of wages in the latter country.

Weaving hats, mats, baskets, and various coarser grass, palm, and bamboo or rattan fabrics employs the people to some extent in all parts of the Philippines, and engages practically all the workers of some villages. No definite rate of earnings can be stated for these occupations, as they are followed at odd hours as household employments. If an export demand could be created for the better grades of Philippine hats, their manufacture might be made a thriving industry in Luzon and some of the other islands. At present the exportation of these and kindred articles varies. It reached a maximum of \$181,162 American currency in 1902, but fell to \$84,625 in 1904. The hats themselves are equal to high-grade Panamas in workmanship, and some varieties afford even a lighter and more agreeable head covering for warm weather. It is not probable that the hand-woven matting could compete with the machine product in America, though some of that produced in the Philippines is of a much finer quality than can usually be obtained in the United States. Nothing seen in the Philippines, however, equals the Niihau grass mats of Hawaii. A coarse matting, of almost hurdle-like structure, is used for siding houses in the Philippines, as in most of the East Indian islands. While not as durable this matting when whitewashed or painted gives almost as substantial-appearing and weatherproof walls as ordinary pine siding.

According to the United States census report there are 78 sawmills in the Philippines, employing 1,531 hands. A large proportion of the lumber manufactured in the islands is still sawed by hand by Filipino laborers, usually under the supervision and in the employ of Chinese merchants. This sawing is done by two men with a cross-cut saw or magnified buck saw, after a fashion that some very old people may still remember to have seen in remoter parts of America. A log, hewn

roughly square, is supported on high horses—6 or 8 feet from the ground, if an up and down stroke is used, and at the height of a man's breast if a horizontal stroke is employed—the foreman chalks lines on two sides, and two coolies, alternately pulling on the instroke, do the sawing. The work is paid for customarily by the surface foot. In Iloilo, where there was a large amount of building under way to replace the portion of the city burned by the insurgents before evacuating the place in 1898, sawyers were paid 5 cents silver currency a square foot, a trifle over 2 cents in American currency. According to one employer two men could saw about 40 to 50 Spanish square feet (32 to 40 American square feet) a day, and earned upon an average \$1 silver currency (42 cents American currency) each at this labor. An American employer stated that it cost \$32 American currency to cut 1,000 feet of lumber in this manner. The same rate of 5 cents silver currency a foot was paid for hand sawing in Masbate, and this seems to be a common rate throughout the islands.

One difficulty with this hand-sawn lumber is that it does not come in standard dimensions, and it requires a great amount of dressing to produce anything approaching uniformity in the thickness of a single piece. This reveals itself later in inaccurate and crude construction wherever, as in houses and large joinery, entire lengths are used. This difficulty is less felt in coach and cabinet work. Much timber is wasted by unintelligent sawing. Four logs were used in one case noted in order to get what might have been obtained from two. Where large construction is undertaken, the timber is usually brought to the building where it is to be used in the log, and sawed into required dimensions on the spot. Workmen were observed finishing the interior of a large addition to the Jesuit college and observatory at Manila. Ceiling timbers, siding, panels, flooring, sash, screen lattices, and shelves and sides for book cases were all made from timber sawed upon the spot. Not an article of these, so far as was observed on several successive visits, was brought to the building ready-made, or even in sawn lumber.

The Filipinos make fairly efficient mill hands and probably their competition would drive Americans out of this occupation even were there an ample supply of white labor in the islands. One sawmill was sawing 6,000 to 7,000 feet of lumber a day with a crew of 16 natives. The proprietor said that 8 or 10 Americans could do the same work; but they would have received more than double the wages of the Filipinos. An American head sawyer had been employed at \$6 American currency a day, but he had left his position to return to the States. The Filipino head sawyer who took his place was paid \$2 silver currency (\$0.84 American currency) a day. The other hands received from 40 to 60 cents silver currency (17 to 25 cents American currency) a day. The men were not regular, so that a few extra hands

were always needed within calling distance to provide for sudden vacancies. In a mill of about equal capacity, which was started in May, 1903, in Isabela de Basilan, in the Moro province, where there had been no similar establishment previously, 30 Filipinos resident in the locality were employed. They were paid 80 cents silver currency (34 cents American currency) a day. They were under the immediate direction of a working American manager, and kept the mill going at full capacity. Logs had to be brought from the bayou by hand, and considerable lumber was piled in stock, so part of the men were engaged in yard labor. Their employer said they would do as much piling and general millwork as an equal number of Americans in the same climate; but that it has taken much time and patience to get them to pile lumber straight. They had learned this lesson well, however, when the mill was visited, six months after beginning operation. This mill was the only employing industry in the place, and had no difficulty in getting either labor or logs. This village presented a striking instance of the benefit which a comparatively modest undertaking of this kind is to a people. In half a year it had changed stagnation to an active enterprise that seemed to be contagious; everybody was employed whether in the service of the mill or not, and the people presented a more prosperous appearance than in any other equally small and remote village visited in the Philippines.

One of the larger mills in Manila pays Filipino workmen \$1 silver currency (42 cents American currency) a day, and some Chinese and Japanese hands \$2.50 silver currency (\$1.05 American currency) a day. The logs are too heavy to float, and so are brought in in barges and handled with a steam crane. Some logs were reported to weigh 8 tons. The manager of this mill was very emphatic in his advocacy of Chinese labor, stating that a Chinese employee was worth two Filipinos, and that he paid them double or treble the wages paid the natives because they were worth it. This employer, however, spoke very highly of the faithfulness of Filipinos in certain instances. "Many of our Filipino workmen," he said, "prove very loyal. Recently on a special job they worked from 7 a. m. Tuesday to 12 p. m. Thursday with only 6 hours sleep and their rest during meal times. I offered to let them off at 6 p. m. Thursday, but they preferred to finish the job. All were Filipinos except two American foremen. They were paid only the usual time rates."

In considering the efficiency of Filipinos as skilled sawmill hands, it should be remembered that none of the country mills is at present provided with complex or delicate machinery. Band saws are used for log sawing only in Manila, and the circular saws used in the country mills have insert teeth, so that there is little filing or setting. Filipino workmen, with a very little direction, can keep such a saw in very

good condition. The mechanical problems that present themselves are therefore simple, and a single American manager or foreman is usually the only skilled operative needed. Even the engineer needs little more knowledge of his business than would be required to run a threshing-machine engine or a road roller. The pay roll of mills, similar to those common in the United States, would naturally contain the names of a number of white foremen if they were running at the present time, but the impression of the writer is that Filipino mill workmen will acquire all the skill required to run more complicated machinery sooner than they will the physical strength necessary to do the heavier manual labor around such establishments.

The transition from lumber sawing to carpentry and from carpentry to cabinetmaking is not marked by a well defined division of plants and occupations in the Philippines. As just remarked in connection with the work upon the Jesuit college in Manila, the woodworker takes the log, as the sculptor does the block of marble, and fashions from it whatever is required. Though the hand sawyer may seldom drive nails or fashion a joint, he earns about the same wages and works under about the same conditions as the rough carpenter. His occupation, too, requires a certain degree of skill.

The Chinese almost control woodworking trades in the larger towns of the Philippines. There are comparatively few houses of frame construction except in the coast cities and some of the larger municipal centers. The native usually lives in a nipa-thatched cottage, with bamboo floors raised some feet from the ground on piles. Where these piles are very long, in case the house is elevated considerably and the posts run to the eaves, they are sometimes jointed. Usually the keyed dovetails made by native workmen for this purpose are as secure and accurate as the most skillful white carpenter would make, and hold without bolts or iron fastening. Indeed these joints were hardly observable without close inspection of the posts. But as a rule the joining done by the natives is crude, and often reminds one of the work of children rather than of grown men. They show more skill and ingenuity in preparing their nipa shingles and thatches, and weaving their matting walls, and a native house constructed of these materials, with an open bamboo splint flooring, can be made an exceedingly cleanly, cool, and comfortable habitation in the Tropics. A person can sometimes sleep comfortably in a nipa cottage when he would swelter in the close heat of a frame or masonry building. The construction of these native houses is not a separate employment of any particular class of workmen. Each laborer, with the assistance of a few neighbors upon occasion, and of the members of his own family, builds his own home, and attends to the almost constant repairs which this fragile form of construction demands.

The Chinese carpenters employed in the Philippines possess only a modicum of skill in house construction, if their work is to be judged by the finished product. Frame houses are proportionally more common in the Philippines than in Spanish-American countries—probably because Chinese mechanics so nearly monopolize the building trades. The fear of earthquakes, which may have helped to popularize this lighter form of construction as compared with masonry in Manila, has not been sufficient to counteract the Roman, brick-and-mortar, instinct of the Spaniards in other earthquake countries, where they have trained their own labor. The crudity of Chinese carpentry is partly due to the irregular dimensions of their lumber, as already mentioned. These workmen are extremely slow and methodical. It took two years to build a 3-story, 20-room hotel in Manila, with simple plank walls and partitions, and hardly more interior work than a careful American farmer would put into a barn.

Building mechanics often reside in the houses they are constructing from the time they are inclosed, and even earlier occupy temporary shelters which they erect upon the site of their labor. Native carpenters in the country receive about 50 cents silver currency (21 cents American currency) a day, and sometimes their rations of rice, at least for the midday meal. Employers in small places are said thus to find provisions for their carpenters because men who go to their homes after working half a day seldom return again until the following morning. The custom of allowing mechanics to reside in buildings under construction may therefore consult the advantage of the employer as well as of the employee, securing the former more regular labor, while it lessens the cost of living for the latter. The families of workmen seem to enjoy the same rights of temporary tenancy as the workmen themselves. Only native carpenters are found in the small towns, where the Chinese population is usually engaged wholly in mercantile pursuits. These Filipinos in the cases observed were turning out as good work as the Chinese in Manila. A form of peonage is occasionally found in this employment in remote places, where the contractor employs permanent debtors in building operations. In La Unión province Filipino boss carpenters receive 75 and journeymen 50 cents Philippine currency ($37\frac{1}{2}$ and 25 cents American currency) a day; but in some of the north Luzon provinces, notably Isabela, American employers reported it hard to get native carpenters even at \$1 and \$1.50 Philippine currency (50 and 75 cents American currency) a day. In the province of Albay, where the profits of share cleaning of hemp influence the rate of wages in other occupations, carpenters are paid \$2.50 silver currency (\$1.05 American currency) a day. Native carpenters employed in building a new market at Malolos were paid \$1.25 Philippine currency ($62\frac{1}{2}$ cents American currency) a day. The provincial supervisor reported that the men learned new ways of

working readily, and were fairly regular except on local fiestas. They did about one-third what an American carpenter would accomplish. Both natives and Chinese were employed at Iloilo. Carpenters were receiving from 50 cents to \$1 silver currency (21 cents to 42 cents American currency) a day. In the town of Cebú, which as a hemp port was enjoying rather more prosperity than the sugar port of Iloilo, carpenters were paid from \$1 to \$1.50 silver currency (42 to 63 cents American currency) a day. In Masbate, a smaller port, an American employer who was working his men systematically but not severely paid \$1.75 silver currency (74 cents American currency) a day, but the usual rate of wages was stated to be \$1 to \$1.50 silver currency (42 to 63 cents American currency).

Filipinos as well as Chinese are relatively more efficient at other woodworking trades than at carpentry and large construction. Their physical strength, their tools, the materials they use, and their methods of work are all better adapted to the lighter occupations of cabinet-making and coach building, small-boat building, and similar trades. A native can work much better from a model than from a plan; he can fit very accurately by eye where he can not by measurement; the irregular dimensions of his material are no hindrance to well-finished work where all materials have to be dressed down to smaller sizes before being used. The Malay races ought to have an inherited aptitude for boat building. The commandant at the Cavite navy-yard mentioned especially the skill of his Filipino employees in the small-boat department. An American contractor who has a yard for constructing small boats and barges in the neighborhood of Manila, and is an experienced and intelligent observer of labor conditions in America and the Philippines, and who can be classed among the successful users of native labor in the latter country, thus summarized his experience with Filipino boat carpenters:

I have been in business here two years and had to train my own men. They are apt in learning from imitation, but don't quickly apprehend verbal explanations. I work about 70 Filipinos and no Chinese. The two races don't work well together, and for my work, such as wooden-barge building, I prefer Filipinos to Chinese. I believe that the Filipino when trained by American foremen is as good or a better workman than a Chinaman. Natives will do work as directed. As soon as your eyes are off of a Chinaman he will go back to his old way of working; but the Chinese are more persistent, and will hang on a dull job better than a Filipino. I pay eight or ten laborers who carry lumber and rough paint \$1 silver currency [42 cents American currency] a day. My best-paid Filipino carpenter, who has been with me two years, gets \$5 silver currency [\$2.10 American currency] a day; that will be in Philippine money after the first of the year. Most of the others get \$2 silver currency [84 cents American currency] a day. Ten or fifteen old hand carpenters get \$2.25 silver currency [95 cents American currency]. They are good men with the adz. I have one former coach builder who does my iron work and bolt mak-

ing. It is very simple work. We work from 7 to 12 a. m. and from 1 to 5.30 p. m., but the men fiddle away about half an hour getting to work, so I count on about 9 hours of good service. Those calkers haven't steady work. The foreman gets \$3 silver currency [\$1.26 American currency] and the others \$2.50 silver currency [\$1.05 American currency] a day. The Filipinos take very kindly to labor-saving devices. They are the opposite of the Chinese in that respect. If we had the same devices as in the States, the labor cost of barge and boat making would be less than there; as it is, it costs more. I had 3 barges to get out on contract time—on June 11 of last year. It was very hot weather and the men were not working well. About one week's work remained to be done. I offered the men full wages and \$5 extra for finishing the job on time. They got through in four days, and so got two days' pay and \$5 silver currency (\$2.10 American currency) in addition.

My head men, who are a nucleus, are always on hand. The others have many relations die or some other excuse for being away from work. When they are well satisfied with their employers the Filipinos are very loyal. I had eight or ten men working aboard a tug last year when one of the crew died of cholera. I got permission to quarantine them aboard the boat, and they worked until the contract was finished, although it would have been easy enough for them to escape. They told me afterwards that they would have left, only they preferred to stick by the job for me. Some of the slowness complained of with Filipinos is due to the lack of sense of their own employers. I have seen painters put to work to paint a galvanized-iron roof in this city with pencil brushes.

The statement that Chinese and Filipinos do not work well together was also made by other employers. Among these was a coach builder, who had adopted the policy of employing only natives for this reason. He said that his men did very good work, but were slow. They were paid \$50 to \$60 silver currency (\$21 to \$25.20 American currency) a month, and were partly engaged in repairing and constructing for the proprietor of the establishment, who ran a large livery stable. Wages are more usually rated by the day in establishments repairing exclusively, and by the month in manufactories. Natives are almost exclusively employed, though many of the employers are Chinese. As men are frequently boarded, and there is more or less of the *criado*, or at least of a domestic organization of business, reported wages are often misleading, for in estimating wages the employer makes a liberal allowance for the cost of lodging and feeding his employees. This applies especially to the pay of apprentices and helpers. Though the rate of pay reported ranges considerably higher in many instances, natives familiar with this occupation say that men are seldom paid more than \$1 silver currency (42 cents American currency) a day, and a wage of half this amount would be the average for the large number of helpers and apprentices employed in this occupation.

Although most of the furniture manufactured in Manila and the larger towns of the Philippines is sold by Chinese merchants, and

Chinese workmen are chiefly employed in its manufacture, there are also very skillful Filipino cabinetmakers in the islands. A discharged American soldier opened a cabinet shop in Iloilo, where he now employs about 30 Filipino mechanics whom he trained himself. The process of teaching a considerable number of workmen requires time and patience, especially if a shop must be made to pay from the start, but this employer succeeded. He said that work cost about twice as much as in the United States, but that with fully trained men and more specialization of labor the cost of manufacturing furniture could be made lower than in America. His employees worked 10 hours, from 6 to 12 a. m. and from 2 to 6 p. m., but they "soldiered" away part of their time. Occupations were not specialized, and men were simply rated according to skill. One man was paid \$1.20 silver currency (50 cents American currency), another \$1.15 silver currency (48 cents American currency), and another 95 cents silver currency (40 cents American currency) a day. Twenty men received 75 cents silver currency (32 cents American currency) a day. A number of boys were paid 40 and 50 cents silver currency (17 and 21 cents American currency) a day. The shop turned out bedsteads, wardrobes, tables, and chairs that were equal to those made at Manila, and in durability, if not in design and finish, compared favorably with medium American factory furniture. In Zamboanga a white carpenter was employing Filipinos at cabinetmaking to fill a government contract. The men were paid 50 cents silver currency (21 cents American currency) a day. It took 2 men 15 days to make 3 tables that would cost \$3 American currency each in the United States. Including material, these tables cost the contractor \$8 American currency each, and he lost money on the contract. Some excellent, well-finished, flat-top, native hardwood desks, made by Filipino workmen, were seen at Masbate. All the joining and dovetailing were perfect, and the desks were as well built and finished as if made to order in America.

Guitars are manufactured in Manila and some of the provincial towns. The workmen are Filipinos, and division of labor was observed in this occupation. There are no large factories, and usually every competent workman is his own employer. Helpers receive 50 cents silver currency (21 cents American currency) a day. In Iloilo one of these makers completed a guitar in five days, upon an order. He furnished his own materials, except the strings, and charged \$5 silver currency (\$2.10 American currency) for the completed instrument. The making of canes, some of them with silver heads, and of carved swagger sticks is another minor industry of a similar character, unimportant from the point of view of employment, but indicating skill and ability to produce well-finished and exact or artistic work. Still more suggestive in this relation is the Paete wood carving. For over a century this little village, on the east

shore of Laguna de Bay, about 50 miles from Manila, has been the center of an artistic furniture and wood-carving industry. The statues and fine screens and carvings in the Philippine churches are mostly the work of Paete craftsmen. This church demand may have been the reason why this industry sprang up on the great market highway of central Luzon. Some of the furniture made in Paete follows models and designs that suggest Chinese influence, and probably an oriental as well as a Christian suggestion is behind this work. Possibly imported Chinese furniture was imitated in certain instances, and designs derived from this source became traditional, for a new influence of this sort has manifested itself since the American occupation, and the Paete shops are now manufacturing chairs after the latest American models. The provincial building at Santa Cruz, not far from Paete, contains Paete interior decorative carving showing much taste and skill, though probably the designs are Spanish. Such superiority as the work has consists in technique rather than in originality. There are many incongruities and amusing anachronisms in the religio-historical statuary made at Paete. The price of high-grade work is said to have risen 300 per cent since the American occupation. Much of this carving and manufacturing is done in private homes, but there is an establishment in the village that attains the dignity of a factory. Employment is on a wage basis, and men receive \$1 silver currency (42 cents American currency) a day, upon an average. They recently learned what skilled wood carvers were paid in the United States, and struck for an equal wage. Naturally this was unsuccessful. The proprietor of this establishment explained that the men did not accomplish the same amount of work as American wood carvers. The evidence of all these minor woodworking trades points to considerable deftness and aptness for certain forms of mechanical work on the part of the Filipino, and it is probable that his clumsiness in larger construction is to be accounted for by causes that lie outside of himself. If he ultimately fails as a building mechanic it will be because he can not apply figures and measurements intelligently in structural work, not because he can not attain a manual mastery of his trade.

Masonry construction, as already remarked, is not as common in the Philippines as in other countries that have been under Spanish rule. The master masons, like the carpenters, are mostly Chinese. Walls of a very soft, easily dressed limestone are often built around private grounds and groups of tenements in Manila. These stones are dressed with a broad adz or a hatchet-like tool by Chinese stonecutters. Bricklayers lay about 300 Spanish brick a day. In Iloilo their daily wage varies from \$1 to \$1.50 silver currency (42 to 63 cents American currency). Some boss bricklayers in Manila were paid \$2.50 silver currency (\$1.05 American currency), but ordinary journeymen received about the same wage as in Iloilo. Helpers, mortar mixers, and coolies (car-

riers) receive the wages of unskilled laborers, from 50 cents to \$1 Spanish currency (21 to 42 cents American currency) a day. In the hemp province of Albay bricklayers were paid \$2.50 silver currency (\$1.05 American currency) in 1903. Masonry construction is about as poor in its way as frame construction. An instance was observed in Manila, where a tile floor was relaid five times before a passable job was secured. This floor was estimated to cost about a dollar a square foot, and it took seven weeks to complete it.

There is little specialization in the building trades. Filipinos seem to be relatively most numerous among the painters. The same man will present himself one day as a carpenter, the next as a painter, and apparently receives the same wages for both kinds of labor. Very little is known about mixing paints, though fairly accurate color results are secured. No drier is used in some house painting; two or three months after application a coat of interior wall paint was observed to remain sticky in places.

American plumbing firms are engaged in business in Manila, but most of the minor jobs are done by the Chinese. The latter are the poorest possible mechanics in this field, and a case was instanced where an entire installation had to be taken out and replaced by an American plumber after a Chinese contractor had made two ineffectual attempts to put in a plant that would work. The proprietor of an American firm said:

We employ no American journeymen, because the men we have been able to get would go off on a drunk when most needed, and so Filipinos have proved more reliable. We employ no Chinese, only Filipinos and American foremen. We pay our American foremen \$5 and \$6 American currency for a 9-hour day, and pay one Filipino \$6 silver currency [\$2.52 American currency] and the others \$4 silver currency [\$1.68 American currency]. Laborers get \$1 and \$1.50 silver currency [42 and 63 cents American currency] a day. The native journeymen do neat work, can wipe a joint and turn out as good a job as anybody, under American supervision. We encounter competition from Chinese and Filipinos. They work from sunrise to sunset and cut prices down to the lowest figure, but they do very poor work. All the plumbing in the Bay View Hotel had to be replaced; some others have been torn out several times. We are often called upon to do jobs spoiled by the Orientals.

Machine shops and ship building and repairing works employ more highly skilled mechanics than any other establishments in the Philippines. The firms of this kind in Manila and Cavite number 9 and employ 3,782 hands. Besides these there is the navy-yard at Cavite, employing from 2,000 to 3,000 mechanics, and smaller private shops exist at Cebú and Iloílo. Much complaint was heard in this business of the competition of the Hongkong and Shanghai yards, and it was from these firms that the most insistent demand for Chinese labor was encountered. The changes made by the American Government, espe-

cially in tariff and immigration legislation, have particularly affected this industry. The dependence of employers upon Chinese skilled labor has been greater in these occupations than in any other. Relatively to the field of employment there is a small supply of trained Filipino workmen. The influence of the higher wages paid in the Philippines, as compared with Chinese ports, is earliest and most acutely felt in a line of manufacture that has, so to speak, an ambulatory product. The cost of a steamer or launch is not materially increased by delivering it over 600 miles of salt water, nor is the cost of repairing much greater if one sends a vessel the same distance for docking. A very slight difference in wages will more than counterbalance the additional expense of transportation and enables the foreign competitor to underbid his local rival. The use of machinery in the Philippines is so limited, outside of water transportation, that no local support of importance is given the metal-working trades outside the dockyards. For these reasons, now that Chinese are excluded and wages have risen greatly in the trades they so largely monopolize in Manila, there is at present a severe depression in this old established industry.

Speaking of the rise of wages in these occupations since the American occupation and its effect on the cost of production, the manager of one establishment said:

I was foreman of the Cavite yards in 1899 when the best-paid man in the shops received but \$1.50 silver currency a day. Now my best paid men here get \$4 silver currency [\$1.68 American currency] a day. I recently figured on a contract for a Government launch which was finally given to a Hongkong firm. Their price was \$1,900, and mine was \$2,300. The difference in price was simply the difference in the cost of labor in the two places. Why should the Government keep the Chinese out of Manila and then give them its work to do in Hongkong?

COMPARATIVE HOURS OF LABOR AND WAGES PER DAY (AMERICAN CURRENCY) IN FOUNDRIES AND MACHINE SHOPS, FOR 5 SELECTED CITIES.

Occupation.	Habana.			Honolulu.			Hongkong.			Surabaya.			Manila.		
	Hrs	Wages.		Hrs	Wages.		Hrs	Wages.		Hrs	Wages.		Hrs	Wages.	
		Mini- mum.	Maxi- mum.		Mini- mum.	Maxi- mum.		Mini- mum.	Maxi- mum.		Mini- mum.	Maxi- mum.		Mini- mum.	Maxi- mum.
Blacksmiths.....	9	\$1.80	\$3.60	9	\$2.00	\$4.50	11	\$0.42	\$0.50	10	.....	\$0.60	9½	\$0.53	\$1.47
Boiler makers....	9	1.80	3.60	9	2.12	4.50	11	.42	.50	10	\$0.34	.80	9½	.88	1.47
Carpenters.....	9	1.80	3.60	9	.....	3.00	11	.....	.28	10	.20	.60	9½	.84	1.58
Laborers.....	9	.90	1.35	9	1.80	2.05	11	.....	.16	10	.15	.20	9½	.35	.42
Machinists.....	9	1.80	3.60	9	2.25	4.15	11	.42	.50	10	.34	.80	9½	.50	1.37
Molders.....	9	1.80	3.60	9	2.78	4.08	11	.42	.50	10	.32	.80	9½	.84	1.68
Pattern makers..	9	1.80	.....	9	3.50	4.50	11	.28	.42	10	.32	.60	9½	.95	1.05

The wages of foremen are not included in Habana or Honolulu, and the salaries of white foremen are not included in the three other cities for which data are given.

The rate of wages paid in Manila is therefore less than one-half the

rate paid in Habana or Honolulu, but in the latter two places the workmen are white mechanics, whose labor efficiency is two or three times that of the oriental and Filipino mechanics employed at Manila and Cavite. The factor of labor efficiency is probably about equal at Hongkong, Surabaya (Java), and Manila, although the Chinese at Hongkong are steadier workers, and the Madurese Malays at Surabaya, who have been trained mechanics in this arsenal and shipyard center of the Netherlands Indies for generations, probably possess more skill and application than the Filipinos. So, if any difference exists in the quality of the workmen in these three places, it is probably to the disadvantage of Manila. Meantime wages in that city are nearly double the rate at Surabaya and fully treble those paid in the neighboring and competing port of Hongkong. In this estimate the hours of labor, as well as the wages per diem, are considered. When we add the fact that this difference in labor price has arisen within the short period of the American occupation and has largely occurred since 1900, the serious disturbance in the condition of this industry, which probably engages more capital and employs more skilled labor than any other in the islands, will be appreciated.

The total number of mechanics in the service of the 15 machine shops of Manila in 1903 was, according to the census report, 918. There were also 147 employed at Iloilo. In the latter city the best mechanics, both Chinese and Tagalogs, come from Manila and receive \$2 to \$2.50 silver currency (\$0.84 to \$1.05 American currency) a day. But the work done is mostly repairing and is seldom of a character to require the employment of the most highly skilled workmen. Also the cost of living in these towns is somewhat less than in Manila.

Filipino mechanics in the metal-working trades are said to show aptitude, learning readily the technique of their craft and acquiring a fair, practical understanding of the mechanical principles applied to tools and machinery. They make careful and accurate fitters. But they avoid those branches of their occupation that involve hard physical labor or disagreeable surroundings, such as boiler making. As was noted by an employer already quoted, they are readier than the Chinese at bridge building, rigging, and high structural work. The Mongolian will delve underground or dive into a dark boiler, tasks disagreeable or terrible for a Malay, while the latter will ascend heights and swing himself into the air from scaffolds with a venturesomeness that the Chinaman never seeks to emulate. Only Filipino mechanics were engaged in erecting a large cigar factory in Manila, where the construction was entirely of iron sheeting over a spider frame of steel. These men worked rapidly and skillfully. They were paid \$2 and \$3 silver currency (84 cents and \$1.26 American currency) a day. In Singapore a large, three-story, steel-frame commercial building was observed in process of construction. While the masons and

carpenters employed were Chinese, all the riggers and structural iron workers were Malays. The Filipinos are said especially to excel in sailmaking, and, although they do not work as rapidly as Americans, their output, in proportion to their wages, is larger. The commandant at the Cavite navy-yard said: "Chinese workmen form about 5 per cent of the 2,000 men we employ, but they are decreasing in numbers relatively to the Filipinos as we can train native workmen to take their places. As yet all our molders are Chinese, but there are many Filipinos employed in the boiler shops. Upon the whole, work is cheaper in Cavite than in the United States, and the cost of work here is decreasing every day—not because we are lowering wages, but because we are getting better trained workmen. Our work is principally repairing, as we have no facilities for shipbuilding or manufacturing. Our sailmaking is done extremely well and at satisfactory prices. The same is true of small-boat building. Young Filipinos learn readily, but the older ones give us more trouble. If employed constantly our Filipinos are as regular as any labor I have ever used, but if not employed constantly they are not so steady. We need more good American foremen." In one of the largest shipyards in Singapore, where many Chinese are employed, all the molders are Malays.

Blacksmithing is a trade of remarkably little importance in the Philippines, considering the fact that the people are agricultural and employ much animal cultivation. The plows used are so simple and substantial as to require few repairs. The same is true of the rude country vehicles used where roads permit of wheeled transportation. Ox carts and a sort of sledge or "go-devil" are made entirely of wood. Draft animals are usually unshod. Horseshoers in Manila receive 50 cents to \$1 silver currency (21 to 42 cents American currency) a day. The government pays the same nominal wages, but in American currency.

It is exceedingly difficult to secure reliable information as to wages, hours, and general conditions of employment in the small mechanical trades followed in the cities and supplying the daily wants of the community, such as tailoring, boot and slipper making, and food preparation. Most of the employers and many of the employees are Chinese. Their books are not available material for information. Their statements regarding the matters investigated are not reliable. The conditions of work are not well defined. No general standard of wages and hours of labor prevails. Many employees board with their employers. The younger employees, helpers, and apprentices are often engaged under the "criado" system, a form of domestic peonage mentioned later. Profit sharing and piecework at fixed rates, or under some form of share payment, are common. Workmen under this system are employed irregularly. Trades and occupations within the same trade are not differentiated, and workmen are not classified

according to skill into the well-defined ranks of masters, journeymen, helpers, and apprentices. Industrial service is much like domestic service and is often confused with the latter. A statistical picture of these conditions would be as unreliable as an algebraic formula for the weather.

A cutter in what was probably the best tailor's shop in Manila was paid \$100 American currency a month. This man was a Spanish creole. Tailors regularly employed received \$35 silver currency (\$14.70 American currency) a month. The cost of making a coat in this establishment was estimated at \$4 silver currency (\$1.68 American currency) and that of making a pair of trousers \$1 silver currency (42 cents American currency). A well-informed Filipino labor leader said that sewing women usually earned about \$8 silver currency (\$3.36 American currency) a month if they worked steadily; but that a few especially skillful hands, employed on expensive garments, could earn \$20 silver currency (\$8.40 American currency) a month. Shoe and slipper makers are paid on a piecework basis, and there is little or no division of labor in these occupations. A man receives 60 to 75 cents silver currency (25 to 32 cents American currency) for making a pair of shoes. He may earn \$1 a day in Manila. According to the city assessor's statistics there are no importing tailors in Manila, but there are 16 who occupy larger shops and 217 who occupy small shops and doorways. The city has one importing bootmaker, 15 who occupy larger shops, and 46 occupying small shops and doorways. These figures do not take into account the large number of slipper makers, who manufacture the usual footgear of most Manila residents who do not dispense altogether with this superfluity.

Besides the palm hats woven in the Philippines there are some felt and straw braid hats manufactured in Manila by a German firm which has a hat and umbrella factory in that city, and also operates a match factory in the Pasig suburbs. The manager of this establishment said:

We employ about 400 in the hat and 120 in the match factory. About one-half of these are women. Wages have increased 40 or 50 per cent since the Americans took the islands. The change from "Mexican" to "Conant" [Philippine currency] money will mean another increase of 20 per cent, as exchange rules at present. Our hands work very irregularly. The cost of doing work is twice what it is in Germany. We pay about a dollar silver for work that would cost a mark [24 cents] in Germany. Our people work from 7 to 12 a. m. and from 1 p. m. to 5 or 6 p. m., according to the season. We are beginning to export some, but the duty on materials used in manufacture—such as braid, wool, gum, leather, and ribbons, hampers us. We should have a rebate on these materials when we export them again in finished goods. We make wooden matches entirely. The wood is imported in blocks from America. We are introducing women in all machine work in both factories where possible, because we find them steadier and more intelligent than men. Those that are on

regular wages in the match factory get 60 cents silver currency [25 cents American currency] a day. They earn all the way up to 75 cents silver currency [32 cents American currency] a day by piecework. The men in the match factory are paid wages ranging from 80 cents to \$1.50 silver currency [34 to 63 cents American currency] a day. In the hat and umbrella factory nearly all our employees are on a piecework system. Women earn from 80 cents to \$1.30 silver currency [34 to 55 cents American currency] a day, and men who work regularly get from \$1.50 to \$2.50 silver currency [63 cents to \$1.05 American currency] a day. We now are having a small strike in the match factory over the question of fines.

Although a tropical city in a rice-eating country, Manila consumes a large amount of meat. Part of this is beef imported on the hoof from China, with a few local steers and carabaos slaughtered for the native market. A large part of the meat used by Americans and Europeans is imported in cold storage, and comes from Australia. The government cold-storage warehouse ranks with the remodeled custom-house as one of the two most prominent building improvements made by the Americans in Manila. These works contain 500,000 cubic feet of freezing-chamber capacity and an ice factory, and form a central depot from which supplies are distributed throughout the islands. Including the local transportation force of tug and launch men and teamsters, 300 men are employed; most of these are Filipinos. Ordinary hands, such as ice pullers, are paid from \$15 to \$25 American currency a month. They work 8 hours. The labor cost of handling supplies is about the same as in the United States. Often in government undertakings it looks as if the officials in charge had unconsciously adjusted wages with the view to making operating expenses about the same as those to which they were accustomed in America. There are private cold-storage works in Manila, and ice factories are in operation at the principal army posts. The latter supply American civilian as well as military demands.

The brewing industry is confined to a single establishment in Manila, which is said to hold a monopoly patent from the Spanish Government. This brewery has been running 13 years, with a constantly growing business, and now has a daily capacity of 7,000 liters, or nearly 1,800 gallons daily. Including cartage and cooperage about 250 hands are employed, most of whom are natives. Chinese coopers are paid \$50 to \$60 silver currency (\$21 to \$25.20 American currency) a month. Between 30 and 40 women are employed in the bottling and bottle-cleaning department, at wages averaging from 60 cents to \$1 silver currency (25 to 42 cents American currency) a day. They are paid by piecework. The rate for cleaning bottles is 10 cents silver currency (4 cents American currency) per 100, and the maximum number that one person can clean in a day is 1,000. Ordinary brewery hands and cellar men are paid \$20 silver currency (\$8.40 American currency) a

month. They work in two shifts of 12 hours each. A Filipino head engineer receives \$200 silver currency (\$84 American currency) a month and house. The head and assistant brewers are Germans. The malt used is imported from Germany, and is said to be more expensive in proportion to bulk but to give a larger product than American malt.

The tobacco trades afford the best example of factory production in the Philippines. One factory in Manila normally employs 4,000 hands, and this is but one of many large establishments. The cigars manufactured are of two models, the "Habana," which is the form familiar to Americans, and the "Filipino," which is a conical cigar popular with the natives and in East Indian markets, where even cigarettes are often rolled in the shape of an extremely attenuated fool's cap. The ordinary cylindrical cigarettes are manufactured, and machinery is used for this purpose in the larger factories. Girls and women are almost exclusively employed in the "Filipino" cigar and the cigarette departments; but most of the "Habana" model and high-grade cigar makers are men. Women are employed in packing, and as leaf sorters and strippers, but only men are employed in the selecting or cigar-sorting departments of the factories visited. Practically all the employees except a few maestros, or white foremen, are paid by the piece. Leaf sorters and strippers receive 20 cents silver currency ($8\frac{1}{2}$ cents American currency) for 17 bundles (17 *manojos* = 17 by 4 *manos* = 17 by 4 by 100 leaves). The price for making cigars varies from 75 cents to \$3.50 per 100, according to quality. Women are paid the same rate as men, but are seldom intrusted with the more expensive tobacco used in high-grade cigars. Skilled workmen can make from 100 good cigars to 150 lower-grade cigars a day. While men and Habana cigar makers in general sit at tables and work after the fashion of Cuban cigar makers, the women employed in the Filipino cigar department work sitting squat or tailor fashion on the floor, with a flat, plate-like basket to hold the leaf and finished product. They are often accompanied by little children, only a few years old, who assist them in small ways and presumably learn something of cigar making about the time they learn to walk.

The maestros or foremen are nearly all Cubans or Cuban trained. Operatives work at their convenience, about 8 hours a day. The conditions described are those prevailing in the regular factories. There are some 200 small Chinese factories in Manila, which turn out very "cheap and nasty" goods according to the statements of the regular manufacturers. These small shops pirate established brands and gain some trade by imitating superior goods with inferior materials, and by substituting their own cheap goods for the original contents of the packages of reputable makers. According to one manager an expert cigar maker has no difficulty in earning \$70 silver currency (\$29.40 American currency) a month. Another manager estimated

the average earnings of women at not to exceed 90 cents and of men at not to exceed \$1.20 silver currency (38 and 50 cents American currency, respectively) a day. In certain testimony before an official commissioner in 1903 the statement was made: "An uncle of mine works for the Philippine Tobacco Company and has been there 12 years now. His salary was raised this month to 16 pesos [\$6.72 American currency]. He was getting 12 pesos [\$5.04 American currency] before." The best selectors receive from \$100 to \$150 silver currency (\$42 to \$63 American currency) a month. A German manager said: "It is not much cheaper to manufacture cigars here than in Germany—very little if any cheaper." The export trade in cigars has been injured by recent tariff changes in Japan and the Australian Commonwealth.

A small country factory was visited where 20 to 30 girls were employed in manufacturing cigarettes by hand. They were paid a real (12½ cents silver currency or 5½ cents American currency) for making up a package of papers of 1,000 sheets. Girls could work up from two to three packages of papers—that is, make from 2,000 to 3,000 cigarettes a day. So their average daily earnings when employed constantly would be from 25 to 37½ cents silver currency (10½ to 15½ cents American currency).

Lithographing usually accompanies extensive cigar manufacturing, as the demand for labels and advertising work made by the tobacco firms can best be supplied by a local establishment. There are 4 lithographing works, usually with job-printing departments run in connection, in Manila. One manager said: "We pay good native engravers \$80 to \$100 silver currency [\$33.60 to \$42 American currency] a month, and pressmen up to \$18 silver currency [\$7.56 American currency] a week in our lithographic department. They work well when watched, but are irregular, and we do not try to apprentice them. There is a vexatious tariff on the materials we use. The cost of work is about the same here as in Germany." Another employer in the same industry said: "I have been in business in Manila 20 years. In 1897 we paid \$1 silver currency a day on an average and got 5 days' work a week. Now we pay \$2.50 silver currency [\$1.05 American currency] a day and get about 3 days' work a week. As artists, the Filipinos are like monkeys—they just imitate and put in all the defects. Filipinos here get higher pay than Germans in Europe. The German gets 5 or 6 marks a day [\$1.19 to \$1.43 American currency] at home; the Filipino gets \$2.50 or \$3 silver currency [\$1.05 to \$1.26 American currency] and works 7½ hours to the German's 10 hours. Germans will do two or three times as much as Filipinos. If we could get American workmen in Manila for the same wage they are paid in the United States I should

employ them altogether. I am now paying up to \$4.50 and \$5 silver currency [\$1.89 and \$2.10 American currency] to my best Filipino lithographers. They have demanded higher wages three times. Two times I let them have a raise and the third time I refused them. They struck, but came back to work in a few days. Compositors set 3,500 'ens' in 7 hours for \$2.50 silver currency [\$1.05 American currency] a day. I am speaking of the very best men. The others set from 1,800 to 2,500 'ens.'"

A number of daily and weekly papers are published in Manila. At least 5 of these, including 3 of the dailies, are in English. Besides the offices of these publications there are several establishments devoted exclusively to job and book printing. One of the latter is that of an American firm with a modern plant, capable of turning out as fine work as is common in the United States. The government printing office also has a new building and equipment and its typographical work compares favorably with that of Washington. All of this implies a fairly large field of employment and considerable skill in the printing trades. According to the census returns of 1903 there were 922 persons employed in these occupations in Manila in offices having an annual product of 1,000 pesos or over. None of the provincial offices is reported separately, though 3 have a product of the value mentioned.

Some excellent bookwork was done in Manila prior to the American occupation. A few of the university and trade-school memorias were especially creditable. But the present high-grade workmanship attained in many of the Philippine offices is due chiefly to supervision and training given by American typographers. The execution of work is to a large extent intrusted to Filipino workmen, and the success with which they have been trained in this craft, although accompanied doubtless by many incidents exasperating to their employers and teachers, argues well for their capacity to receive instruction. The superintendent of the government printing office replied by letter to a number of questions addressed to him upon the general condition of the printing trades and the experience of the government office with native labor as follows:

As a general proposition, the annual product of an employee, based on the same working day, is less than in the States. Constant labor in a tropical climate is enervating. As a result there is more sickness, and recuperation is slower. With scarcely an exception, sick leave is required by our American employees.

Wages of American employees are appreciably higher in Manila than in the States, owing to the scarcity of such laborers and the increased cost of living. In this bureau all such employees act as instructors to the native help. All native craftsmen are considered and rated as not being fully qualified journeymen, never having served a regular course of apprenticeship, and being unacquainted with the

appointments and detail of a modern printing office. It is the stated policy of the civil commission to pay the native, as regards compensation for labor, at the same scale as Americans, provided the product is equal—quantity and quality considered.

Experience of this bureau, while not covering a sufficient period to give a conclusive report, demonstrates that native employees can be taught all branches of the printing trades, and that they learn quickly and display considerable intelligence. They readily take to the improved machinery and operate them with care. The rudiments of the several trades are speedily grasped, and progress is shown as they advance. There are two regularly assigned on linotype machines; natives operate all machinery in the bindery and electrotype and stereotype rooms. It is too early to venture an assertion as to their initiative and their executive ability. It is my policy to require attendance on night schools, so they may be able to follow written instructions direct from our requisitions, offering an incentive to their own application and execution.

An apprentice law was passed March 3, 1903, and provides a bonus to every native craftsman for each full day worked during a three-year period. Attendance is comparatively regular and, considering the rapid change from the many fiesta days celebrated under Spanish rule, is very gratifying. Many of these employees have not lost a day's work in several months, and the general attendance is commendable.

One of the American dailies in Manila pays its 3 Filipino pressmen \$6, \$16, and \$20 silver currency (\$2.52, \$6.72, and \$8.40 American currency) a week, respectively; a Filipino engineer is paid \$15 silver currency (\$6.30 American currency); 2 circulators receive \$7 and 1 receives \$7.50 silver currency a week (\$2.94 and \$3.15 American currency); 3 compositors receive \$12, 3 receive \$15, 4 receive \$18, and 1 each receives \$21, \$24, and \$27 silver currency, or wages ranging from \$5.04 to \$11.34 American currency a week. The government printing office pays its Filipino "junior compositors," who are mostly young men trained in the office, wages ranging from 50 cents to \$1.62½ American currency a day; pressmen of the same category receive from 75 cents to \$1.50 a day, and bookbinders from 75 cents to \$1.62½ American currency a day.

Several miscellaneous trades are followed in Manila that afford a limited or precarious field of employment. In the aggregate they give work to a large number of people, though the number of wage-earners they engage is small and no large establishments exist where they form the sole occupation. An American employing harness-maker said: "My workmen are all natives. They learn easily and are naturally dexterous. They work 9½ hours a day, and do about one-third as much as an American. I pay them \$2.50 and \$3 Philippine currency [\$1.25 to \$1.50 American currency] a day, according to ability." Another American employer, who owned a tin and sheet-metal shop, and also did some plumbing, said: "The cost of work, making a tin or iron tank, for instance, is about the same as in the

States. I pay my men from \$2 up to \$7 silver currency [84 cents to \$2.94 American currency] a day. That's the highest, and I pay it to a Filipino who has been with me for 3 years and was a trained mechanic previously. Filipinos learn very well, but are not regular. Chinese competition is our worst enemy. They undercut by scamping work. We don't want any more Chinese here, but ought to get rid of those we have. There are enough Filipinos ready to do the work. Americans won't stick to ordinary mechanic's work, but are needed as foremen. We plumbers thought of organizing a union a few years ago, but found the laws wouldn't let us." An American optician said: "I have trained that native boy in the 9 months he has been working here to grind lens edges very well, and I shall try him on surfaces in a short time. He learns very well." An employing baker and candy manufacturer said: "One good American girl can dip 3 times as many chocolates or wrap 3 times as many caramels as one of our Filipino employees or a Chinaman. I employ American bakers and Filipino helpers. I am not training Filipinos to become bakers because this is a business I couldn't trust under their sole charge. I pay my Filipino helpers \$12 and \$15 silver currency [\$5.04 and \$6.30 American currency] a month. They lodge themselves."

Before leaving the subject of skilled and urban occupations the neighborhood distribution of these trades should be mentioned. As in other countries where primitive industrial conditions prevail, and as formerly in England and Europe, certain crafts are sometimes confined to particular villages, where they form the occupation of almost all the able-bodied workers. This of course is true upon a large scale in our own country at the present time, where Troy linen goods or Lynn shoes indicate a similar centering of an industry in one locality. The wood carving mentioned as *paete* is one instance of this in the Philippines. Similarly *Meycauayan*, in *Bulacán*, and *Las Pinas*, near *Cavite*, are silversmith towns; *Mariquina*, near *Manila*, is a pueblo of shoemakers. Other towns are noted for hat or mat weaving or for other local fabrics. This predominance of a mechanical trade in a single village is sometimes ascribed to the training of the friars, who took pains to instruct the people of a certain locality in a particular craft. If this is true, historical evidence unknown to the writer probably exists for the fact. But the same condition prevails, for instance, in *Java*, where a single village is famous for printing sarongs, and another for making sandals. There is little wage service in these village industries. What employment there is resembles domestic service. The work is done by the members of a family, with the assistance, possibly, of a few household servants.

COMMERCE AND TRANSPORTATION.

While a large proportion—over 45 per cent—of the native workers in the Philippines are engaged in primary production, especially agricultural labor, and a relatively small number are engaged in secondary production, represented by the skilled trades, the number employed in commerce and exchange as a distinct and sole occupation is relatively unimportant. This is partly because such trading as exists is largely in the hands of Chinese and Europeans, and partly because the development of the country and standard of living do not demand an active or extensive exchange of commodities. A tao engages in transportation to the extent of carrying a small amount of produce to market occasionally, but outside of Manila the market is by no means so important an institution in the Philippines as in most oriental countries. The cottager may expose a few bananas for sale near the roadside, but in the barrios, and even in many municipal centers, there are almost no shopkeepers. Outside of Manila and the larger port towns the Philippines present a notable lack of that lively bargaining spirit that is so common in the East. The Filipino doesn't haggle as a rule. He is commercially self-contained. If he has any mercantile instinct it has suffered atrophy under the discipline of the friars and the keen competition of the Chinese. Among the Tagalogs the women are said to be more enterprising and sharper at business than the men.

Land transportation does not employ a professional class like the *carreteros* of Porto Rico or the muleteers of South America. Manila has an inefficient tram line, which is now being converted into a modern and extensive system of electric traction. The licensed vehicles include 2,118 *carromatas* (a 2-wheeled covered conveyance that is fortunately strictly localized in that city), and 946 *carretellas* and 1,008 *carretones*, both of which are classes of 2-wheeled carts used for transporting persons and goods. There are also 673 nondescript 2-wheeled vehicles reported and 611 carriages. Four-wheeled wagons are used almost exclusively by the government departments. The wages of *cocheros* in private employment vary widely, according to the caprice or inexperience of employers. Livery stables pay about \$20 silver currency (\$8.40 American currency) a month.

The sole railway in the Philippines has already been mentioned in another connection. It has 1,005 employees in its operating and traffic department and 156 men employed in the shops. The wages are appended in a table, from statistics gathered by the census department in 1903. Speaking particularly of this group of occupations, the manager of this railway said:

All our shop mechanics are Filipinos. We can make a complete locomotive. They are slow, but do their work very well. They fit accurately and turn out as good a job as an American or English

mechanic, though it takes them twice the time to do it. They can not use figures or calculate and must have white foremen over them. In 14 years we have not been able to train up a traffic inspector from their numbers.

The Filipinos must be treated rather more paternally than Europeans. We keep a "personal book," with every man's record, fines, etc. Our old men often come around to ask for a loan of anywhere from \$10 to \$100 silver currency [\$4.20 to \$42 American currency] to build a house or for some special object like that, and we always try to accommodate them if their record is good. I am not aware of any labor laws or employer's liability. We have few accidents and help out our employees, if they suffer from them, of our own accord.

Organizations have been formed among our men and there were a few strikes, especially in 1901, but never anything serious or that affected the administration of the road.

Marine transportation and longshore occupations are relatively more important. There is direct shipment from local ports in nearly all the important islands, as well as a brisk interisland trade. The steam fleet employed in traffic between the islands includes 13 steam vessels of over 1,000 tons gross burden and 104 of between 100 and 1,000 tons. This is in addition to the interisland army transports, and to a fleet of 15 new coast-guard boats, which make regular trips throughout the archipelago in the service of the civil government. Altogether 24,563 licenses were issued from January 1, 1900, to June 30, 1904, to coastwise vessels, with a gross tonnage of 410,908 tons. All boats of over 1 ton burden are licensed, as it has been found that vessels of less than 5 tons are engaged in the Borneo-Sulu trade. Most of the larger interisland sailing vessels are brigantines and schooners, but the various native types predominate among the smaller boats. Native paroes, which are the typical Malay sailing canoe, are numerous and range from 2 or 3 to nearly 40 tons burden. Barangayans, also native boats with tonnage limits about the same as the paroes, are interesting as preserving the name of the vessels with which the original Malay immigrants presumably came to the Philippines; for the word barangay—originally probably a canoe load of people—is the native name for village or settlement. These native boats do in the aggregate a large carrying business, and ply up the large rivers as well as along the coast. Indeed, the paroes engage to some extent in export trade with Borneo and possibly other East Indian islands, and it is not unusual to see one of them, just in from a foreign port, lying in quarantine at Iloilo. The conditions of employment on these boats are unknown. Some of the Moro craft are manned by domestic slaves or peons, and this may be the case sometimes of those sailing to Christian provinces.

The prevailing rates of wages in the marine carrying trades were given by some of the large shipping companies as follows: Eleven Spanish and 2 Filipino masters received \$260 silver currency (\$109.20 American currency); 3 Spanish received \$220 silver (\$92.40

American), and 1 Spanish master received \$200 silver (\$84 American) a month; 10 Spanish and 3 Filipino first officers received \$160 silver (\$67.20 American); 2 Spanish and 1 Filipino \$130 silver (\$54.60 American); 1 Spanish \$120 silver (\$50.40 American), and 9 Spanish and 4 Filipinos \$110 silver (\$46.20 American) a month; 11 Spanish, 1 Scotch, and 3 Filipino chief engineers received \$260 silver (\$109.20 American), 1 Filipino received \$220 silver (\$92.40 American), and 1 received \$200 silver (\$84 American) a month; 4 Spanish and 10 Filipino assistant engineers received \$160 silver (\$67.20 American), and 1 Filipino received \$130 and 2 received \$120 silver currency (\$54.60 and \$50.40 American currency) a month. Second assistant engineers, nearly all Filipinos, received \$110 silver currency (\$46.20 American currency) a month. Third assistant engineers and oilers were all Filipinos and received from \$36 to \$45 silver currency (\$15.12 to \$18.90 American currency) a month. Head firemen received \$32 and assistant firemen \$24 silver currency (\$13.44 and \$10.08 American currency) a month. Helmsmen and quartermasters received from \$25 to \$45 silver currency (\$10.50 to \$18.90 American currency) monthly. Sailors were paid \$20 silver currency (\$8.40 American currency) a month. All employees under the second assistant engineers mentioned were Filipinos, and all these wages are in addition to food and quarters. Six Spanish and 11 Filipino stewards received \$40 silver currency (\$16.80 American currency) a month. Chief cooks were all Filipinos and received the same pay as stewards. Second cooks were paid the same rate as sailors, and cabin boys and apprentices received \$15 silver currency (\$6.30 American currency) a month.

On the coast-guard boats Filipino seamen receive \$15 American currency a month, and 15 cents American currency a day for rations. On the government cold-storage harbor launches engineers are paid \$360 and \$480 American currency a year, and sailors from \$15 to \$18 American currency a month, without board. The wages paid on pearling schooners have been mentioned in a previous connection. They are more representative of the rate of pay prevailing on the small interisland sailing craft. On a local schooner owned by an American the captain was paid \$20 silver currency (\$8.40 American currency) and sailors \$6 silver currency (\$2.52 American currency) a month, with rice rations, but not fish. This was a small boat of 5 or 6 tons burden, and the owner said he paid about the same wages that were paid on native paroa. Upon coast lorchas or barges in the Visayas \$8 silver currency (\$3.36 American currency) a month and rations is considered an average wage.

Longshoremen seem to possess the same characteristics and their occupations to experience the same vicissitudes in the Philippines as in our own and other countries. Their work is of so irregular a char-

acter and the demand for their labor is subject to such violent fluctuations that they are often tempted to squeeze the last possible cent out of an emergency by suddenly demanding higher wages, and they face with even less concern than other Filipino workmen the prospect of a period of idleness, for such periods are a common feature of their trade. Stevedores are paid \$1 silver currency (42 cents American currency) a day in Manila, by private firms, and 50 cents American currency a day by the government. Those working for private firms are employed from 6 to 8 a. m., from 8.30 to 12, and from 1 p. m. to 6 p. m. One stevedore foreman said: "We are now paying \$1 silver currency [42 cents American] on shore and \$1.10 silver currency [46 cents American] on sea, the 10 cents extra being to pay for the food that the men take out with them on the lighters. They average $9\frac{1}{2}$ hours on the wharf and about 9 hours effective labor when on the lighters. There are no Tagalogs in this occupation. The members of that tribe are too aristocratic for this work, and only enter our employ as checkers. All our laborers are Ilocanos, Igorots, and other tribesmen. They are not strong men—not so strong as the Hongkong Chinese—but they pack regularly 220-pound sacks of rice, and sometimes carry two sacks, that is, 440 pounds. They carry regularly five 49-pound sacks of flour." The cost of discharging army transports is 28 and 29 cents American currency a ton. Quartermaster-General Humphrey says in his report:

The experience of this office and that of the various offices in charge of the different branches under my direction has, on the whole, been favorable to the efficiency and reliability of the Filipino laborer. As skilled workmen, under the direction of competent Americans, they have shown ability and quick comprehension, with a willingness to learn and adopt new and improved methods. As stevedores, laborers, etc., they exhibit the same characteristics, and have been found capable of handling their work expeditiously and efficiently. The padrone system has been broken up and the Filipinos brought to realize that they are employed, retained, or discharged on their individual merit, and that their pay is their own, all of it, not to be divided with any boss, contractor, or other person. The Filipino has replaced the Chino in many branches of work in this department in Manila, for the reason, principally, that he is found more willing to learn, fully as able and willing to work, and not so much inclined to demand increases of pay or quit when able to take advantage of emergencies.

Against such commendatory opinions as this must be set the following, from a private letter from a stevedoring firm in another city:

We pay our men according to their rating. For common laborers and winch drivers, $62\frac{1}{2}$ cents silver currency a day and 20 cents silver currency for chow [$26\frac{1}{2}$ cents American currency and $8\frac{1}{2}$ cents American currency for food]; for the best class, \$1 silver currency per day and 20 cents silver currency for chow [42 and $8\frac{1}{2}$ cents American]; foremen, \$2 and \$3 silver currency a day [84 cents and \$1.26 American currency].

There has been no increase of pay for the whole of this year—not since the cholera. We find from experience that there is not one of our men we can depend upon for more than the day he is working, and we are never sure of them until we get them aboard a ship. They seldom work more than 4 days a week; I think I would be safe in saying that 3 days is the average for each man. I am in favor of Chinese labor for these reasons: (1) If they get a job they will stick to it. (2) They are people who can be taught and are anxious to learn. (3) A Chinaman will work for the interests of his employers. I have had a lot of experience with Chinese labor and have found them the nearest to the "real thing." We employ from 60 to 350 men per day, according to the shipping in port. I think a fair average for the year would be about 150 men per day. There does not seem to be much scarcity of labor while there is shipping in port, but if there have been no ships for a week or two these people leave town or go to the hills or to work on the farms near town, and then we have hard work to get enough men to work two ships; but they drift back in time. There are a few of these people who could be classed as fairly good workers, but the larger part of them have to be driven to get anything out of them, and if left to themselves would not do 10 cents' worth of work a day. My greatest objection to these people is that we can not depend on them to figure on any big job, for if ever they get a chance they will jump up the pay; and as they are never anxious to work, if any one of them says, "Let us quit," they down tools at once. We have had a lot of trouble with them on this account, and it has landed us in a few tight places. They do not seem to consider anyone but themselves.

In comparing the testimony of the head of a department with that of a working manager who comes into direct personal touch with his workmen, it must be remembered that the latter usually has a much livelier and more concrete understanding of the difficulties encountered in labor administration than the former. Moreover, Filipinos are said to work better when in government employ, and they are probably better protected from the exactions of their own foreman or patrons in that service than when working for private firms. It is suggestive, however, when comparing Chinese with natives in these occupations, to note that in Jolo, Chinese coal handlers are paid \$2 silver currency, and Moro coal handlers \$1 silver currency (or 84 and 42 cents American currency, respectively) for a day's work, when working side by side in the same ship.

The retail trade of the Philippines is in the hands of the Chinese. More than one-half the bulk of the goods passing through the Manila custom-house is consigned to Chinese merchants, and of 489 importers in that city 199 are Chinamen. With this large fraction of the wholesale and practically all the retail trade of the islands in their control the Chinese are the direct exploiters of the Philippines. It is within their hands largely that the surplus wealth produced by the tao population, with comparatively little administration from the ilustrados,

remains. As an agricultural landlord the mestizo is more prominent than the pure Mongolian, but he does not affiliate with the latter, and more usually holds aloof from commercial pursuits. Commerce is much less of a wage-paying industry in the Philippines than in occidental countries. The Chinese merchant's relations with his employees seldom come to the surface in a labor investigation. While in some respects the Chinaman is honorable, and in the Hawaiian Islands, for instance, he is considered a most reliable creditor, his presence is stated, both in the Philippines and in Java, not to have raised the standard of commercial morality. He is accused, apparently with ample evidence, of being an all-round adulterator of almost every commodity that passes through his hands, a falsifier of labels and trademarks, and of being addicted to all the occidental besides several original oriental dodges of fraudulent insolvency. He is said to open a number of shops under different names, gradually to transfer his goods, bought on credit, to a single establishment and then fail in all the others. Identical charges are made in Java. That they are justified if applied universally to Chinese merchants may be doubted, for the credit of these people seems to remain good in spite of their alleged practices. But when this shifty spirit is so common in business, employees are often in positions analogous to that of the dummy directors of some American corporations, and their relations with their employers are of a strictly confidential character. Where Chinese predominate sociological and economic data are not susceptible of statistical tabulation.

Moreover, commercial employment, except in the larger European and American stores in Manila and a few other port cities, presents only conditions similar to those prevailing in domestic service. In fact these two classes of service are not clearly separated. European and American salesmen must be well paid in order to be secured. One employer stated that he was forced to pay a minimum of \$75 American currency a month to obtain reliable men, and that it was difficult to secure employees who would be permanent even for that salary. Intelligent and competent Filipinos are paid from \$25 to \$50 silver currency (\$10.50 to \$21 American currency), and in positions of exceptional responsibility as high as \$333 silver currency (\$140 American currency) a month in clerical and commercial service. As a rule, however, the pressure for such positions is so great that salaries among the natives are kept at a minimum by competition. In a provincial treasurer's office near Manila the highest paid accountant received \$40 American currency a month, a native stenographer, able to write English and Spanish, was paid \$20 American currency and the other employees received less than this figure. The treasurer said that some employees received but \$6 and \$8 silver currency a month under

the Spanish Government, and that he had many applications from competent clerks for positions at \$20 silver currency (\$8.40 American currency) a month. Some of the unemployed ilustrados are glad to enter such positions at much less than a living wage. In government offices Filipino messengers are paid from \$150 to \$180 American currency, and clerks, stenographers, and interpreters from \$300 to \$900 American currency a year.

Wages of domestic servants in Manila have possibly risen more since the American occupation than those of any other class of employees. But this increase is not so large as is popularly represented, if estimated on a gold basis. The unfavorable ratio of silver exchange is accountable for much of the apparent difference. Sawyer quotes the following from his household accounts in Manila, in 1892: Cook, \$18; butler and coachman, each \$12; house boys and maids, \$6 silver currency a month with food estimated to cost \$3 silver currency monthly. Making allowance for the difference of exchange, these wages were about equivalent to \$36, \$24, and \$12 silver currency (\$15.12, \$10.08, and \$5.04 American), respectively, in 1903, and food allowance would have been equivalent to \$6 in Mexican currency (\$2.52 American). Many domestic servants were employed at the wages last mentioned in 1903, although in hotel service Chinamen were paid \$30 American currency a month in some instances. In native and Chinese families the *criado* system still prevails throughout the islands, and is said to be common even in Manila. It is a condition of domestic service, and of quasi-domestic service in small shops and industrial establishments.

“*Criados*” in this sense of the term are domestic peons. Their relation to the latter is about the same as that of the household slaves to the field slaves on a Southern plantation sixty years ago. *Criado* strictly means something a person has bred or brought up. Theoretically *criados* are persons working off some real or fictitious debt incurred by them or by their parents or ancestors—a debt often as habitually addicted to increasing as the public debt of a European power. While the peon is induced to remain in a condition of permanent indebtedness by receiving his support from the land he tills for his master, the *criado* lives and labors while being supported in his master's household. He—or frequently she—is given a home for his services. A few special instances will illustrate how this system works:

A school-teacher in Batangas province tried unsuccessfully to secure a nurse girl for his little child. Finally a kindly resident of the town where he was stationed, learning of his difficulty, sent him a girl, but would not allow her to receive any wages. The teacher, naturally, did not care to keep the girl without giving her some compensation for

her services. Finally her amo (master) told the teacher he might have the girl for \$160 silver currency (\$67.20 American currency)—her “debt” to him.

A girl 27 years old, at Orion, Bataán province, learning that she could not be held for debt under the present laws, sued for her liberty in the local court.

A provincial treasurer was offered a servant girl 14 years old for a debt of \$30 silver currency (\$12.60 American currency), due from her parents. The custom of pledging children as security for debt appears to be not unusual, and may have come from China.

A Filipino widow in Batangas province, who owned a fine residence and garden, was allowing the latter to go to ruin. When asked why she was neglecting a garden with which she had formerly taken so much pains, she explained that her gardener had died, and that her means did not allow her to employ one at wages.

The abduction and sale of girls for immoral purposes is favored to some extent by the criado system, and parents are often indifferent or deceived as to the real service for which their daughters are intended, and the presence of such a system facilitates the disposal of the girls at Manila. A case was before the Manila courts in August, 1902, where two girls had been sold into this form of slavery, one for \$100 and one for \$150 silver currency (\$42 and \$63 American currency).

It should not be understood, however, that all domestic servants are criados working off debts, or that such a system has been anything like universal in the larger cities for a considerable period. As early as 1840 there was a reglamento governing the employment of domestic servants in Manila. More recent regulations, similar to those introduced unsuccessfully in Hongkong previously, went into effect in Manila January 1, 1895. It is doubtful if the latter were ever very effectively enforced. At present no pretense is made of observing them. Their main provisions were: (a) Domestic servants, including private and public coachmen, must register with the public authorities; (b) servants were issued certificates containing memoranda for their personal identification and their previous services and credentials; (c) this certificate must be deposited with the employer while the holder was in his service, but returned to the owner at expiration of service; (d) servants must not leave their employer without three days' previous notice; (e) employers were liable to fines of from \$2 to \$10 for not reporting changes in their staff of servants when they occurred, or for obstructing the domiciliary inspection of servants by the authorities; (f) fines were inflicted upon servants for disobedience; they were liable to a penalty of \$10 for leaving an employer without previous notice, and of \$20 for not being properly registered.

STANDARD AND COST OF LIVING.

The standard and cost of living throughout the agricultural districts of the Philippines is fairly uniform. Tenant farmers and peons live upon the ground of their masters in houses constructed by themselves. Most of the rural population in the less-developed provinces are squatters or small proprietors, and among the Christian tribes have individual holdings. For all these classes rent is a negligible quantity. In Bulacán province, near Manila, where the land is all under private ownership, a nominal ground rent is paid for house plots in barrios and country places, 50 cents to \$1 silver currency (21 to 42 cents American currency) a year. In the municipal centers the canon or rent is from \$5 to \$10 silver currency (\$2.10 to \$4.20 American currency) per annum. The nipa huts that form the workingmen's suburbs of Manila are owned by the occupants, who pay ground rent. The houses cost them about \$100 silver currency (\$42 American currency), and ground plots of from 100 to 200 square yards rent for \$3 to \$6 silver currency (\$1.26 to \$2.52 American currency) a month. Some barracoon single-room tenements on a rear lot in the suburb of Binondo were said to rent for \$12 silver currency (\$5.04 American currency) a month.

In the matter of food requirements the Filipino tao is equally modest. Carriers who accompanied the writer through mountainous country, traveling 30 miles a day on foot with burdens averaging 50 pounds, ate only a little white rice, boiled in joints of green bamboo cut from the thickets, without salt or other condiment. Plantation laborers are supplied with some nitrogenous food, such as fish or their equivalent, in addition to rice, and gather herbs, which they use as condiments, in the fields. The usual measure for a ration of rice is a chupa, which is not an invariable and uniform standard throughout the islands, as measures are very crudely constructed and allowance is sometimes made by guess. But the capacity of a chupa is about 275 grams (9.7 ounces) of white rice or 250 grams (8.8 ounces) of shelled corn. The cost of a day's ration for one person was placed at 11 to 12 cents silver currency, or about 9 cents American currency, in 1890-1895.

In Masbate, in 1903, an American employer estimated the cost of the rice ration he gave his sailors at 10 cents American currency a day. The men found their own fish. The cost of full rations for coal passers was found to average 30 cents silver currency (12½ cents American currency) a day. A ganta of rice, which is one-twenty-fifth of a cavan, or nearly 2¾ quarts, sells for about 35 or 40 cents silver currency (15 to 17 cents American currency) retail. Native (Pangasinán) rice was selling for about \$6 silver currency (\$2.52 American currency) a cavan in the Manila market in the autumn of 1903, according to published

quotations, but the prices given on personal inquiry ranged \$1 silver currency (42 cents American) a cavan above this amount. In Jolo, at the other extremity of the Philippines, the retail price of rice was $7\frac{1}{2}$ cents silver currency (slightly over 3 cents American currency) a pound. This would make the ganta, which is slightly over 5 pounds, worth nearly 40 cents silver currency (17 cents American currency). In Jolo fowls were worth 15 to 30 cents silver currency ($6\frac{1}{4}$ to $12\frac{1}{2}$ cents American currency); eggs cost 3 cents silver currency each; sweet potatoes, 5 cents silver currency for 3 pounds; fresh beef, 25 cents a pound; and pork, 50 cents a pound. In Masbate a 48-pound sack of California flour sold for \$4.50 silver currency (\$1.89 American currency), and its use was increasing. This increase in flour consumption is shown by the rise in the value of the imports of this commodity, exclusive of Government stores and flour brought by army transports, from the value of \$399,408 American currency in 1900 to \$683,360 in 1903. In Manila flour was \$2.50 silver currency (\$1.05 American currency) a 49-pound sack, and fresh beef cost in the native markets up to 50 cents silver currency (21 cents American currency) a pound; white beans and dried peas were worth 10 cents silver currency (4 cents American currency) a pound; Hongkong eggs were 30 cents silver currency ($12\frac{1}{2}$ cents American currency) a dozen; water costs the poor people 1 cent silver currency a lata, or 5-gallon kerosene can. In the workingmen's quarter of the city board without meat was said to cost 50 cents silver currency (21 cents American currency) a day.

The nominal cost of living has risen rapidly in the Philippines during the past 5 years on account of the declining price of silver. But the real cost of living has also increased in all parts of the islands, and especially in Manila. A labor leader in that city recently said in official testimony: "In Spanish times, when the laborers were getting 20 cents a day, rice was worth only 12 cents a ganta [about $2\frac{1}{4}$ quarts]; now there is rice you have to pay 40 cents [17 cents American currency] a ganta for. Some ordinary fish which formerly were only worth 2 for 1 cent, now you have to pay as much as 4 cents for each one of them. Formerly you could buy a shirt and a pair of pants for 30 or 40 cents, and now the cheapest suit a man can buy is worth \$1.50. Houses formerly could be rented for from \$2.50 to \$8; it is now necessary for the poor laborers to pay from \$50 to \$70 per month, and instead of having separate houses they now have all to live in one house." In speaking of houses the witness evidently referred to frame and masonry houses rented to the better class of mechanics and wage-earners, not to the nipa huts already mentioned. The prices are in silver currency.

The price of provisions for travelers was fixed by official regulations during the Spanish government of the Philippines. These prices for

some of the Luzon provinces for the year 1890 are compared with the ruling prices in Manila in the autumn of 1903 and with prices given in some tenders for hospital supplies made to the Dutch Government in Batavia, Java, in 1902. The prices are in American currency.

RETAIL PRICES OF CERTAIN COMMODITIES IN LUZON, MANILA, AND BATAVIA.

	Luzon (1890).	Manila (1903).	Batavia (1902).
White rice.....pound..	\$0.02	\$0.03½	\$0.03
Fresh beef.....pound..	.20	.17	.13
Fresh pork.....pound..	.12	.19	.17½
Chickens.....each..	.10	.17	(a)
Eggs.....dozen..	.16	.12½	(a)
Milk.....quart..	.16	(a)	.06½
Milk, concentrated.....quart..	(a)	.50½	(a)

a Not reported.

The lower prices of certain provisions, such as eggs and beef, is probably explained by lower freights and more frequent importation from China than formerly.

The wholesale price of staple provisions in the Manila market was as follows in the years indicated. The prices for 1870 are in Spanish currency, and for the other years in both American and Spanish currency.

WHOLESALE PRICES OF STAPLE PROVISIONS IN MANILA, 1870, 1880, 1890, AND 1903.

Commodity.	1870.		1880.		1890.		1903.	
	Span- ish cur- rency.	Span- ish cur- rency.	Ameri- can cur- rency.	Ameri- can cur- rency.	Span- ish cur- rency.	Ameri- can cur- rency.	Span- ish cur- rency.	Ameri- can cur- rency.
Sugar, refined.....pound..	\$0.16	\$0.17	\$0.15½	\$0.17	\$0.14	(a)	(a)	
Butter, American.....pound..	.62½	(a)	(a)	.62½	.51½	\$0.85	\$0.36	
Codfish.....quintal (101 pounds)	7.00	17.00	15.30	12.00	9.86			
Flour, California.....barrel	5.37½	9.00	8.10	8.50	6.99	10.00	4.20	
Ham.....pound..	.45	.28	.25½	.37	.30½	.60	.25	
Pork, salt.....200-pound barrel	20.00	(a)	(a)	34.00	27.95	(a)	(a)	
Potatoes.....picul (2.3 bushels of 60 pounds)	4.00	3.00	2.70	3.00	2.47	6.50	2.73	
Rice, white.....cavan (2.1 bushels)	3.25	3.25	2.92½	3.87	3.18	7.00	2.94	

a Not reported.

The higher price of rice has been especially felt by large employers, like the Negros sugar planters, who furnish rations to their employees; but in most agricultural operations the food supplied laborers is charged against their store account and only represents a somewhat larger advance against the proceeds of the tenant's or peon's crop; and the high price of rice has compensated in part one class of the community, the rice farmers, for their lessened harvest. The fall in the price of silver has contributed more than the war and the American occupation to raise wages and increase the cost of living in the Philippines during the last decade.

This influence of currency conditions upon prices is sufficiently indicated by the increased cost of clothing, tools, and agricultural implements. There is a duty of about 25 per cent upon cotton goods, but

the import tax upon agricultural implements is only nominal, and yet planters complained more of the increased price of plows than of any other single item in the rising money cost of production. The price of clothing varies in different localities. In the Moro provinces the sarong is still worn, but the Filipino proper wears a semi-European garb, consisting of short cotton breeches and a coat or blouse of hemp fabric. City workmen and the countrymen of the more advanced provinces also wear shirts. A tao's hat is a local product—an umbrella or basin-like sunshade of palm leaf or fiber. A week's wages will clothe a Filipino, and if he has a loom in the house his wife will clothe the family with the product of her spare moments.

At the present time \$50 American currency a year will support a Filipino country laborer upon a basis of cash expenditure for his supplies. Taking into consideration the fact that his wife and often his children are wage-earners or contribute indirectly to the family support, that his house rent is practically nothing, that a large fraction of his consumption is confined to home products, his personal money income, even in the more developed districts, need not be more than one-fourth that amount. Were he disposed to save and to constant labor the Filipino tao might lay by fully one-half his annual earnings. Of course he will never do this, but the fact that it is possible remains, and has as its corollary the irregular industrial habits, unwise petty extravagances, and disposition to idleness that are said to characterize him.

This is not the place to consider what elements of his environment, other than climatic, may be responsible for this condition. Some of them doubtless may be removed. The fact merely needs to be stated that relatively to his standard of living—that is, to the supply of physical necessities demanded for his satisfaction, and therefore to his economic happiness—the income of the Filipino peasant is probably larger than that of the American farmer. He has fewer cares and more physical pleasures according to his standards than have agricultural workers in America or Europe. He is materially better off than the laborer in Porto Rico or Java in case he is a wage-earner; for in the latter countries the pressure of population places before the poor man the unwelcome choice between constant labor and insufficient nourishment.

Filipino workingmen in Manila are not so favorably situated in this respect. Their expenses are relatively higher, and the food and clothing they use must be purchased. The item of rent is also considerable. Mr. Edward Rosenberg, a commissioner of the American Federation of Labor, who visited Manila in the interests of that organization in 1903, and who was afforded exceptional opportunities of seeing economic conditions from the workingman's point of view, estimates the minimum cost of supporting a family of 5 persons in Manila at \$250

silver currency (\$105 American currency) per annum. This agrees very closely with the estimate made by the writer, which would make the cost of living of urban workmen double that of laborers in the provinces. The items of rent, better clothing, and a somewhat higher standard of living account for part of this difference. The food used by the working people is also cheaper as a rule in the country, and more natural or local products, especially in the way of fruits and herb condiments, are consumed.

The cost of living for Europeans or Americans is now higher in Manila and the larger Philippine towns than elsewhere in the Orient. Hotel rates vary from \$1.50 to \$3 American currency a day, and comfortable board can hardly be secured under \$7 to \$8 American currency a week. Duck clothing is largely worn. Suits cost from \$5 to \$10 silver currency (\$2.10 to \$4.20 American currency), according to the quality of the material and the kind of a tailor patronized. Canvas shoes are worth from \$3 to \$5 silver currency (\$1.26 to \$2.10 American currency). Furnishing goods are not materially higher than in the United States. Laundry work costs about \$5 silver currency (\$2.10 American currency) a month. If one is residing in Manila at present he must allow for a considerable unavoidable expense for carriage or carromato hire, but this condition will be changed as soon as the electric-railway system now being installed is in operation. It is not probable, however, that present prices will continue, as they are at least partly due to exceptional conditions following the war. Americans living in tropical countries, especially in the East, however, very often adopt a much higher standard of living than that to which they are accustomed at home.

LABOR ORGANIZATIONS.

Prior to the American occupation Filipino workmen formed no labor organizations of a permanent character. The Chinese have long been united in gremios or guilds, which could at need inaugurate and conduct a strike. Some of these gremios were utilized by the Spaniards as taxation units, and so received a degree of official recognition. The character of the different Chinese societies varies, but they are usually to be classed with benefit rather than with militant labor organizations. They continue to exist, and have very effective control over their members. Recently the ship carpenters' guild in Hongkong struck for an advance of pay from 50 to 55 cents silver (21 to 23 cents American) a day. Between 1,000 and 1,500 men were called out and business was completely tied up for several weeks. An American shipping man who was having some work done in one of the Hongkong yards at the time said that though only a few holes remained to be bored for pipe connections in one of the launches he wished delivered, he was unable

to get even this trivial job done for a long period, and finally was obliged to procure tools and finish the work personally.

The Chinese have not been implicated in the labor and political labor troubles that have occurred in Manila during the last three years. The precedents and organization of the Chinese guilds do not appear to have been imitated by Filipino workingmen or to have had any influence upon the recently initiated native labor propaganda. The latter is still a very crude attempt at class agitation, somewhat socialistic in its favorable attitude toward political measures, with aspirations at the same time toward half-understood trade-union deals. It is said to have been utilized to some extent to support the Filipino independence movement, and to have been engineered in the selfish interests of a coterie of would-be political leaders. The Chinese organizations on the contrary are primarily mutual benefit, sometimes for conducting local or interprovincial feuds within their own nationality, and come into relation with labor matters only incidentally, when special interest chances to be aroused in a trade dispute affecting Chinese workmen. They avoid politics and all connection with the government or with outside parties, and when these organizations do strike the difficulty is much more baffling to deal with, more obstinate, and less amenable to ordinary measures of adjustment or control than are the more demonstrative, more frequent, but undisciplined and immature outbreaks of Filipino workmen.

The ideals and methods of the Filipino organized labor movement came originally, though somewhat distorted, from Europe, rather than from America, and have a Latin rather than an Anglo-Saxon caste. The literature that suggested such a movement was Spanish. As above stated, a representative of the American Federation of Labor visited the Philippines in 1903 to report to his society upon labor conditions in the dependency, and to advise Filipino labor leaders in matters relating to organization and propaganda. But there are at present so many political issues confusing those properly coming under the trade-union purview, a majority of the workmen are so uninstructed and guided to such an extent by momentary impulses, and the leaders are as a rule so engrossed with personal ends, that it is doubtful whether a sympathetic relation can be established at present between the American and the Philippine organizations. Until the stream of intellectual influence still flowing into the islands from Spain is cut off by the gradual preponderance of the English over the Spanish language among educated Filipinos, Barcelona labor ideals, with many bizarre native variations, will probably prevail.

Filipino wage-earners in Manila began to organize in June, 1899, and in a short time had formed more or less autonomous unions among the barbers, in the tobacco and the printing trades, and among woodworkers and carpenters and clerks. The printing trades, which prob-

ably employ the most intelligent branch of native workmen, were the pioneers in this movement. Isabelo de los Reyes, a Filipino identified prominently with the independent Philippine church movement, a man who impresses one as an emotional idealist of the evangelist type, tinctured by a trace of personal political sagacity, organized these floating unions into a society known as the "Union Obrera Democratica Filipina" (Philippine Democratic Labor Union), upon his return from exile in Spain, in June, 1901. Conditions were beginning to exist that gave some ground for labor agitation. There was a tremendous depreciation of the silver currency in use. While nominal wages had risen rapidly, especially for government labor, they had not risen evenly, and in some occupations were at a standstill. The increase in real wages was much less than was popularly assumed in all instances where silver was paid, and on account of the rapidly rising cost of living real wages were actually decreasing in many occupations. The conditions in these respects were the same as those which occasioned agitation, rioting, and a rapid organization of workingmen in Habana in 1888, when the paper currency in use began violently to depreciate. It is very probable, therefore, that many classes of labor in Manila had a real grievance. Furthermore, there was a spirit of agitation in the air. Vague hope for some sort of an industrial millennium was created by the recent political changes. The payment of extraordinarily high wages by the government in some instances was taken as a sort of official indorsement of this expectation. Local leaders who had been in Spain and knew something of the European labor movement, albeit very superficially, probably with less malice than misunderstanding, undertook to utilize this situation, partly for patriotic motives and incidentally for their own benefit. There is no evidence known to the writer that Reyes profited financially to any great extent from the organization he created, but the methods adopted by that organization put him into prison. During a year of active propaganda the number of organized workers had risen to 20,000 in Manila and vicinity, and the number of federated unions to 150. Thirty of these unions were in the tobacco trades, representing the workers of different factories, and not different divisions of occupations, as in America. Unions were not federated by industries, but had their sole bond of association through the general organization. A number of strikes occurred, and in several instances wages were raised as a consequence. There was no decrease in the hours of labor. The first union to walk out was the hemp pressers, then followed the printers, and last of all the tobacco workers. On August 15, 1902, when the tobacco strike had been on about 6 weeks, 4 delegates of a union were arrested for ordering a foreman and employees of the German Commercial Company's factory, who had resumed work, to quit at once, under threat

of assassination if they refused. At a conference with employers the following day the cigar makers decided to resume work at the rate of wages formerly prevailing, but the cases against the men arrested were continued. Reyes, who was president of the general organization, was considered the arch offender, however, and was arrested on August 17 under a Spanish conspiracy law still in force, and on the 29th of the same month was sentenced to 4 months' imprisonment for violating the provision of the penal code prohibiting organization of workmen to force up the price of labor. He served half his sentence, and was then pardoned by Governor Taft. Since liberation he has abstained from taking active part in the labor movement, confining his activity to furthering the independent church movement, as mentioned previously, but he still publishes a paper, *La Redención del Obrero* (The Redemption of the Worker), in the interest of the working people of the islands.

When Reyes was arrested, Dr. Dimonador Gomez, a Spaniard, said to have served in the Spanish army in Cuba, became president of the *Union Obrera Democratica Filipina*, which he reorganized under the name *Union Obrera Democratica de Filipinas* (Democratic Labor Union of the Philippines). The slight change in title indicated a change in the constitution by which membership was made possible for all workingmen in the Philippines, including those of other nationalities; for whom no provision had been made in the earlier organization. The dues were 20 cents silver currency ($8\frac{1}{2}$ cents American) a month and \$1 silver currency (42 cents American) a month for a paper, *Los Obreros* (The Workers), which Gomez started. It is disputed whether this second payment was compulsory or not, but in any case it was made desirable for the workingman to subscribe for the paper. There was a third voluntary fee of \$2 silver currency (84 cents American) a month, which entitled members to free medical treatment at a hospital established and conducted by Doctor Gomez. For another fee of 20 cents silver currency ($8\frac{1}{2}$ cents American) monthly free legal advice was given by a firm of lawyers having a contract with the union. It was also proposed to establish factories and stores with capital to be subscribed by the workingmen. The constitution contained a section providing: "When we have elections and native chambers, every member of the labor union is under obligation to vote for the candidates of the association which the general assembly may select." In short, a sort of journalistic-professional-industrial-political trust seems to have been contemplated by Doctor Gomez and his fellow-organizers. It is curious to note that a trade union in New South Wales was recently refused registration under the arbitration act because its constitution contained a political clause similar to the one just quoted from that of the Philippine organization. No provision

was made for a strike fund, but it was proposed to hold theatricals and take up voluntary contributions for the support of workmen thrown out of employment by these disputes.

Meantime Doctor Gomez had become president also of the Nationalist party, an organization representing the independent Philippine movement and opposed to the Federal party, which is at present the party in power, though doubtless in a popular minority, and identifies the interest of the Philippines with their continued political connection with the United States. A collapse, naturally, was inevitable, and it was precipitated when Doctor Gomez was arrested on May 29, 1903. In addition to the charge of being at the head of an illegal organization of workmen, whose purpose was to conspire to raise wages, he was accused of a series of fraudulent practices in connection with the finances of the union and with furnishing financial aid and assistance to bands of ladrones. The Union Obrera Democratica de Filipinas was placed in the hands of a receiver, as its funds had disappeared and it was not able to meet its obligations.

The failure of this second attempt to federate the working people of the Philippines was due, therefore, to causes not directly related with the labor movement. The constituent unions meantime remained in existence, or if dormant were easily recalled into life. The commissioner of the American Federation of Labor was now in Manila and cooperated with the leaders of the two former societies in an attempt to effect a third federation, following more closely than its predecessors traditional lines adopted in America. He issued an address to the organized workers, which was read at a meeting of 400 delegates held in Manila on June 13, 1903. This paper consisted of a résumé of the main motives and objects of the labor movement in America and Europe, and a description of the principles and methods governing the policy of unions in the United States. As a result of this conference a tentative constitution was adopted, which was submitted to Governor Taft for approval. The remarks of the governor upon this occasion are appended in Spanish to the constitution published by the society, and are intended to prevent an impression to the effect that the Philippine government had adopted an attitude hostile to legitimate labor propaganda. The substance of these remarks was:

I understand that this is a society of workmen; that it is in no sense a society of politicians; that it is simply a society of skilled workmen and laborers.

I do not hesitate to express my sympathy with your desire to better the condition of labor in these islands, and I believe that some advantage may be derived from an association such as yours if it is intelligently directed and confines its mission to proper labor ends.

In the long run the wage of a laborer or of an artisan depends upon the law of supply and demand, but during a change in these conditions the facility with which the workman improves the opportunity to

benefit by this change may be greatly increased by a society of workers which studies the market and determines to the best of its ability if the profits of the employer justify his sharing them to a larger extent with his employees.

Another purpose of an organization like this one is to teach the laborers to respect themselves; that they have the same rights as other members of the community; that the fact that they work with their hands does not deprive them of the right of sharing in every civil right possessed by the richest and the most highly educated.

Likewise, it seems to me, a society of workers can not do better than instruct each one of its members what are his civil rights and to teach them that the way to enjoy a civil right is, in the first place, to learn what the right is; and, in the second place, to seek legal remedies for one's protection whenever one is deprived of that right. You will observe that when a law is enacted granting you a civil right, it depends principally upon yourselves whether or no you shall receive the benefit of it by learning what it is and then exercising it.

There is another object that a society of laborers and artisans like yourselves can accomplish. When free education is offered to a people there is danger that those who accept it may come to believe that they ought to hold government positions, or become doctors, or lawyers, and that they can not engage in the various manual occupations, skilled or otherwise, without sacrificing their dignity. You will meet such men ready to take a clerical position at \$25 a month but unwilling to accept a position as a skilled artisan where he would earn \$75 a month. This is nonsense. A mechanic who earns \$75 a month by his manual skill enjoys as high or even a higher social position than the clerk earning \$25 a month. This is so in America; it is true in every country where the skilled worker occupies the position he ought to occupy. Many of the great directors of industry and capital in America are men who have made themselves and have begun as mechanics or laborers and wrought out their own fortunes. There are presidents and managers of railway companies who began as engineers and brakemen.

It is therefore necessary to develop in the young people a sense of the dignity of labor, that it is the means of advancing in the world, and that there is no reason for considering the man who earns his living by the work of his hands as socially inferior to the professional man. But when you teach the workman to take pride in his work, and that labor is honorable, you must teach him likewise to be worth his wage. Your society should teach him to work constantly for the time he has agreed, to work in the interest of his employer, in other words, to be a laborer worthy of his hire; and if your society has furnished the capitalists who wish to invest their money here workmen who do well the work for which they are paid, you will have accomplished all that can be hoped of an association in this community. You may rest assured, gentlemen, that as long as you pursue the legal object of your society, keep the peace, and only exercise the rights that the law grants you, the Commission, the civil governor, and the entire government will stand at your side to protect your rights.

This new federation is called the Union del Trabajo de Filipinas (Labor Union of the Philippines). Its constitution recognizes unions, groups of unions in municipalities, and departments of unions in prov-

inces, and therefore has provided for an organization extending throughout the archipelago. The central government is vested in executives consisting of a president and vice-president, and a salaried secretary and a salaried treasurer, with a governing council consisting of these officers and the presidents of unions and town federation and department representatives. Officers hold office two years. Provision is made for an annual convention of delegates from all the unions, municipal groups, and departments. The fees are graded into seven classes, varying from 20 cents Philippine currency to \$3 Philippine currency (10 cents to \$1.50 American currency) a month, and carrying a proportionally rising scale of benefits. For instance, the lowest fee entitles members to medical and legal advice and a pension of \$2.50 a month in case of permanent total disability, or to widows or to children under 15 years of age in case of death. The highest fee entitles to the same privileges as the first, except that the monthly pension (benefit) promised is \$36, and in addition to the paper to be published by the society, free medicines and burial expenses are given. The funds of the society are also intended to be used to support members during involuntary idleness caused by strikes, illness, or other justifiable reason. A strike must be approved by a nine-tenths vote of the striking union, and formally approved by the executive of the federation before becoming official, or entitling its members to receive strike support from the general organization. A special assessment of 2 to 5 cents Philippine currency daily upon all members of the general society is permitted in case the funds are needed for strike support.

The president of the federation, Mr. Lopez Santos, said that a number of unions were existing in Manila, but that the new society was still in the process of organization, and the full membership was not yet recorded. An organizer was working in Negros, and the laborers, shoemakers, and clerks had been organized in Cebú.

The official publication of Doctor Gomez's union was called *Los Obreros* (The Workers). A number of papers at present published in Manila represent labor to some extent, though not officially connected with the unions. The president of the new federation is a writer upon *El Renacimiento*. *La Democracia*, *El Grito del Pueblo*, and *La Redención del Obrero* also show marked labor sympathies.

The labor movement in the Philippines is still in one sense academic. While it has been occasioned in part by real grievances of the workers, it has not originated directly among the working classes, who are probably too ignorant and apathetic to organize of their own volition; but it has been inaugurated by a few *ilustrados*, who are men of some education and do not, strictly speaking, belong to the working people. It would be wrong wholly to deny their sincerity of purpose. But no comparison can be made between their movement and the trade-union movement in the United States. In

the latter country this propaganda has risen and progresses with the inevitableness of natural-service law; it is not amenable in the long run to individual direction, and it can not be made or ruined by any leader or leaders. It has arisen among the workingmen themselves and is guided ultimately by their collective intelligence. Trade-unionism is a phase of democracy. In the Philippines trade-union ideals are imported and are employed by a coterie of nonworkingmen as a political rallying cry, and arouse an interest that is partly artificial among the workingmen themselves. The latter join a union because they are accustomed to obey their leaders, not because they comprehend or sympathize intelligently with its purpose. They have only a nominal voice in the administration and control of their organization. A "mass meeting representing 10,000 workingmen" may mean two or three score ilustrados convened for the purpose of carrying out a predetermined programme.

The best influences of American trade-unionism can probably be brought to bear in the Philippines by organizing the skilled trades followed or supervised by Americans and Europeans, as has been done by the typographers. These unions become locals of the parent organization in the United States, and keep aloof from native complications. The superintendent of the government printing office in Manila writes in this connection: "Manila Typographical Union was organized June 13, 1903; its membership is 25; there are no other branches in the Philippine Islands. There have been organizations of native workmen, but not along the same lines as the United States organizations. I believe the Filipinos may be successfully organized along legitimate trade-union lines." The electrical workers are also organized. The marine engineers and naval mechanics have a society of a semiprofessional, semitrade-union character, but as these are licensed occupations, eligibility is really determined by the government. The prominent members are Americans and Europeans.

Possibly with the further industrial development of the Philippines organizations of the character just mentioned will increase. They will probably represent an unusually high degree of intelligence, conservatism, and social well-being, for resident white labor in the islands will always be directing rather than operating labor. Such unions, if in sympathy with native workmen, might exercise a healthful influence over their organizations, if not by direct suggestion at least by example. In any case, it is probable that the Filipino labor movement has come to stay. It can be destroyed only by force, and such a recourse will hardly be adopted even by the most conservative government. As a movement ultimately to be reckoned with, it is much preferable that it should be governed by American rather than by South European ideals and that its organizations should be assimilated to trade unions in the United States. This might lessen the probability that a polit-

ical labor party will arise, with great influence in the local governments and in the popular house of the insular legislature. Persons familiar with Filipino character consider that the existence of such a party, if it commanded a large and well-organized body of voters, might greatly hamper the authorities in maintaining peace in case of strikes or other labor difficulties, as well as embarrass the general administration of the government. It might place another obstacle in the way of successfully adjusting democratic institutions to an undemocratic people. Assuming the presence of a persistent labor propaganda, therefore, as an inevitable condition in the Philippines, it is desirable, at least while the new governmental organization is still untried, that this movement should attempt to realize its ends through the "no politics, no religion" policy of trade unionism rather than through political agitation. But it is very doubtful if any positive measures could be taken to favor this result.

BENEFIT SOCIETIES.

The writer was unable to learn of any associations of Filipino working people for mutual benefit or self-help of sufficient importance to justify extended mention. A stage of development favorable to the success of such enterprises has hardly been reached in the Philippines. A mercantile and industrial society called "La Obrera Filipina" was organized in October, 1903, but had not begun actual operations at the time the data for this report were gathered. The society may be a sort of revival of the industrial end of the labor union formed by Doctor Gomez. It was founded by the tobacco workers, for the purpose of establishing and conducting shops and factories, buying and selling merchandise, and for general industrial purposes. The capital is fixed at \$1,200,000, in 100,000 shares of \$12 each, which must be paid up at the rate of \$1 Philippine currency (50 cents American) a month. The purchasers of the first 10,000 shares are to receive as a premium what is tantamount to an issue of promoters' stock, covering the stock they purchase share for share, and receiving a dividend of 8 per cent of the net profits. Two "cooperative" associations—though cooperative seems to be used merely as a convenient title—exist, one among the cooks and the other among clerks. They were described as possessing little capital and but trivial importance, and no constitution or reports concerning their condition or manner of organization were obtainable.

An important quasi-public corporation, established primarily in the interest of the poorer classes of Manila, deserves fuller description. This is the Monte de Piedad y Caja de Ahorros, a public pawn shop and savings bank, which was founded by royal order in 1880. The original capital of \$33,959 was derived from a charitable church endowment. Ten years after its establishment, in 1891, this institution had

41,858 loans outstanding, to a value of \$735,721, and the savings deposits amounted to \$335,483. These sums were in Spanish currency, then at a slight discount from gold. By the end of 1903 the amount loaned on pledges had increased to \$1,300,000 and the deposits to \$919,456.11 Spanish currency. On account of the depreciation of silver the gold value of loans and deposits had not increased as rapidly as the number of transactions and the real extension of business; but the growth in the importance of the institution is to be measured by the figures quoted rather than by what they would appear to be if reduced to gold exchange. The original capital has increased to \$600,000, including a substantial building in the business center of Manila. The interest rate is 4 per cent upon savings deposits, and 8 per cent is charged for loans against pledges. The institution is governed under a charter by a board appointed by the archbishop of Manila from among all classes of the community. The only restriction upon eligibility is that the members must be Catholics, as the original endowment was donated by the Roman Catholic Church.

LEGISLATION.

Much of the customary law and many administrative regulations affecting labor in the Philippines, in force during Spanish rule, have fallen into abeyance or ceased to have legal authority since the American occupation. Tacit consent, habit, and the ignorance of the working classes still maintain in existence many customs affecting the terms of service, such as peonage, that even in Spanish times no longer had legal sanction. The code of procedure has been wholly revised by the American authorities and a new penal code is at present under discussion. The Spanish code of commerce and the civil code still remain in force without essential modification.

The civil code, which regulates contracts for service, provides that such contracts may be for an uncertain period, for a fixed period, or for a specific work; but that a hiring for life shall be void. If an employer dismisses a domestic servant, engaged for a fixed period, before that time has expired, he is liable for 15 days extra wages, over and above those already due the servant at the time of dismissal. In disputes between an employer and a domestic servant, the burden of proof as to the rate of wages, and as to the payments of wages made during the current year, rests upon the servant.

The civil code provides that "Field hands, mechanics, artisans, and other laborers hired for a certain time and for a certain work can not leave nor be dismissed, without sufficient cause, before the fulfillment of their contract." This provision appears to place within the judgment of the court the legality of any strike or lockout where a contract is proved, and to give authority to grant civil damages for the same. The penal code inflicts a penalty of imprisonment for not less

than one month and one day, nor more than six months, upon "those who combine to enhance or lower the price of labor or regulate its conditions wrongfully, provided such combination has begun to be carried into effect." It is further provided that "this penalty shall be imposed in its maximum degree on the leaders and promoters of the combination, and on those who shall employ violence or threats to insure its success, unless they deserve a higher penalty by reason thereof," i. e., a penalty incurred by having violated other provisions of the penal code, such as for assault or arson. Strikers who have been working under time or job contracts would therefore be liable, under the present laws in the Philippines, both for civil damages caused to an employer by the strike and to imprisonment for violating a penal statute, if the strike were conducted by an organization. It would appear from the wording of the law that they would have a right, on the other hand, to collect damages from an employer if they were locked out under similar conditions, and even to put an employer into prison, if they can prove that he has combined with other employers to lower the price of labor. Unorganized strikers, not working under either of the above-mentioned forms of contract, or unorganized employers locking out their men under like conditions, are free from legal interference. As mentioned elsewhere, one Filipino labor leader has been convicted and imprisoned in the Philippines, under the penal provisions just quoted, since the American occupation.

Under the civil law a workman who has performed work upon the personal property of another may retain such property as a pledge; but workmen can not recover from an owner for debts due them from a contractor doing work for the former, more than said owner owes such contractor. Unless there is agreement or custom to the contrary, the price of work must be paid upon delivery.

No law provides for employer's liability, except a general clause in the civil code, which provides that "a person who, by an act or omission, causes damage to another, when there is fault or negligence, shall be obliged to repair the damage so done." But employers are specially made liable for injury or damage caused by their employees, and may recover from such employees the money they have paid for compensation for the injury or damage caused by the latter.

The civil and commercial codes both deal with preference to creditors. In case of insolvency, wages appear to have no preference against real property. The commercial code provides that in case of insolvency of an employer personal servants and commercial employees shall have a preferred claim for payment of services rendered within the preceding six months against the proceeds from the sale of personal property over all other creditors except creditors by reason of burial, funeral, or probate expenses, and creditors by reason of furnishing support to the bankrupt and his family.

The commercial code also regulates the relations of sailors and masters of ships, providing for the enforcement of the written contract or articles required by law, in case of violation by either party. A sailor who falls sick shall not lose his right to wages during the voyage unless the sickness is caused by his own fault. In all cases he must be provided with proper medical attendance, but may be required to repay the cost of such attendance. A ship with all her gear and the freights due her is liable for the wages of the crew, but if not levied before a new voyage is undertaken these claims lose preference in favor of those for wages for the subsequent voyage.

The code of procedure enacted by the Philippine Commission provides that a fraudulent debtor, if the debt has arisen from an express or implied contract, may be imprisoned in case he does not satisfy the judgment legally secured against him. His expenses during confinement must be paid by the judgment creditor, to be added to the amount of the judgment and be collected before release. Property exempt from attachment and execution for debt is the debtor's homestead to the value of not over \$150 Philippine currency (\$75 American currency), the tools or implements he uses in his employment, two draft animals used in his ordinary work, but not exceeding in value \$150 Philippine currency (\$75 American currency), clothing, furniture, provisions, etc., necessary for his use. It is specified that the fishing boat and net, not exceeding the value of \$25 Philippine currency (\$12.50 American currency), belonging to a fisherman, shall be exempt from debt. This code provides for simple procedure before a justice of the peace, not differing materially from similar procedure in the United States.

The Commission has recently enacted a law requiring that all mutual benefit and relief societies, including those "furnishing support to members while out of employment," must register with the insular treasurer, and that their annual statements shall be filed and their accounts inspected by the same office. This law covers practically any labor organization that could be legally formed in the Philippines, as an association of workmen solely for the purpose of conducting a strike or for controlling wages would be manifestly unlawful under the provision of the penal code quoted above. Such organizations can legally exist in the Philippines only by constituting themselves benevolent societies, unless they make their purpose educational or literary improvement, and even then they may become liable for acts beyond their constitution and expressed objects, if in violation of the penal provisions mentioned.

A vagrancy act was passed in March, 1902, defining vagrants so as to cover all tramps, and subjects them to a fine of \$100 and imprisonment not to exceed one year and one day.

EDUCATION.

No other measure of the American authorities in the Philippines has done so much to win the confidence and conciliate the sympathies of the Filipino population as the establishment of a system of public schools. The Spanish Government and the church authorities had previously provided for the education of the people. Aguinaldo himself was formerly a country schoolmaster. But the former system did not satisfy the educational aspirations of the Filipinos. However, something was accomplished, and illiteracy was by no means universal. According to certain educational statistics published 20 years ago, in 1883, the numbers of those who had received some instruction were as follows. These figures are compared with those of the recent census:

STATISTICS OF LITERACY AND SCHOOL ATTENDANCE, 1883 AND 1903.

	1883.	1903.
Males able to read and write	298, 500	735, 564
Males able to read only	327, 984	1, 161, 925
Females able to read and write	101, 273	267, 024
Females able to read only	270, 234	1, 049, 508
Males unable to read and write	1, 743, 317	1, 311, 852
Females unable to read and write	1, 911, 155	1, 450, 241
Males able to speak Spanish	146, 108	.....
Females able to speak Spanish	103, 492	.....
Males attending school .....	.....	443, 012
Males of school age (5 to 17 years) .....	.....	1, 087, 266
Females attending school .....	.....	368, 703
Females of school age .....	.....	1, 050, 031

Practically all the Christian population of Mindanao spoke Spanish in 1883, which indicates that the statistics probably did not cover the remoter Jesuit mission stations among the Moros. In that year about 21 per cent of the total population reported for the islands could read, but less than 5½ per cent could speak Spanish. In other words, 75 per cent of the persons able to read could do so only in the Malay dialects. Writing has evidently been an accomplishment less frequently taught to women than to men. The decrease during the last 20 years in the number of illiterates reported is very satisfactory, especially as the count made in 1903 was probably more exhaustive than the former one.

Technical and agricultural education were begun by the Spanish Government. In 1887 and 1888 experimental farms were opened at La Carlota, in West Negros, and at San Pedro, in Pampanga province, Luzon; and in 1889 an agricultural school was founded at Manila. The same year a trade school (Artes y Oficios) also was opened at the capital. Classes were held at a building in the Walled City, and practical instruction was given in shops provided for that purpose in the Calzada de Vidal. The strictly technical courses were five in

number—for apprentices, artisans, stationary engineers, electricians, and constructing engineers and architects (*maestros de obras*). Naval engineering was taught in a separate school. There was also a commercial course in the trade school, for which fees were charged. The technical courses were entirely free, except those in construction and architecture, where a nominal charge of 20 cents a subject was made. Secondary school subjects, such as bookkeeping, political economy, French and English, were taught. The shopwork covered engraving, lithographing, printing, carpentry, joinery, cabinetmaking, wood carving, stonecutting and masonry, carriage making, ironworking, and electrical installation. A similar school was opened at Iloílo in 1890. According to their published reports or memorias, the latter school had the larger attendance, probably on account of some popular night classes, or because there were fewer competing secondary schools in the provincial city than in the capital. In 1896 there were 1,007 pupils enrolled in this institution, and 1,657 enrollments by subjects. In Manila in 1897 the pupils enrolled numbered 472, and the enrollments by subjects 1,100. Besides these schools there was a nautical school for training marine engineers at Manila, which has been continued by the American Government. This institution still remains at Manila, under the charge of a naval officer detailed by the Secretary of the Navy as superintendent, but it is proposed to reorganize the school and place it on a military reservation at the entrance of Manila Bay, where the cadets will form a distinct corps, under a competent staff, and subject to strict discipline, and be fitted for positions in the coast guard and other government service as well as in the merchant fleet.

An act has been passed and appropriations have been made for a school of agriculture at La Carlota, in West Negros, but no progress has as yet been made toward the practical realization of this plan. The technical schools established by the Spanish Government did not survive the transition to American control, but a new school of this character had been opened in Manila, and a similar institution was in contemplation in Iloílo, to be built up around a woodworking shop already in existence, when the writer was in the islands. In some of the government mechanical departments, especially the printing office, the training of Filipino craftsmen is being conducted upon a thoroughly efficient and practical basis, as systematically as would be possible in an institution with a more formally educational object. The total volume of industrial instruction conveyed through these agencies, from both government and private sources, since the American occupation, has been very large. It is evidently large enough to be an opening wedge to a complete transformation in ideals and methods of work.

The enrollment statistics of the Manila trade school at the close of the autumn term of 1903 were as follows:

Number matriculated, day class, June 15 to December 18, 1903.....	251
Number matriculated, night class, June 15 to December 18, 1903.....	332
Total	<u>583</u>
Number on roll, day class, December 18, 1903.....	122
Number on roll, night class, December 18, 1903	133
Total	<u>255</u>
Number attending both day and night classes.....	41
Average attendance, "no padding" (per cent).....	90.7

The enrollment by subjects was as follows:

ENROLLMENT IN MANILA TRADE SCHOOL, BY SUBJECTS, NOVEMBER AND DECEMBER, 1903.

Subject.	November, 1903.	December, 1903.
Carpentry and wood carving	43	70
Drawing	69	90
English and mathematics.....	94	118
Iron working and tinsmithing.....	17	22
Telegraphy	33	50
Stenography and typewriting.....		16
Total.....	256	366

The positions secured by students upon their trade-school record for the 7 weeks since November 1, 1903, had been as follows: Telegraphy, 29; drawing, 5; iron working and tinsmithing, 1.

The authorities intend to remove the school from its present location in Ermita, a suburb of Manila, occupied largely by Americans and the well-to-do classes, to the workingmen's suburb of Binondo. Such a change, it is thought, will add largely to the enrollment.

The director of this school speaks well of his pupils, who are all Filipinos. The Ilocanos, while slower intellectually, show more persistence and become better workmen than the Tagalogs. At first some difficulty was experienced in getting the pupils to soil their hands. The latter considered anything but the theoretical side of the trade they were learning beneath them. But this prejudice has been overcome, and the students are now willing manual workers and appreciate the importance of hand practice. A number of objects, such as joinings, calipers, and other articles of wood and metal made by the pupils, testified to their growing skill and accuracy in workmanship.

The fact that 29 pupils in the telegraphy department have qualified for service on the government lines in the last 7 weeks is interesting, in view of the difficulty experienced by the signal corps in training native operators. Competent and reliable American operators will

not remain in government service in the Philippines at the salaries provided, especially upon remote stations. Therefore the signal corps tried the experiment of training Filipino operators, selecting men from the more intelligent linemen and messengers already employed. The following quotations from a report upon this experiment by a sergeant to the chief signal officer describes some of the difficulties met with in trying to train a man out of his class in the Philippines: "After 6 weeks, during which the men (2 native linemen) practiced from 2 to 4 hours a day, it has proved a failure." The men show "utter incapacity and lack of sufficient intelligence to comprehend even the elementary principles of telegraphy." The class distinction that separates an ilustrado from a tao is so strong that "there is absolutely no monetary consideration that could reasonably be offered which would induce them (ilustrados) to degrade their social position by condescending to engage in manual labor," such as that of linemen and messengers, which, under the scheme proposed, was to be a preliminary step to training and employment as operators. The taos, "under American supervision, do fairly well at manual labor and attain considerable skill in the performance of their duties, but when left alone to work independently their faculties appear to relapse into a state of desuetude." The failure here was evidently due to the fact that men of the class selected did not have sufficient preliminary mental training and education to fit them for further acquisitions of skill and knowledge. The trade-school pupils, on the other hand, already possessed at least an elementary education, and most of them continued their general studies in that institution. Even educated Filipinos, however, are said to lack power of concentration sufficient to enable them to fix their attention steadily upon a single object or line of thought for any length of time. For this reason they seldom learn to receive messages by ear. In a large office all the clerks will look up and stop work when a stranger enters, like children when a visitor enters a schoolroom. Evidently, however, youthful training has as much to do as native character with determining ability to concentrate attention and apply the entire faculties to a task.

The remarks of the signal sergeant were quoted principally to show certain limitations existing at present in the Philippines upon the immediate extension of technical instruction, whether in schools or in connection with working industrial enterprises. Classes of occupations that might in the near future be profitably extended in that country require both some physical labor and the intelligence and mental training derived from elementary education. Until the ilustrados overcome the prejudice against soiling their hands, or a generation of public school peasantry can be brought up without acquiring this prejudice, it may be easy to fill technical schools with mechanical theorists who have not the practical training to direct or the courage

to undertake skilled manual trades. Such education will have very little influence upon the real industrial capacity of the people. On the other hand, these very conditions create a mission for technical education. No other influence is likely to be more effectual in dignifying labor, breaking down the prejudice against working with the hands, and creating modern, sane, wholesome social ideals in the minds of the coming generation than this very professionalizing of the mechanic trades.

Practically all private instruction in the Philippines is in the hands of the Catholic Church. Protestant mission enterprises appear not to have entered this field as extensively as in Porto Rico and Cuba. The old University of St. Thomas occupies a commodious and substantial building in the walled city of Manila, possesses the most extensive library in the country and a fair museum, and still gives courses, especially in theology. This institution has suffered through the conditions resulting from the change of government and the insurrection. The Jesuits have successful and growing schools in Manila and elsewhere, and are especially active in the Moro province. The Observatorio and Ateneo are both growing Jesuit secondary schools in the capital. The former, as its name indicates, contains an observatory and meteorological station, and possesses a good scientific library.

CHINESE AND NATIVE LABOR.

The Chinese, whose connection with the history of early Spanish colonization in the Philippines has already been referred to, form an element of the population of enough present and potential future importance to deserve special consideration in any account of labor conditions in those islands. They are already present in large numbers. Commercially they form a connecting link between Europeans or Americans and the natives; industrially they render a considerable part of the skilled service required in local construction and manufacture; potentially they influence labor conditions in two ways. There is a demand from some influential sources for the admission of Chinese unskilled laborers for the purpose of developing new and extending present enterprises in the Philippines. This demand may continue, become more exigent as capital is attracted to the islands by renewed peace and prosperity, and form a permanent factor in the political and industrial situation until the present exclusion laws are modified, or a reciprocal adjustment of demand and supply in the native labor market is established under a fixed and settled policy of exclusion, or until an immigration of workingmen from Japan, Korea, or Java, all neighboring and labor-exporting countries, has supplied the more urgent requirements of employers. In the second place, Chinese competition at Hongkong, Shanghai, and other Asiatic ports is destined to be a per-

manent factor with which employers in many branches of established or contemplated industry in the islands must reckon. This factor may set the final limitation upon the extension of manufacturing enterprises in the Philippines, even of those already in operation, and it will certainly determine the upper limit that may be reached by wages in relation to labor efficiency and tariff protection. As the Chinaman is generally conceded to be a more efficient workman than the Filipino, it is only by maintaining lower wages than those paid in China, or by adjusting tariff protection to the exigencies of certain industries, that such occupations as ship and machinery building and repairing, rope making, textile manufacturing, and furniture making can survive. Indeed, some of these industries already show signs of depression and possible extinction. A possible remedy for this competition may be found in the readiness with which the Filipino adopts new methods of work and welcomes labor-saving machinery. With these aids and scientific American industrial administration headway may be made against the conservative Chinese. But it must be remembered that the latter in turn are in the employ of managers who appreciate and utilize every modern aid to economical production.

The movement of Chinese population to and from the Philippines, before and since the American occupation, is shown by the following table:

ARRIVALS AND DEPARTURES OF CHINESE POPULATION BEFORE AND AFTER AMERICAN OCCUPATION.

Year.	Arrivals.	Departures.	Excess of arrivals.
BEFORE AMERICAN OCCUPATION.			
All Philippine ports:			
1889.....	11,365	4,307	7,058
1890.....	11,807	2,947	8,860
1891.....	10,137	1,286	8,851
1892.....	9,499	3,226	6,273
1893.....	9,584	4,376	5,208
Total.....	52,392	16,142	36,250
AFTER AMERICAN OCCUPATION.			
Manila:			
1899.....	13,308	9,458	3,850
1900.....	9,768	10,568	a 800
1901.....	10,309	7,294	3,015
1902.....	9,789	6,550	3,239
1903.....	7,426	8,068	a 642
January 1 to June 30, 1904.....	4,632	4,112	520
Total.....	55,232	46,060	9,182
All Philippine ports, January 1, 1899, to June 30, 1904.....	58,129	49,505	8,624

a Excess of departures.

The figures point to a steady increase in the Chinese population, but the increase for the 5½ years ending June 30, 1904, was less than one-fourth of that for the 5 years from 1889 to 1893.

The policy of government regulation of Chinese immigration and

settlement was early adopted by the Spanish Government. By an order issued in 1660, all Chinese residing within the archipelago were required to have a license, which was valid for one year. Failure to comply with this regulation was punished by two years in the galleys. This provision, however, was evidently for taxation more than for administrative purposes. At the time of the English invasion the Chinese joined the invaders against the Spaniards, and after the restoration of Manila to Spain further restrictive measures were adopted. In 1828 an order was issued admitting only such Chinese as were engaged solely for purposes of agriculture. This condition, however, appears to have been evaded. In 1850 special regulations were promulgated governing the admission of Chinese, who were imported as agricultural laborers. Planters were graded into two classes, those with an income of \$2,400 or over per annum, and those with an income of \$1,500 but less than \$2,400. An association of small planters was reckoned, for importing purposes, as equivalent to a planter having an income equal to the collective incomes of the members. First-class planters were allowed to import 400, and second-class, 200 Chinese, paying a tax upon the laborers so imported amounting to 6 to 12 reales (\$0.75 to \$1.50 Spanish currency) per head per annum. No tax was required upon Chinese imported into the tobacco districts. Chinese introduced under these provisions were forbidden to engage in any trade, art, or industry, or in any commercial occupation. The only occupations permitted them were agricultural labor and the manufacture of sugar, hemp, and indigo. These restrictions applied only during the term of the contract, and employers were made responsible for their observance. The moderate extent to which these regulations effected their object is sufficiently indicated by the fact that in 1877 there were only 197 Chinese engaged in agricultural pursuits in Luzon.

New regulations went into effect upon January 1, 1890, permitting Chinese to enter the Philippines only at Manila and imposing special taxes upon them. Their gremio organization was recognized, as formerly, for both taxation and administrative purposes.

The Chinaman does not voluntarily engage in agricultural labor in the Philippines or in other tropical countries. He can only be retained in such occupations by penal contracts or some similar form of compulsion. A Spanish writer, speaking of conditions in the Philippines in 1879, says: "He (the Chinaman) has monopolized all the retail commerce of Manila. He could at will leave the city without food, light, or clothing. He forms a state within the state. * * * Of the 80,000 [sic] members of the nation in the archipelago not one devotes himself to agriculture."

The American Government has been consistent in its policy of excluding the Chinese from the Philippines. This was first effected, prior to

the establishment of the civil government, by an order of the commanding general, which continued in force until legislative authority for such exclusion was given by the act of Congress of April 29, 1902. This law has been supplemented by an act of the Philippine Commission, dated March 27, 1903, which provides for the registration of Chinese by customs officials and the deportation of all not legally registered within two years. The precedents of the Federal law applying to the United States are followed, and the Federal court definitions of laborer and merchant are adopted.

The demand for Chinese labor in the Philippines appears to be localized in two directions. It is confined almost entirely, if not wholly, to American and European employers, and partly for this reason exists as an appreciably important sentiment only in Manila and two or three of the larger ports. No Filipino was found, whether employer or employee, who wished the present exclusion policy amended. Among the sugar planters interviewed there was not one who favored Chinese labor. In reply to inquiries upon this subject, the Filipino chamber of commerce of Manila, through its president, writes: "For industries already established in the country there is a sufficient number of laborers and mechanics with the skill and intelligence required; but in case of new industries that might be established there would naturally be a lack of suitable hands, because they would have no experience in the new occupation. There was no complaint of scarcity of Filipino laborers during Spanish rule, and if Chinese came it was not so much because they were necessary as because no restriction was placed upon their immigration."

Among American employers there was diversity of opinion as to the need of Chinese labor. In official circles and among employers in sympathy with official views or doing business with the government, it was claimed that the local labor supply, trained and instructed by trained workmen from America, was sufficient for the needs of the islands. It was pointed out that many of the difficulties experienced with Filipino labor were due to misunderstandings arising from our ignorance of the people and their language. These difficulties were said to be rapidly diminishing, or disappearing entirely, as we learned more of the native workmen and they learned more of our ways and demands. Considerable insistence was placed upon the point that the will of the Filipino people, which it is considered just that our Government should consult upon this question, was distinctly adverse to Chinese immigration. Such immigration, it was also stated, would ultimately prove disadvantageous to Americans. The Chinese do not remain primary producers for any length of time, but become a commercial class, monopolizing those lines of business which it is for our interest as a nation to place in the hands of native and white mer-

chants. It has already been mentioned that practically all the retail and much of the wholesale trade of the Philippines is in the hands of the Chinese. They own four banks in Manila, and have six vessels of an average burden of 500 tons each in the coasting trade. They also have their own chamber of commerce in Manila. Judging from Javanese experience, they appear to be more oppressive exploiters of the people than individual white merchants and employers. They are the source of at least one vice most pernicious to the colored races in the East—opium smoking. The imports of opium into the Philippines have increased 50 per cent since 1900, in spite of an increase of duties. The commercial methods of the Chinese often injure the trade of a country. Spanish writers state that it was persistent Chinese adulteration that ruined the once flourishing indigo industry in the Philippines. It is claimed that where Chinese control trade in a foreign country an impoverished peasantry and a low state of industrial development is always the consequence, for it is from the class of retail traders, who come most directly into contact with the working people, that initiative and incentive to industrial improvement most often reaches the latter, especially in country districts. Such initiative and incentive is never furnished by the Chinese, who do not possess the progressive qualities themselves. The country storekeeper is frequently the man who is in the best position to suggest to his customers, or introduce upon his own land, new crops, fertilizers, or methods of cultivation, or new implements and wares. He creates and extends markets for new commodities. He can be a political and educational force in the community. But those who have studied the situation in the Philippines state that the Chinese trader in that country is solely a money getter from the narrow point of view. He does not build up industries or introduce improvements. He is a reactionary rather than a progressive character in both an industrial and a civic sense. He makes progress more difficult rather than more easy. Several employers corroborated these general observations in details peculiar to their own industry. The Chinese opposes while the Filipino welcomes the introduction of labor-saving machinery. The Filipino is ready to adopt new ways of doing things, of handling a tool or putting together the frame of a house, while the Chinese workman would positively resist any change, no matter how obviously for the better, in his old habits of work.

While European industrial employers were almost a unit in demanding Chinese labor, there was a division of opinion again among European mercantile employers. The latter wanted the Chinese only upon condition that they were confined strictly to manual labor. One large employer of this class said: "As to Chinese, so long as they are allowed in the country only as laborers, it might not be so bad; but if they are to go into business, like they do now, as soon as they have

saved a little money, it would be a very bad thing." An American merchant said: "Capital will never come in with present labor conditions; but if the Chinese are allowed, they might drive all the Americans here out of the islands by their competition." Others expressed the opinion that Chinese admission would mean a permanent block to free trade with the United States, and that of the two measures, free trade would benefit business more than Chinese labor.

The largest tobacco company in the Philippines advocated the admission of Chinese solely as agricultural laborers under contract, but they would not employ Chinese as factory operatives, as Filipinos prove more satisfactory in this occupation. Other tobacco firms, however, having more particularly in view the unfair competition, falsification, and adulteration of goods with which they charged the Chinese, thought there were already too many persons of that nationality in the islands.

The most urgent and consistently advocated demand for Chinese labor came from larger American and European industrial employers, and above all from the shipbuilders. About a year ago the American Chamber of Commerce of Manila sent a representative to Washington to present these claims before Congress. Since then agitation has ceased to a great extent because employers seem to have despaired of obtaining the legislation they wish from Washington.

The general arguments brought forward in favor of the admission of Chinese labor are threefold:

(a) It is claimed that Chinese skilled labor is necessary to preserve certain industries already established and to enable others to be undertaken, in view of Chinese competition on the mainland.

(b) Chinese unskilled labor is said to be required to build roads and other public improvements necessary to the progress and complete pacification of the islands, and to develop mines and agricultural industries, especially in remote and thinly settled districts.

(c) The presence of competing Chinese labor is thought necessary in order to make the Filipinos work.

The first claim is supported by present conditions in a limited number of industries. Hemp can be manufactured into rope in Hongkong at less than one-half the labor cost in Manila. Ship mechanics in that city, as has been shown, receive but little over a third the wages they receive in Manila, although labor conditions are more stable in China than in the Philippines and labor efficiency is greater. This difference in wages in the two countries has come into existence since the Chinese were excluded from the islands. Naturally the industries affected by this change suffer.

The second and third claims involve the whole question of labor supply and administration, and might be discussed indefinitely without arriving at a conclusion that might not be disputed. The statement from the Philippine Chamber of Commerce of Manila that an

ample supply of native labor existed in the Philippines in Spanish times is not in accord with the testimony of several Spanish writers. Over a century ago a Spanish friar mentions certain characteristics that affect the quality and regularity of native labor, much as an American employer would do at the present day. He mentions "indolence and a propensity to gamble" as lessening the working efficiency of the people, and suggests that where tracts of well-cultivated land occur in the Philippines they do not imply an industrious, but rather a dense, population. Further he says, almost in the words of present employers, who complain that the present high wages are a cause of labor scarcity: "In fact, the times when money is abundant are bad for undertaking any new business in the Philippines, for then the natives secure enough to satisfy their wants with ease, and they make no provision for the future; so they are even more indolent than at other times, as less work is required to obtain their daily food." In 1876 a Spanish treasury official mentions the lack of labor felt in many Luzon provinces, especially Nueva Écija, Principe, Cagayán, and Ilocos Norte. He thus refers to general agricultural labor conditions in that island:

The lack of laborers on the one hand, the indolence of the native on the other, and the small number of Chinese who devote themselves to agriculture have much to do with the fact that the 2,095,786 hectares [5,178,687 acres] of (tenanted) land in Luzon are not more fully cultivated. * * * The greater part of the land belongs to the natives and they are nearly all small holders. This hampers agricultural progress greatly and lessens the product of the land, for in general, it is more expensive to cultivate a small than a large holding. The return the peasants get from their land is very small, and from this results their indifference to agriculture. Their inherited customs, apathetic temperament, few needs, unconcern about the future, the poor quality of their seed, their primitive implements, and their slow working animals are all a drawback to agriculture in the Philippines. * * * The development of industrial enterprises in the Philippines is very slow, and always exposed to severe losses. One must overcome the difficulty of lack of operatives and laborers, and the indolence of the natives—of an indolence that recognizes no need except that of providing the primary necessities of existence—and, more important still, one has to encounter an entire nonobservance of their contracts and obligations on the part of the workmen, however favorable to the latter these agreements may be. Neither the example of other workmen nor high wages will overcome their antipathy to labor. From these causes result the great losses that those suffer who have endeavored to develop large industrial enterprises in this country.

In 1894-95 a government agricultural inspector reported severe losses to cane planters through lack of labor at harvest time. A writer^(a) upon agricultural conditions in Iloilo in 1894 said: "The

^aLa situación de agricultura en la provincia de Iloilo, 1894, por D. Lorenzo Romero y Pérez.

most prudently devised industrial undertakings attempted in these islands, although amply financed, have been wrecked upon the reef of deficient labor supply. The mining and industrial enterprises that have gone to pieces in the face of very large prospective profits are a clear and palpable example of the insecure labor situation." Civil guards stationed on plantations could not prevent laborers, who have already been paid advances, from deserting their contracts. This writer says that the labor stringency "is in no wise due to lack of population, but to the fact that the natives will work only when it suits them." The official agricultural bulletin states about the same time: "The Filipino laborer never looks forward to the morrow. He lives for the day alone. So long as he has a handful of rice he will not work until it is finished. He knows nothing of saving. If an employer increases his wage so as to encourage him to work, he works fewer days in the week, because with the earnings of these fewer days he can live more days in idleness."

Among the many statements from present employers the following is of interest as coming from an American trade unionist, who still keeps up his membership in his local at home and is practically familiar with the labor situation in the Philippines: "We must import enough labor to make the native labor work if we are to make anything of the country. I don't say Chinese labor, but some labor from outside the country." On the other hand, an officer of the insular bureau of agriculture, who had employed many country workmen in experimental farming in Luzon, said: "I could get 1,000 laborers for any agricultural undertaking in any one of the provinces immediately surrounding Manila were I to offer them 40 cents Philippine currency [20 cents American currency] a day cash." Another American, in the lumber industry, said: "I employ 240 men and don't want Chinese. They drive Americans out of business, and their admission would destroy our chance of tariff concessions from the United States—which is very much more important for the country."

Spaniards generally appear to have considered the difficulty of labor supply in the Philippines one to be solved by more efficient administration rather than by the importation of coolies. Planters have not as a rule turned toward Chinese as a remedy for the situation, at least during recent years. One Spanish writer says: "The problem is to create habits and customs governing the relation of employer and employee; and though these habits may be difficult to impress, they are easily followed when once formed." F. H. Sawyer, an English civil engineer who was a resident of the Philippines for 14 years and employed many men at different periods, says in his work upon the islands: "I think that they [Filipinos] are quite ready to work for a sufficient inducement. I never experienced any difficulty in getting men. I made it a rule to pay every man with my own hands Satur-

day his full wages without any deductions. On Monday morning, if I wanted 300 men, there would be 500 to pick and choose from." Filipinos, as previously stated, proved more satisfactory than Chinese in constructing the Manila and Dagupan Railway.

Unskilled labor is plentiful in Manila at present, and this may have been a common condition in the past, although some persons interviewed thought that temporary causes accounted for the presence of so many workers in the city. In any case the most favorable accounts of the Filipino as a workman come from the metropolis or its vicinity. Speaking of the matter of supply, a large employer said: "There is plenty of labor, such as it is. The Manila unskilled labor market is crowded on account of the numbers who have come in from the provinces, attracted by high wages or driven from their homes by the ladrones, the cattle plague, the drought, and the locusts." Another employer in the same city said: "There is sufficient labor in Manila at present, because numbers of people have come in from the provinces, hoping to secure government employment, so the labor market is pretty fully stocked. The men work more regularly here than in the country." The collector of customs in that city said: "We have 100 to 150 clerks proper, and our Filipinos have been faithful and without bad habits prejudicial to their integrity. But one of them has been discovered to be dishonest—a better record than has been made by the Americans in our employ. Our laborers proper get 90 cents Philippine currency [45 cents American currency] a day. I was in favor of importing Chinese labor during my early experience in the Philippines, but the Filipinos in our employ have made such real progress in the industrial virtues since I have been able to observe them—I may say such extraordinary progress in many respects—that, though I do not consider them ideal workmen, I believe they deserve a further trial, and that we are not justified in importing Chinese for any labor with which I am familiar after the showing the Filipinos have made. Importation of Chinese would boom some industries, but it might not benefit the country permanently. What we need most is good American foremen—men who can get along without bullying and cursing the Filipino, but who have the tact to handle him properly. The improvement of the past year in the way of steadiness and regularity at their work has been especially marked." In the report of Capt. A. W. Butt, quartermaster in charge of land transportation, the following statement is made with regard to the regularity of Filipino workmen in the employ of this department: "Take the number of men employed regularly for the month of September, which was 643, and the working days at 26, the total number of days is 16,718 for the month, against time lost, 583 days. This shows a percentage of time lost of $3\frac{1}{2}$ per cent, or an attendance of $96\frac{1}{2}$ per cent."

The influence of labor administration upon the regularity and efficiency of labor in the Philippines can be surmised only from such testimony as this and that of the successful American employers whose remarks have been quoted previously in this report. There has been very little variation in the method of dealing with workmen in the country, and it would be difficult to convince a candid observer that any final conclusion as to the industriousness of country laborers can be drawn from previous experience. The suspicion constantly intrudes itself that many of the ancient difficulties with plantation employes were due to their being systematically cheated by their employers—cheated, at least, out of an equitable return for their labor, if not out of the literal remuneration stipulated in their engagements. It remains to be shown what the universal introduction upon plantations of the wage system, with regular payments in money at frequent intervals, would accomplish in the way of making the tao more willing to work. Filipinos, with the exception of Chinese mestizos, possess very little saving instinct; but they have never had an opportunity to save. No banks or secure forms of small investment exist, except in Manila. If they followed Indian precedents and put their surplus earnings into jewelry, they only advertise their wealth to those who would deprive them of it. The political boss had many ways of “squeezing” the incipient opulency out of a villager, and the church had a persuasive way of soliciting contributions or levying christening, marriage, or burial fees that left very little in the pocket of a thrifty parishioner. Social environment has probably had as much to do as natural temperament and climatic conditions with making the Filipino workingman content to remain as poor as he was born. The modest requisitions that a tao makes upon the stock of a village storekeeper are also to be ascribed to some extent, though of course not wholly, to the fact that the local merchant has never exerted himself to create wider demands. A few small transactions at an immense profit is the Chinese idea of business. Cheap and attractive wares within the means of a tropical laborer do not reach the market among his customers. A demand for such wares might not be created upon presentation in every case, but it is very reasonable to suppose that if they were attractively displayed many workmen would conceive a desire for them, and money would acquire a worth that would overcome their aversion to labor. The extreme case of what is more or less common throughout the islands is that mentioned in Mindoro, where payment in rice is preferred to payment in money, because the latter has little value in the absence of shops and stores. In German New Guinea and the Bismarck Archipelago native laborers are paid almost entirely in kind, because they will not work for a money wage. In order to make money an induce-

ment to work that money must be made valuable. The experience of an American army officer in command of a remote post upon a Moro island illustrates this.

This officer needed labor in order to carry out certain necessary public improvements. He engaged 60 natives for this undertaking at a stipulated wage of 30 cents silver currency (12½ cents American currency) a day. The first day all the men deserted, because a rumor got around that the Americans, "like the Spaniards," would not pay them for public work of this character. The men were persuaded to return and were paid their full wages regularly, as promised. As soon as money began to circulate among them the agents of the nearest *datos* and sultan came into town in order to get the money away from the workmen on various pretenses. As this discouraged the industry of the laborers, all such agents were expelled from the district and not allowed to return. This measure resulted in something of a local boom, and two entire villages and many isolated families of Moros at once pulled up stakes and moved into the post in order to be free from the official exactions of their chiefs. When they had a little money ahead, however, the men began to stop work, as they had nothing to spend it on but rice. The commandant, considering the vice of idleness as reprehensible as any other and casting about to create a constant demand for money among his workers, took his cue from what he saw going on about him and licensed two gambling houses at \$100 silver currency (\$42 American currency) a month each. After that he had an ample supply of excellent laborers who worked regularly without persuasion and required little supervision except for directing their work. When their engagement was finished they came around to the commandant asking that some other paying employment be found for them. The officer who related this experience remarked in all candor: "It only requires a little diplomacy to make these people industrious."

This incident is not related with the purpose of suggesting gambling as an incentive to regular labor among the Filipinos; but it illustrates very concisely three facts that have a direct bearing upon the problem of labor supply in the Philippines: (a) The advantage of paying regularly and honorably a money wage for labor; (b) the need of protecting the laborer in the possession of his earnings; (c) the wisdom of providing a use for money that will make the desire to acquire money stronger than the desire to idle. The fact needs to be repeated many times, in order that its importance in connection with labor supply be appreciated—money has no value, or at most but trifling value, for a majority of the rural workers of the Philippines, as compared with its traditional worth in the eyes of a white man.

This disregard for money is not peculiar to one country or especially a characteristic of the Filipinos. Rather, it attends a certain

stage of social and industrial development. The following quotation from German memoirs, in Brentano's Hours, Wages, and Production, illustrates this:

Siemens started a copper factory in the Caucasus, which is now in full activity. The whole neighborhood has been civilized by his enterprise. Neat workmen's dwellings have taken the place of wretched clay hovels. Siemens writes: "It gave the mining managers a great deal of trouble to accustom their Asiatic workmen to stone houses. When, with the help of their wives, this object was finally attained, the difficult labor question was therewith also solved. The wants of the people of that country being extremely few, they have no inducement to work much. As soon as they have earned enough money to live on for a few weeks they stop working and take their ease. The only remedy for such a state of things was to habituate them to wants which could only be satisfied by continuous labor." Siemens goes on to describe how a sense for a higher standard of comfort first awoke in the women and gave them higher wants, for the satisfaction of which their husbands had to provide, "while the latter themselves found by experience the benefit," and how in the end there was a general rush for the workmen's dwellings. In that way the natives who, owing to their absence of wants, had hitherto been contented with a cave dweller's existence, and, needing nothing, had worked as little as possible, were induced to steady labor.

This quotation from Siemens is closed with an admonition that applies very aptly to what we are trying to accomplish and to the methods we are using—and in some instances perhaps neglect to use—in the Philippines:

I can only strongly recommend a similar course of action in case of our present colonial enterprises. The man without wants is an enemy to every development in civilization. It is only when wants have been awakened in him, and he has become accustomed to labor for their satisfaction, that efforts to civilize him in the social and religious sphere have any prospects of success. To begin with such efforts will never produce any but illusory results.

The problem of labor administration would present itself under another aspect in case Chinese laborers were admitted to the Philippines. It is generally conceded, and past experience has sufficiently proved, that Chinese will not voluntarily remain manual workers, least of all unskilled workers, in that country. Possibly this is because the Chinaman can not compete with the Filipino in this class of occupations. Improbable as this might appear at first blush to some residents of the islands, it is the only inference to be drawn where, as in the Philippines, there has been practically unrestricted admission of Chinese agricultural laborers for a century and no Chinese are to be found engaged in these or similar pursuits. Even the rickshaw man is unknown, and the cooly carrier is only semioccasionally found in Manila, usually acting as a helper to building mechanics of his own nationality. Chinese unskilled labor, even if admitted without restric-

tion, would voluntarily come into the Philippines only when wages had reached a point considerably higher than those prevailing in the past and only so long as that rate was maintained. Coolies working on the Canton-Hankow Railway in the autumn of 1903 were paid 40 cents silver (17 cents American currency) a day, or the same wage as that prevailing in the vicinity of Manila on government road works at the time. The prevailing rates in Hongkong were 30 and 40 cents silver (12½ and 17 cents American), and living cost much less than in Manila. A Chinese merchant in Hongkong who owned a farm in China was paying his laborers \$4 silver (\$1.68 American) a month and rations, which was the rate prevailing on several West Negros sugar plantations. There is no inducement, therefore, for many Chinese voluntarily to leave the provinces of their home country tributary to the Philippines for the wage now being paid Filipinos. As contract coolies, secured through the dubious practices of recruiters, they might be brought over for a lower wage, but evidently only by having deception practiced upon them. This might be made a means of regulating—i. e., of depressing—wages. That it would make a larger number of Filipinos work than at present is extremely improbable, so long as ample areas of unoccupied land exist which the tao squatter can till after a fashion and so provide for his simple wants. Indeed, after making allowance for all the testimony as to the effect of high wages in promoting idleness among the Filipinos, we may well doubt if this effect will be more than temporary. High wages rather than low wages are calculated to stimulate the industry and raise the standard of living of a people in the long run. A man with money in his pocket sooner or later acquires the habit of spending, and this is a habit that grows with practice. Otherwise, the per capita imports of the Philippines would not have risen in value from \$2.26 American currency in 1887 to \$4.12 American currency in 1903, during a period of transition from peonage to wage service and of rising compensation for labor.

Irrespective of the question of wages, however, the need of more labor is undoubtedly felt in many sections of the Philippines and will present itself more urgently when railways and other public works are undertaken in sparsely settled districts. Employers suggest that Chinese should be brought into the islands under contracts providing for the just compensation of their services, but enforcing the specific performance of these services by penal punishment. The question of adopting such a policy is one upon which public sentiment in the United States and colonial public opinion in the East profoundly differ. Cooly contract labor is employed in tropical agriculture in the British colonies except Queensland,^a where the Commonwealth parliament has recently abolished this form of service, in the German and French South Sea colonies, and in the Netherlands Indies. Both

^a In Western Australia indentured natives are employed.

Britain and Holland allow the exportation of coolies from their possessions, though the former country really acts but as an intermediary in the Chinese cooly traffic and does not allow the exportation of subjects of the Empire except from one colony to another. Even in the Australian Commonwealth, with a prolabor government, a system of indentureship exists by which the native blacks are held in a form of bondage which has, at least in the past, covered inhumanity and crime. Everywhere in the tropical Orient the cooly contract, humanely regulated, to be sure, but with all its specific-performance clauses, remains to-day the foundation of agriculture, mining, and all the severer forms of service. Only with the Spaniards did this form of labor engagement remain relatively unimportant, and that because they attained the same end through the different institution of peonage. Finally, the cooly contract appears to be supported by the favor of official circles and the sentiment of the white population of all the countries where it is in force. But it is nowhere denied that the system invites almost inevitable abuses, that the practices of the recruiters are endured only because they are veiled from public observation, and that cooly immigrants either are originally or become almost immediately the worst class of the population of the country from which they migrate.

The facts just mentioned have very little bearing upon American policy, for two reasons. The writer is convinced from studying the institution of cooly labor in nearly all the countries mentioned, and its former history in Cuba and Hawaii, that in spite of all the safeguards and alleviating conditions placed around these workmen, especially by British and Dutch authorities, such contracts present aspects which public opinion in the United States—which could be influenced but slightly by purely utilitarian considerations—could not abide, and that these aspects would be revealed in the inevitable discussion which legislation to legalize such contracts would arouse. Furthermore, public sentiment in the Philippines is opposed to such contracts, and they would constitute a reactionary current in the progressive policy that we, in conjunction with the Filipinos, have adopted for that country. This is leaving entirely out of the question probable constitutional objections to what would be *de facto*, if not *de jure*, involuntary servitude in many instances. Among the large employers interviewed in the Philippines; but one let it be inferred that he would favor such contracts upon grounds connected with his own business. A few officials and business men from the United States, none of whom was an employer of importance, expressed views in favor of compulsory contracts with agricultural workmen upon purely theoretical grounds, because the common practice of colonial governments in the East seemed to justify such a policy. But it was generally agreed that the aim of the American administration in the Philippines—to make a demo-

cratic, self-governing people of the natives—is different from that of European colonial administrators, and that this aim would probably not be advanced by the introduction of an alien cooly population.

Probably the only practicable solution for the pressing problem of labor supply—and the seriousness of this problem should not be underestimated—must come from free labor. The key for this solution may be sought in two directions—in labor administration, and in voluntary immigration from countries other than China.

LABOR ADMINISTRATION IN RELATION TO LABOR SUPPLY.

Nearly all the evidence received from employers in the Philippines, much of which has been previously quoted in the report, emphasizes either expressly or by implication the primary importance of tactful administration in dealing with native laborers. All the information afforded the writer in this respect tended to show that employers who treated their employees with absolute fairness and honesty, without absolute discourtesy, and who possessed the long-headed patience of men who sacrifice momentary passions to a fixed purpose, succeed ultimately in winning the confidence and the loyalty of Filipino workmen. This conclusion is supported by the experience of employers dealing with allied races in neighboring countries. The president of the sugar planters' association in East Java said: "The secret of our success with Javanese labor is three hundred years of experience and a dense population." But the dense population does not always exist, even in Java. A large planter in one of these less-populated districts said: "We aim to make attractive surroundings for our workmen when we develop a new district for plantation purposes, and thus to create a resident labor supply. All depends upon creating a resident supply. We have no trouble in this respect, either with coffee or sugar." Another planter, the secretary of an agricultural society, said: "The great secret of success in handling tropical labor, like our natives, is first to understand the people and their language. You can't force a tropical workman. I fancy, from what I know of Americans, that they will fail chiefly by trying to drive their workmen too fast. It is a question of some years at times to get an enterprise upon a proper labor basis—but you can succeed by patience and right methods. Never trust the management of your labor to a man who has not resided in the country long enough to know the people and their language thoroughly—that is the chief secret of what success we Dutch have had in Java." As showing that the Javanese is not naturally more industrious than the Filipino, the following remark by a Dutch employer of experience may be quoted: "The Javanese have no moral sense of laziness. For them there is no such vice. They

consider it perfectly proper not to work so long as they have enough to eat and wear." Almost all employers in Java agreed in not wanting Chinese. They were called "bloodsuckers, bleeding the Malays," and similar terms. The owner of one of the largest quinine plantations in Java said: "I deal so far as possible with my mandoers [native foremen or overseers], and pay them a bonus of from 1 to 3 florins [\$0.40 to \$1.21 American currency] a month if their gangs do good work, and fine them if the work is not up to standard. I very seldom deal with individual workmen. But I pay each man directly, and, if I am paying a contractor, I always pay him in the presence of all his workmen, so that they can see that he has received the full amount due him from me, and get their wages. I only pay advances at the times of festivals—of their great festival, the Malay New Year—and then I make all the workmen jointly responsible for the whole sum advanced, so that if any man deserts, they have to make up the amount lost. They soon weed out any unreliable members there may be among them. There is no, or very little, corporal punishment, so far as I know. The men are treated kindly in order to get good discipline." Men are flogged on Philippine plantations. Although the writer has not been present when punishment of this kind was inflicted, he has been told by planters at whose houses he was a guest, that they sometimes whipped men for offenses. American foremen were seen to strike their native workmen, though probably they never give them a formal flogging. Probably punishment of this sort is not uncommon in the Netherlands Indies, where the natives are accustomed to receive physical correction from superiors of their own race, and would accept it as a matter of course from a white man. One must keep in mind that a body of plantation workers in these countries resembles a body of school children more than the employees of any industrial undertaking in America. Their attitude toward an employer who punishes them deservedly is rather that of a schoolboy toward his teacher in like circumstances than that of men who have received an outrage to their dignity and sense of manhood. But as there are better and more elevating means of securing discipline than by corporal punishment in schools, so there are measures more effective than flogging to secure the same result on a plantation. And it may well be questioned whether the Filipino will ever attain the dignity and self-respect of a citizen while subject to arbitrary correction of this character from his employer.

The natural inference from Dutch testimony would be that Americans are encountering the inevitable difficulties of tyros in dealing with Filipino labor, and that many of these difficulties will disappear with the gradual acquisition on our own part of more tact and experience in dealing with the natives and a better understanding of their language and customs. By forcing many of our own industrial ideals

in a rough-and-ready way upon the islands, we have succeeded in disorganizing to some extent conditions of employment existing prior to our arrival and in embarrassing the established relations of employers and their workmen. This has been a temporary disadvantage to business but may prove an ultimate benefit to the people. There were many practices and traditions affecting labor that needed to be jogged out of old ruts, even at the expense of some discomfort. There are times when to leave everything to orderly evolution would be to court stagnation. The relations of employer and employee will have to be reestablished upon a new basis in the Philippines, and it is doubtful if the example and experience of other tropical countries covers the new conditions we have already created or made inevitable in the near future. Neither party to the contract of service will be content to regulate that agreement by the paternalistic canons of the past. Higher wages, labor organizations, and agitation, more or less individualism, have come to stay. The problem of labor administration is therefore very complicated. Especially in urban industries workmen must be treated as they are in the United States, and yet differently. Their individuality must be consulted, and yet they must be humored like children on many occasions. They have hardly emerged from the chrysalis of status. They do not understand the ethics of contractual rights. They will violate their obligations without conscience, because they have not yet learned their sacredness. They have not yet developed a sense of responsibility. Filipinos must be taken for what they are, a people just evolving out of a condition of primitive culture and a paternal social organization, without training in our industrial ideals but receptive toward them. They are not hampered, like most oriental peoples, by hidebound traditions. They face Japan and America rather than China and the Indies. Perhaps the most successful attitude for an employer to assume toward his native employees is not so much the paternal as the genial pedagogic. Systematic teaching, training, discipline, with a cordial recognition of the fact that the progress of the workman, in both an industrial and a civic sense, is necessary and desirable, but will unavoidably be slow, seem to be the principles upon which successful labor administration must be based. Extremes must be avoided. To treat the Filipino as a peon would produce a revolt; to treat him like an American mechanic and laborer is to expect him to respond to ideals and conceptions which he has not grasped.

IMMIGRATION.

Other available sources for free labor than China exist in the vicinity of the Philippines. A few Japanese are already employed in the islands, there is a Japanese labor-contracting firm in Manila, and

workingmen of this nationality will probably migrate in considerable numbers to the islands if they can command a wage equal to that which has hitherto attracted them to Hawaii, of from 50 to 70 cents American currency a day. In spite of the war with Russia the number entering the islands rose from 1,123 in 1903 to 2,770 in 1904, though these immigrants were not all laborers. Java is overpopulated, and though it is the policy of the Netherlands Government to direct emigration from that island to its own sparsely settled possessions in the Indies, especially to Borneo and Sumatra, coolies have recently been allowed to leave for Surinam, New Caledonia, and the Straits Settlements. In default of an active labor demand in the Dutch Indies, coupled with assured employment in Mindanao, for instance, it is possible that some provision for the emigration of free Javanese laborers from the more congested districts of their own country to that island might be allowed.

The American Negro can not better his position, socially or economically, by migrating to the Philippines. Governor Taft remarked sentimentously: "This is no place for Negroes." As workingmen, they can earn better wages in America. As directors of labor, they do not command the influence of a white man. In agriculture and as independent employers, they are not fortunate in their methods of dealing with the natives. The question presents itself if there is not a tendency for the Negro to relapse into barbarism under the influence of a tropical climate and a lax social environment. The continued progress of the American Negro race may be conditioned as yet by their association with white men in a temperate climate. While conditions do not favor their general immigration, a few colored workmen can usually find employment in Manilla. Skilled colored mechanics of good habits could earn fair wages in the Manila shipyards, and several could find service in the various departments of government work. One colored boy was managing a prosperous steam laundry in Manila, and appeared to be doing very well indeed. But anything like Negro colonization in the Philippines would be bitterly opposed by the natives, would complicate racial and political problems to be faced by our Government, and would, to say the least, be of questionable benefit to the immigrants themselves.

The extent to which the Philippines may afford a field for the employment of American workingmen and for agricultural settlement by white farmers can be only theoretically determined. The most diverse views as to the effect of tropical life upon the white race are met with in the Orient. Much of the current theorizing upon the subject, even by physicians and men of long experience in the Indies, is obviously pure speculation. For instance, on all sides in the Dutch possessions one hears the statement that the white race dies out in the third generation in the Tropics, an opinion that is contradicted by

thousands of living proofs of its falsity in the West Indies and South America. As a matter of fact, only since the completion of the Suez Canal has there been a resident population of white women in the Eastern Tropics large enough to form a basis for deductions of this character, and therefore time has not yet elapsed for the appearance of a third generation of whites numerous enough or mature enough to afford any local demonstration of the theory advanced. Quite contradictory is the common belief that white women of the first and second generations are more fertile in Java than in Europe. This again appears to be a statement derived from the observation of some very large families among the Java whites, rather than from a thorough statistical study of the question.

The Dutch in Java sleep through the tropical afternoon and take little exercise. The English in Singapore play football. Both thrive very well under their respective regimens. As a rule, however, a fair amount of physical activity is a preservative of health in the Tropics. Some of the most prevalent forms of illness, affections of the stomach and liver, arise from inaction in many instances, rather than from immediate climatic causes. The most robust persons, as a rule, in both the East and West Indies, in Hawaii, Fiji, Queensland, and the Straits, are the planters, who have much active exercise in the sun. Men usually suffer less from climatic diseases than women, though they work harder and are more exposed to climatic influences. This is especially true of nervous troubles, which appear to be aggravated by the idle, eventless life often adopted by white women in the Tropics. The moral incentive to work must be greater in a warm country than in a temperate one; physical exertion is not so agreeable as in those cold climates where its direct benefits at once appear to the senses, but the need and wholesomeness of labor appear to be as great in one climate as in the other.

The experience of American wood choppers in the Philippines has already been alluded to in a previous connection. Their foreman said: "For certain classes of work Americans stand the climate very well. Americans that do work regularly and steadily, and are temperate and observe the laws of health, are in better health than Americans who do no manual labor. I have had 14 Americans under me, cutting timber in the forest, where it is very close and warm in a country like this, and all of them kept healthy and strong and professed to feel better than they did in the army and police, where they got less exercise." A Mississippian, who was certainly working as hard in a sawmill, where he had direct control of the men and did lifting and machine tending himself frequently, as the average sawyer works in America, claimed to feel in excellent health, and his appearance bore out his statement. He had been in the Philippines since the war, and had been

in charge of the mill for six months, without stopping work a day. In nearly all the large government undertakings American workingmen were to be found who had been engaged in manual occupations in the Philippines since the war, without serious illness or loss of health. Spaniards do most of the hard work in Cuba. In 1883 the authorities in that island assigned 300 Spanish soldiers to work on the Conde de Ibañez plantation. The health of the men remained quite as good as it had been in garrison, though the labor of harvesting cane is one of the severest employments in tropical agriculture. A Spanish officer concludes an official report to his Government upon the question of immigration to the Philippines with the observation that the climate of those islands "is not an obstacle to (white) labor, though not as favorable as that of Spain." There are in all 63,000 white persons in Java, a majority of whom are permanent residents, earning their living in private employment. Among them are mechanics and foremen of all grades and classes. The writer personally knew a Luxemburg carpenter who had been for 18 years in the Indies, and was working for a wage of 2 guilders (80 cents American currency) a day. The man enjoyed good health and had not thought of returning to Europe. In Surabaya there is a population of several thousand middle-class whites—carpenters, tailors, shoemakers, and small shopkeepers—who give the place the appearance and the social atmosphere of a provincial town in Europe. Yet Surabaya, on account of its low coast location, is the hottest and the unhealthiest city in Java. It lies about as far from the equator as Zamboanga, in southern Mindanao. There is a large amount of evidence of a very convincing kind to show that white men can follow successfully many manual occupations in the Tropics. The practicability of their doing so depends upon the degree of development of the country and local health conditions, the demand for labor, and the character of competition.

The character and degree of development of a country often have more to do than latitude with its fitness for white occupation. The Mississippi Valley south of Cairo was a more unhealthy country 50 years ago, more scourged with the fevers and malarial diseases that are supposed to constitute a chief peril of the Tropics, than are Cuba and Java to-day. Clearing forests, draining high swamps, and artificially flooding those that can not be drained, tend to make a tropical country securely habitable by Europeans and Americans. The province of Cagayán, in the Philippines, was for a time noted as a center for malarial fevers. As a result of partially clearing away the original forest growth the mortality was reduced to 3.59 per cent. During the earlier settlement of Puerto Princesa, in Palawan, fevers were so common that in 1877 but 6 persons in the town were free from that disease; but under the influence of gradual clearing and established

settlement the rate of mortality was reduced to 2.94 per cent of those under medical supervision. On portions of the North Queensland coast the Chinaman goes into the jungle, clears it away, and plants bananas for 5 or 6 years before the white man attempts to reside in the country. It is certain, therefore, that the American can not go into the forest districts of the Philippines to cultivate the soil of new clearings and do the same sort of pioneering that he did on the Atlantic slope and in the Mississippi Valley without suffering serious consequences. But the results of such an attempt would not necessarily prove that the country was permanently uninhabitable by white men.

The character of the development of a country also has much to do with its availability for immediate white settlement. A man suffers comparatively little from climatic changes if he goes into a civilization akin to his own. An American changes his habits but very little when he moves to Honolulu from the mainland. The moral effect of the change is slight in comparison with that resulting from a movement to Manila or Habana. He does not acquire a certain perverse climatic self-consciousness that makes some persons change all their habits and ways of living, disarrange their systems with strange foods and unaccustomed drinks, attire themselves in an unconventional garb, and irritate their nervous system by centering their thoughts almost wholly upon their physical condition; that probably does more to break down the health of men, and especially of unoccupied women, in the Tropics than the direct and unavoidable effects of their changed natural environment. If the American immigrant were to find in the Philippines American towns, with green lawns, frame cottages, shaded streets, food somewhat similar to that to which he is accustomed, and ordinary facilities for getting about the country, he might easily adapt himself to the changed climatic conditions encountered. But these things do not exist at present. He can not, like the Dutchman in Java, take a few hours railway trip into the cool mountain highlands when the tonic of a lower temperature and higher altitude are needed. Under whatever aspect we consider their development, then, as to degree or as to character, the Philippines do not as yet present the most favorable attainable conditions for American settlement, or conditions in these respects equal to those presented to Dutch and English colonists in their colonial possessions in the tropical Orient.

The demand for American workingmen, however, is a factor quite independent of climate and one that of itself might determine the desirability of wage-earners migrating from the United States to the Philippines. Many parts of the Mexican highlands afford as favorable climatic conditions for Americans as do our western States, and are far more accessible than the Philippines. It does not follow that there is any occasion for the movement of a large number of American workingmen to those districts, though some of them are undergoing

rapid development and suffer from a limited labor supply. The fact that our flag flies over the Philippines does not, especially during the continuance of separate tariff arrangements, guarantee an industrial boom in that country. In fact, the existence of an American government in those islands has not as yet been an important influence in their industrial history. Except in connection with government service and public enterprises there is not appreciably more employment for Americans than might have existed under Spanish rule. Very great misapprehensions, fostered in some instances by ill-considered reports from the Philippines themselves, have existed in the minds of many American workmen in this regard.

An English writer familiar with the Philippines from long residence, during which he employed many skilled and unskilled workmen, says: "I therefore state dogmatically that the presence of white settlers or working people in the islands would add enormously to the difficulties of government. A large number of American mechanics turned loose amongst the population would infallibly, by their contempt for native customs and their disregard of native feelings, become an everlasting source of strife and vexation. Impartial justice between the parties would be unattainable. The white would not submit to be judged by a native magistrate, and the result would be a war of races. The poor white is not wanted in the island, he would be a curse, and a residence there would be a curse to him. He would decay morally, mentally, and physically." Edward Rosenberg, the commissioner of the American Federation of Labor to the Philippines, says: "No American mechanic, unless he receives an increase of from 50 to 100 per cent of wages paid him in the United States, should come here unless he deliberately courts a lower standard of living than he is used to. Besides, the climate is very hard on all those compelled to do continuous manual labor, especially so if in the open. The Philippines are no field for American mechanics and laborers unless they get positions as foremen at high wages." A large employer in Manila said: "No American mechanics are needed here except as foremen. There are not enough of the latter. There are a number of poor mechanics here now, but they are not qualified or are not responsible enough for the positions I mention. A good, steady, well-qualified man could get a dozen positions in Manila to-day. But a very few men would supply the present demand. I have brought 6 men over from the States during the past year, because I could not get competent and reliable men in the islands. These included a saw fitter, a boss carpenter, and mill men and plumbers."

The view quoted from the English writer is possibly too pessimistic, but our experience in the Philippines has already shown that it reflects much truth. Mr. Rosenberg describes conditions as recently as the summer of 1903, and the employer last quoted was interviewed at the

end of the same year and speaks with the authority of large experience both in Manila and in the provinces.

The morale of American workingmen suffers in the Philippines. They are not usually men with families. They are thrown into a lax social environment, free from the restraints of public opinion, and easily fall victims to the fallacy that the bases of a sane and happy existence are different in the Tropics from those in the United States. They are subject to more temptations than men in clerical or government service, because they are deprived so largely of home environment and the society of white women, and necessarily live amid surroundings that do less to distract the mind from purely physical pleasures than do those of better-paid or more happily placed employees. The influence of native women upon white men in the South Sea islands and the tropical Orient is not wholesome, however honorable or conventional the relation of the two may be. The white man almost never brings the woman up to his level. Domestic influence determines in many respects the standard of civilization, and that is in the hands of the weaker sex. Gradually and almost unconsciously the workingman falls into the ways of eating and living that his wife or *querida*, with gentle but insistent pressure, forces upon him; he adopts her language and adapts his conversation to her level of thought, and his own mental life sinks to the level of his conversation. He "degenerates," as the writer quoted above well says. His moral standards, even in his own family, are often lowered. He does not always exact the same early character or subsequent fidelity from his life companion as he would from a white wife. When children come the man is often chained by his better nature to a relationship that he is still dimly conscious of as permanently degrading. The writer has known such men, and except in those rarer instances where the wife has risen to the level of her husband, he has never met a white man in this relationship who appeared to be happy. The most their confidential conversation revealed was an armor of indifference, punctured now and then by darts of vague regret—something akin to the melancholy with which mature men look back upon opportunities wantonly sacrificed in youth. Yet such a life affords the nearest semblance to domestic companionship that the Philippines will offer American wage-earners in any but the higher capacities for many years to come.

The conditions just mentioned and the immoderate use of intoxicants—a vice to which manual workers in the Tropics are especially exposed—have combined to retain in the Philippines many American workingmen of the poorest class. Almost every employer of white men interviewed reverted to this fact. Better men, as a rule, return to the States at the earliest opportunity. Wage-earners interviewed agreed in the opinion that double pay was no more than adequate compensation for the higher cost of living and the social privations experienced

in the Philippines. The fact that so many American workingmen employed so far have proved irregular and dissipated has doubtless lessened the demand for their services. Employers have accustomed themselves to depend on Filipinos and Chinese for this reason. Several made statements to the following effect: "We have employed Americans, but could not get satisfactory men on whom we could depend. We should prefer Americans, even at the highest wages, if we could get really good men." It is a mistake to suppose that even unskilled native labor at the lowest wages is really cheap labor. An American trades unionist said: "I want to emphasize this fact, because I know our union men at home are prejudiced, that it costs more to carry a ton of coal on board ship here (less than 50 yards down a plank wharf); that is, we pay Filipinos more for carrying a ton of coal down that wharf than American miners get for digging it out of the bowels of the earth."

The potential demand for white workmen in the Philippines is therefore greater than the number now employed might imply. But the compensation of labor consists in more than money—in more than money in relation to the cost of subsistence. There is a compensation that comes from living among progressive surroundings, in a higher civilization, in an elevating environment, that appeals most strongly to the better class of workmen. And this is a compensation that even the best intentioned employer can not provide in the Philippines, because it is paid by society collectively. The white workman intending to go to the Philippines must be ready to discount the reward for his services by the value of these forms of social compensation—by school facilities for his children, by sanitary protection and other public conveniences, by church, fraternal, or trade-union companionship to a large extent, by ready access to medical attendance for his family, by cheap travel and the advantage of a large and varied labor market where he can usually find a demand for his services when a change of residence or of employers seems desirable, by English laws and justice administered by his own people, and by all the thousand blessings of modern civilization that we wear as unconsciously as our clothes, and only miss when they are out of reach. For the same reasons the better class of workmen must expect to meet competition of a twofold character. One will be the competition of men of his own race, but of lower social standards and ideals. Summed up in a sentence, the opinion of intelligent and reliable American mechanics interviewed is: "You can't get good American workmen to come out here and stay, unless it is to boss a job, and the kind of men an ordinary mechanic has to work among, even among his own countrymen, are not the sort of fellows he would associate with at home, because most good men get tired of it and go back to the States, and only the fellows who are naturally beach combers stay." A second kind of

competition, which even the more highly skilled mechanic has to meet, and which is often overlooked by the American at home, is that of the better trained Chinese and Filipino workmen. It is a mistake to suppose, as many workmen newly arrived from the States are inclined to do, that all mechanical knowledge and skill are lodged exclusively in the white races. There are many Filipinos, and more Chinese, who can do as good a job if given enough time as any American mechanic. Their low wages partly, often fully, compensate for their slow rate of working. In a fair field with no favors, the Filipino alone may be able to hold his own in the local labor market, not only in the unskilled but also in the skilled occupations. Their limitations are almost wholly in the field of design and supervision. Instructed in our methods of work, organized by American industrial genius, and provided with modern tools and materials, their rate of production can be very greatly increased—probably be made to equal that of Americans in some instances, and to exceed that of Americans working in the Tropics. For the natives can be pushed, and they show remarkable endurance at times. Instances where these qualities were exhibited have been quoted previously. Even at present, in their own special fields of construction and using the crude materials and defective tools at their disposal, they are said to accomplish more than Americans working under the same restrictions.

Though Filipinos may sometimes impress a foreman or employer unfamiliar with their language and ways of thought as stupid, and they may be willfully stupid at times when managed tactlessly or brutally, employers having the most practical familiarity with their qualities as workmen give them an excellent character for handiness and intelligence. Originally a nautical people, they seem to have retained something of a sailor's deftness. In a work published in the eighteenth century a Spanish friar, after mentioning that there were Chinese, mestizo, and "Indian" (Filipino) blacksmiths, coachbuilders, carpenters, masons, printers, bookbinders, shoemakers, tailors, and other craftsmen "of moderate skill" in the islands, says: "Of the Filipinos, with whom I have lived for 17 years, I may say that they are handy at any mechanic trade. They are able to imitate the most complicated construction; but they can not invent anything because they lack imagination, and they are exceedingly stupid in the abstract sciences because they lack ability to reason." More than a century ago an English writer who had lived in the Philippines nearly as long as the Spanish writer just quoted said: "There is a great future before the manufacturing industries of the Philippines, for the people are industrious, exceptionally intelligent, painstaking, and of an artistic temperament, so that an ample labor supply is always available for any light work if reasonably remunerated." The last opinion may be too optimistic, but it was corroborated to some extent by a number of

American employers and by teachers in the Manila trade school. The vices of the Filipino workman that affect most unfavorably his chances of acquiring and retaining control of the skilled labor market of his own country are moral. He has the ability and intelligence to render excellent industrial service, but he still lacks discipline, persistence, and a sense of responsibility. The Indians are without stability of character, "like capricious schoolboys," says the friar just quoted. But there is evidence at hand in the success of some employers in the Philippines that, like capricious schoolboys, they are amenable to firm and tactful discipline.

Even were conditions of climate, social environment, demand, and competition favorable to the immigration of white workmen to the Philippines, if a stigma were placed upon manual labor by the numerous presence of Asiatics in the trades, this would prove an obstacle to the employment of Americans in those occupations. Experience in Hawaii shows this. In the Philippines such a prejudice against hand work exists among certain classes of the natives, but happily it is not strong among Americans. The Spaniards sought to maintain race prestige among the Filipinos by preventing members of their own nation from engaging in manual work in the archipelago. In a report to the governor-general of the colony upon the possibility of white colonization of the Philippines, presented in 1884, the secretary of the board of agriculture and commerce, while recommending the formation of agricultural settlements of Spanish peasants in the Moro province, thought that Spaniards should be prevented from engaging in common or mechanical labor in the Christian provinces on account of the contempt in which such workers are held by the natives, and the possible political effect of violating this sentiment. This was the fear of a weak government, and in practice was not observed by the Spaniards themselves. Much less has it been regarded by Americans. A Spanish employer was seen hard at work among his native workmen, with wrench and hammer, knocking down and packing farm wagons. Some Spanish operatives and mechanics work in several large factories in Manila. Americans work to some extent in almost all the important trades. An English traveler remarked that more Americans were engaged in manual labor in the Philippines than Englishmen in any British colony in the Tropics, and criticised this as lowering the status of the white man in the eyes of the natives. But he did not regard the other aspect of the case, that this participation in the work of the people had a tendency to dignify labor in the esteem of the latter. No nation is more respected by its colored subjects than the Dutch, and yet many Dutchmen engage more or less directly in manual occupations in Java. Filipinos regard work that soils the hands, even in the higher mechanic trades, as degrading. But the same indifference to native sentiment and to any public opinion except their own that

makes Americans en masse rather tactless in dealing with other races renders them quite callous to Filipino ideas as to the inferiority of manual workers. The only authority on such matters that an American recognizes in the Philippines is the sentiment of his own countrymen, and most of these have so recently come from the States and form such a shifting population that their opinions are almost unmodified American opinions. In Hawaii, on the other hand, there is an established population of white residents who have come to associate certain occupations with Asiatics. This sentiment has quite as much to do as climate with keeping white men out of some agricultural occupations in that country. It is possible that the longer we remain in the Philippines the less inclined Americans residing there will be to follow mechanical trades, as they are even now disinclined to engage in the commoner forms of labor. On the other hand, rapid industrial development and the opening of many new and productive enterprises, such as might result from a free American market for Philippine products, would occasion a very urgent demand for competent men in directing capacities. The creation of an industrial atmosphere would foster the respect for labor that always grows with the business of a country, and would break down many existing class prejudices. As an educator the American mechanic is needed in the Philippines. Our success in administering the government of the country will be gauged to a large extent by the demand we succeed in creating for his services.

American agricultural settlements have not been attempted in the Philippines, and so their prospects of success can not be judged from actual experience. Such success would be determined as much by competitive as by climatic conditions. It may well be questioned whether the white farmer, working with his own hands, can compete with the Filipino tao, even though he have the most improved stock and machinery against the latter's antiquated implements and degenerate breeds; or whether he can use such machinery with profit on a 40-acre farm; or whether such a farm will allow his wages as an administrator of hired labor to reach a sum that will induce him to remain in the country. Without exception, native planters and white residents agreed that the present limitation of the size of public-land farms taken up by individual holders to 16 hectares (about 40 acres), as fixed by the act of Congress providing for civil government in the islands, practically prohibited American agricultural settlement in the Philippines. The other conditions for such settlement are not unfavorable in many localities.

The possibility of white agriculture in the Tropics is a question upon which the most diverse views are held, and where the extremists on both sides are probably wrong. Unfavorable views have preponderated as a rule in the Eastern Hemisphere, partly because climatic and competitive conditions were confused. The dense population of many

eastern countries constituted a most obvious argument against any attempt to introduce white agricultural field labor, and this argument has unconsciously been used to prove that such labor was a climatic impossibility. In Hawaii and Queensland, where the question has repeatedly been fought out to an uncertain issue, one kind of cultivation—that of sugar cane—has always been in view. In the Western Hemisphere, with a sparser population, the question has been considered less theoretically. The Canary Islands have about the same climate as the Spanish West Indies, and without much thought or discussion labor migrated from Spain and these southern possessions to the latter countries. The Cape Verde Islands have the same latitude as the Philippines. The Spaniards appear always to have considered the Philippines as a possible field for agricultural colonization by members of their own nation. The Dutch have discussed, and reported, and even experimented in the same direction. Their experiments were unsuccessful, but were made so long ago that their failure proves very little, and both economic and climatic conditions—in relation to health—were different from those at the present day. The Dutch East Indies Company tried to attract Dutch colonists to Java between 1744 and 1760 by offers of land and loans. But under the monopoly of this trading company, with the long sailing voyage around the Cape of Good Hope from Europe, which was attended with great expense for the times, and before the economic emigration movement had as yet fairly seized the European nations, colonization was certainly quite a different matter from that at the present day. Good judgment was not shown in selecting the Dutch colonists. One governor-general thus graphically describes them: “A godless crew, causing much trouble, many of whom acted like irrational animals and created great irritation and scandal among the natives. The latter, seeing no other and better Europeans, think the whole nation as godless, dishonorable, and violent as these people.” These words still possess a not altogether untimely significance in other countries. In reply to a petition presented to the King of Holland requesting that provision be made for settlement of Dutch peasants upon agricultural holdings in the Sumatra highlands, a special commission of colonial experts rendered a report to the Government in 1858. The petition was denied upon a number of grounds: Because the emigration from Holland at that time was not large enough to justify the assumption that a real demand for such settlements existed; that the cost of assisting colonists would be too heavy a burden upon the Government; that artificially stimulated emigration might disturb the labor market at home and raise wages; that climatic conditions were not favorable to Europeans as agricultural laborers; and that such colonists could not make a living. Evidently the last two points alone have a bearing upon the general question of tropical colonization.

The other grounds for refusing the petition are mentioned only to show that these considerations assisted in determining the action of the commission. The climatic argument presented is largely theoretical, discussing meteorological conditions in relation to their physiological effects, and is not based upon statistics derived from actual experience, even with white soldiers in the Indies. Material for an experimental demonstration of the unfitness of the country for white labor did not exist. The economic argument, that such settlers could not make an adequate income from the returns of their own labor, was well presented, with sufficient figures, and remains permanently valid. It would have seemed alone to have proved the case against the proposed settlements. It was shown that the compensation of the best Chinese labor engaged in Sumatra did not exceed \$72 a year, and that the local market value of what they could produce did not justify a higher wage. The European peasant, even if he remained in good health, could not hope to raise a crop more than twice that of a Chinaman. The return from this crop, in relation to the cost of living, would be less than he could earn in Europe. Almost every word of this argument applies with conclusive force to the American farmer attempting to work a 40-acre farm in the Philippine Islands at the present day.

Upon the purely climatic aspects of the question, the following quotations from the work of a military surgeon who spent twenty-one years in public service—at times with considerable private practice—in the Netherlands Indies are worth considering: “Robert Jackson has already maintained with good reason that a man can do as much work in a tropical as in a temperate climate—with which my experience fully agrees. * * * Also here (in the Sumatra highlands) the European peasant, far from the malaria-scourged swamp country and secure from the perils of tropical life, can acclimatize himself and propagate his race.”

Two Boer colonies have recently been established in the Preanger highlands of Java. One of these has been troubled with internal dissensions; the other gives some promise of success, but native laborers are employed. The Philippines are somewhat farther from the equator than Sumatra and Java, but do not possess any variation of climate as compared with those countries that would be a final influence in determining their availability for settlement. The fact that the Dutch have not become agricultural laborers or small farmers, especially in some of their more sparsely settled colonies, may therefore be taken as an indication that Americans will not enter these occupations in the Philippines. Some parts of the latter islands, however, afford very favorable climatic and topographical conditions for white colonization. Mindanao, a comparatively thinly populated island the size of the State of Maine, is a country of rolling highlands, with

several large fresh-water lakes and broad, fertile river valleys, whose waters are navigable for a considerable distance from the coast. The interior uplands and some of the river bottoms are grassy plains, and the former have a bracing, temperate climate, not too humid, with cool nights. While the Moro population is in places hostile to the Americans, and malaria centers may exist in districts along the coast, it is probable that with even superficial development in the way of clearing, preliminary cultivation, and light railway building, a large fraction of this island might be made available for white settlement. The 40-acre farmer could not make a living, but the 160 to 320 acre employing farmer, with modern machinery and native help, could probably earn a comfortable income if the market for his hemp, tobacco, sugar, cacao, and copra in the United States and fair freight rates were assured. Mindanao also offers some very favorable mineral prospects. The principal drawbacks are active volcanoes and occasional earthquakes in some places, and during certain seasons of the year the ports on the east coast are subject to storms and rough water for considerable periods. But the temperature range, even at the Gulf of Davao, on the southern coast, is between 70 and 86 degrees Fahrenheit, and the excessive heat sometimes felt at Manila and Cebu is said never to occur. Even in the latter places, however, heat prostrations are rare and sun helmets are seldom worn. Several other islands present advantages similar to those of Mindanao. Bohol has large unoccupied tracts of grassy uplands in its interior. Northern Luzon, while having more marked season and considerable rain during the wet monsoon months, from June to September, affords large tracts of arable and grazing lands that only await transportation facilities and intelligent utilization to yield large profits. The less developed islands with heavy forest areas, like Mindoro and Samar, present more difficulties for agricultural settlement, on account of the expense of clearing lands and the danger of malarial diseases during the period of early development. Other islands, like Cebú, are thickly populated, and much of the land is already occupied by squatter or peasant holdings. West Negros is in many ways a finely developed and attractive province, and when the sugar market recovers somewhat from the present period of depression its plantations, if organized and equipped like those of Cuba and Hawaii, promise to be among the most secure and profitable investments in tropical agriculture.

Favorable trade relations with the United States, government patronage of private shipping lines, so that frequent and cheap commercial communication between the islands and that country might be assured, and a modification of the land laws permitting some white settlement, would, in the opinion of most residents interviewed, bring the Philippines a period of great material prosperity. At present severe business depression prevails, and there is much unfriendly sentiment toward the

government for this reason. The government is held accountable, because the tariff laws, Chinese exclusion, and the land and forestry laws are considered responsible for existing industrial conditions. Other causes, however, have contributed equally to create the present unsatisfactory situation.

Governor Taft attributed the business stagnation in part to the rapid withdrawal of troops. He said:

Many of the Americans who went into business in the Philippines immediately after the arrival of our army were people with very little capital, who dealt chiefly in liquors, and whose customers were found among the troops. They acquired the soldier's prejudice against the Filipino, and were frank in showing it. Now that the army has been reduced from 70,000 to less than 15,000 men, and the number of posts from 600 to less than 100, these men find their custom suddenly reduced to a fifth of its former amount, and are unable to build up a trade with the Filipinos, whom they have abused. The immense profits made by some in this business have naturally been reduced by more competition. The great demand for labor created by the war brought many poor-grade and unskilled men into the labor centers to seek work. This was the natural outcome of a suddenly enlarged demand in a country where industrial conditions are still so primitive.

The statement that American enterprises hitherto started in the Philippines were not backed by large capital was in agreement with other information received on this point. One employer said: "It is not so much lack of labor as lack of capital that hampers Americans in the Philippines." An American who had investigated a number of undertakings in different parts of the islands said: "A fifth of the capital squandered by our people in chasing the ignis fatuus of an Atlantic shipping combine would have made us as unquestionably dictators of the hemp, tobacco, and cane-sugar business of the world as we are now of the cotton market. The Philippines are one of the biggest neglected opportunities that have ever been in our possession."

The purchasing power of the Filipinos has suffered from insurrection, drought, cholera, rinderpest, and locusts. The latter were still ravaging many districts at the close of 1903, and will continue to be a pest in all probability until a much larger part of the grass land is brought under cultivation. Chinese retailers, who apparently give credit to their native customers, were severely embarrassed, and many failures were reported among them, especially in Iloilo. The effect of an unstable currency has been another unfavorable condition. This has been remedied, and the new Philippine money, while issued only in silver coins and silver certificates, bears a fixed ratio to gold, and places that country on a single-standard basis. While the immediate effect of introducing this new currency has been to increase wages somewhat, because its value and denominations were so nearly parallel with those of the silver formerly in use, the general effect upon business will undoubtedly be beneficial.

The inference is not to be made that all American enterprises started in the Philippines have been failures, or that business conditions are universally bad. General import and export statistics indicate the contrary. When a Spanish-Filipino planter can open a sugar plantation of 800 tons on a former stock ranch, borrowing all the capital for the purchase of a mill and tram line and for development and cultivation and still show a clear profit on his first crop, agricultural industry is not wholly prostrated. The hemp districts have seldom, if ever, been more prosperous than they were in 1903. The manager of an American trading company in Mindanao said that his corporation had made a profit of 51 per cent on its capital the previous year. A discharged soldier at Masbate, who has a small warehouse where he traded groceries and provisions for hemp, timber, and other local produce, had turned over \$20,000 silver currency (\$8,400 American currency) worth of stock the current year. At prevailing rates of profit he must have cleared some thousands of dollars on his transactions. A sawmill, with 7,000 feet a day capacity, had nearly paid for itself the first 6 months of operation. A number of instances were known by hearsay where men who had been pioneering on small capital and amid considerable privations for 3 or 4 years, were bringing plantations which they had bought from private holders to a paying basis and making a good income.

INDUSTRIAL POLICY.

Americans in the Philippines are divided into two parties, with quite opposite views as to the industrial policy that should be adopted by our Government in the administration of the islands. The official party, which is popularly supposed to be carrying out the wishes of the Washington Administration, favors the principle that the Philippines are for the Filipinos. It frankly opposes not only anything savoring of the purely commercial exploitation of the resources and labor of the country by Americans and foreigners, but is even averse to encouraging settlement of white people in the archipelago where direct competition with the natives or indirect encroaching upon their rights might ensue. In this general policy the Government is doing no more than the Netherlands Government does in Java, where the property rights of natives are solicitously protected and new enterprises can be undertaken by Europeans only by special permit and subject to both statutory restrictions and the constant supervision of the authorities. The commercial party, which includes a large majority of the white residents not holding official positions or having direct business relations with the Government, holds the view that the industrial development of the Philippines under the freest régime compatible with efficient administration and the maintenance of law and order

will be the best thing in the long run for the Filipinos themselves, and is also more or less a duty to the people of the United States. They suggest that railway development, water-power development, and the opening of mines, forest resources, and large plantations by private enterprise would employ labor at regular and probably increasing wages, raise the standard of living, and rapidly but effectively extend civilization and orderly government to the remotest parts of the archipelago. This view is dictated not only by personal interests, but also in many cases by mature and candid conviction. The party contains many conservative business men as well as many disappointed adventurers, who agree only in their unfavorable attitude toward certain features of the present policy. The latter wing of this party hates the Government much as a certain element in Hawaii hates the "missionaries." The spirit that in the latter country accuses the advocates of moral and civil restraint of insincere and self-seeking piety finds fuel in the Philippines in what is generally spoken of as the unwise policy of our Government in allowing Commissioners and officials to become interested in commercial and industrial undertakings in the islands. The fact that one Commissioner was rumored to be taking advantage of this privilege was brought forward by both whites and Filipinos, who questioned the sincerity of the Government in what was called its "policy of repressing private enterprise." However unjust the allegation suggested may be, laws similar to those in force in the Netherlands Indies and English colonies, prohibiting American commissioners and officials from having any interest, direct or indirect, in concessions and capitalistic enterprises in the Philippines, would be strongly approved by local business sentiment, and would greatly increase the moral advantage of the insular government in enforcing such measures as it may introduce for protecting the natives.

This protection should extend to both land and labor. It need not, as experience in other tropical countries shows, be incompatible with the proper encouragement of American and European enterprise. Indeed, such protective regulations might be made the means of allowing freer scope than otherwise would be advisable to private undertakings.

Even cooly ordinances are not solely in the interest of the employer. Laborers just emerging from serfdom or peonage require special legal protection and such ordinances provide this, much as our laws regulating employers' liability and conditions of work in shops and factories protect our own wage-earners. On the other hand, they afford security to the employers that contracts made by his workmen will be observed by them. The fact that such ordinances are stigmatized by the word cooly, and that contracts under their provisions are enforced by penal sanctions, should not prevent their best features from being adopted by the Philippine government. Many abuses of peonage

might be obviated, and greater security be given to all labor-employing undertakings in that country, were there special laws governing the relations of employers and employees, securing the payment of a money wage under equitable conditions to the latter, and at the same time defining and enforcing civilly the obligations of the worker under the contract for service.

The complaint that the present land law does not serve the best interests of the Philippines appears to be justified. It is calculated to prevent wholesome development. It is based, in the first place, on an argument that could not have been seriously presented by any one practically familiar with tropical agriculture. Homesteads were limited to 16 hectares (about 40 acres) upon the ground, apparently, that on account of the absence of winters and the large or exceedingly valuable crops produced in the Philippines, that area of land would be equivalent from an economic point of view to a quarter-section farm (160 acres) in the United States. There is not even a remote element of truth in these primary assumptions, and even if there were, the illegitimate inference is drawn that the same agricultural income will induce farmers to settle lands in the Philippines as would lead them to take up public land homesteads in America. The continuous cropping of tropical land, without exhausting the soil or intense fertilization, is just as impossible as it is in the United States. Profitable farming can only be undertaken by resting the land almost as much as it is rested in America. The period of actual use is not necessarily materially different in the two countries. In Java rice lands lie fallow one-third the time, nearly the extent of an American winter. Where this does not apply, as in case of permanent and some seasonal crops, like sugar, coffee, cacao, tobacco, there are just as many crops per annum as in New York or Nebraska—namely, one. Cocoanuts and hemp are the only important crops in the Philippines that are harvested the year round, and they require several years to mature. Government agricultural experts estimate the minimum profitable cocoanut plantation at 60 hectares (148 acres). Unless irrigated, rice must be planted in the wet and harvested in the dry season. Even if irrigated, it can not be harvested during the wet season. Moreover in rice culture, and this is practically the only grain crop in the Philippines, a single laborer with modern machinery cultivates 80 acres, so that under the present law a grain farmer—even were he to use all his holdings for crop purposes and live in the street—would have one-half of his time unoccupied. While two crops of rice are raised yearly in some parts of the Philippines, where irrigation is practiced and the land is worked by hand, this is by no means a universal condition, and is exceptional in much of the land now open to public entry. Alternation, as of corn and tobacco, may be profitable in some cases, and rice and tobacco are alternated in Java, but to infer from these exceptional instances a

general condition extending to all the public lands of the islands is quite unjustified.

The average per acre returns of tropical agriculture are not greater, except in the prospectuses of plantation companies, than those of prairie farmers. The climatic and insect risks are as great or greater than in America. The cost of living is higher. The social compensations of rural life are less. The labor cost of production may be lower, but the difficulties of labor administration are greater.

Very large tracts in the Philippines, as in most mountainous island countries, are suitable only for grazing.

Probably it is not the intention of the Federal or the insular government to discourage the undertaking of responsible American enterprises in the Philippines or the immigration of agricultural settlers who will become permanent residents and assist in developing and increasing the wealth-producing capacity of the country. The common interest of Americans and Filipinos obviously demands that wholesome development should take place. A certain number of American residents in private life is a guarantee for the political rights of the natives. It may be doubted whether we shall ever have continuously a fairly clean American or native administration in the Philippines without the presence of a leaven of Anglo-Saxon kickers. Aside from a few men in high official positions, who have endeared themselves to the Filipinos as a people, the most popular Americans among the masses, those who understand them best and are best understood by them, appear to be persons in private life, and possibly teachers.

There is considerable bureaucratic indifferentism in the Philippine-American civil service. Many unavoidable evils arise from a centralized government administered by agents estranged from the mass of the governed and looking to their superiors rather than to public opinion for the indorsement of their acts and their chance of promotion. A cynical, more or less overt, impugning of official integrity prevails, and the court convictions show that some dishonesty exists among the American officers of the government in spite of the unsparing investigation and punishment of such offenses. These difficulties may decrease as the irregularities of the war and insurrection are forgotten and the administrative machinery is perfected and brought under more thorough control. But that they will continue present in some degree can hardly be doubted. A resident American population, outside the government, insensible to official influence, suffering from official abuses, whose lot is the lot of the people at large, might prove a partial remedy for the lack of public opinion or the broken connection between public opinion and official responsibility now existing. This was a view advanced by one of the most

intelligent Filipino planters met in the islands. An American merchant in a country town was found taking evidence from natives, who had presented themselves to him to secure the removal of an American provincial treasurer, who had gone on a protracted spree, "shot up" a town, and generally terrorized the population and disgraced himself. None of the natives would have ventured to appeal directly to the government in this instance. The presence of an American enterprise in another town has been a potent influence in checking unfair exactions from the taos, and securing needed public improvements. The most sympathetic appreciation of Filipinos came, not from officials, but from public school teachers and from Americans settled in business in the provinces. These men get nearer to the natives, who regard them as "in the same boat" with themselves when anything goes wrong in official spheres. The writer once rode into Manila on a train, the first-class carriage of which was exclusively, or almost exclusively, occupied by American army officers and white government employees. In the second-class carriage, sitting among, smoking, and talking with the native passengers, was a single American, who proved to be a lumberman employing more men than any officer in the first-class compartment commanded, and presumably enjoying an income larger than the salary of any one of the white officials. This man was taking a little Filipino country girl to Manila with him to be put in school.

The Filipino is an imitator. He understands pantomime better than words. Two Americans are associated together in a business enterprise in the Philippines, where they employ, directly and indirectly, about 100 natives. One of these Americans is a college-bred man, who has made a study of the local dialects and speaks them fluently, and therefore gives his directions orally. The other hardly knows a dozen words of the native language, and does all his directing by pantomime, i. e., by doing things and having the workmen watch him. This second man is much more successful than his partner in teaching and directing the employees. This characteristic of the Filipinos was mentioned by several other employers. But the quality of mind here indicated suggests the method of political and social, as well as of industrial, instruction that should be adopted by our Government in dealing with this race. The natives associate American habits, occupations, and ways of living with a social status more desirable than their own. They will therefore imitate the Americans whom they see in the Philippines. The antagonisms of war and the fact that the Americans hitherto coming to that country represented the most diverse classes and conditions of society have made the unconscious influence they exercised less effective than it will be later, when a more permanent and homogeneous American-Philippine population is

established in the islands. This influence, nevertheless, is already very great. If the Americans residing in the Philippines continue to be preponderatingly an official class the Filipino conception of Americanism will be to wear good clothes, keep clean hands, and hold a government job. A century of formal teaching of the dignity of labor and of the primary national significance of industrial life, and volumes of assertion of the fact that we ourselves are a nation of workers, will not counteract the influence of the concrete example that we set before them. On the other hand, a resident population of Americans whose chief interests are agricultural and industrial will prove a weighty counterpoise to the unfortunate preponderance of these bureaucratic ideals among the more ambitious natives.

Our public-school system—as admirable an institution, perhaps, as has ever been established in a dependency by government initiative—may but aggravate the difficulties presented by an over supply of partially educated but idle young men whose only career is afforded by the public service, unless some other honorable channel for their activities is provided. Such a class is a hotbed for unwholesome political agitation, for the discontent it represents is bred by false ideals as much as by real social evils. Governor Taft pointed to such dangers in the remarks to the Manila labor leaders previously quoted. If we are to educate the Filipino people we must create some demand for educated workers outside of government employment. Experience elsewhere sufficiently shows that it is putting the cart before the horse to assume that educating a people creates the industries to employ their trained abilities; such industries will not arise without encouragement and direction from America or Europe. It would seem, therefore, that inducements should be offered to Americans to settle in the Philippines to engage in industrial undertakings, whether planting, small manufacturing, or commercial; first, that they may form part of the people, checking any abuses that may arise from bureaucratic government, and stimulating a healthy local public opinion in civic matters; second, that they may set an example to the Filipinos of the dignity of industrial life and teach them concretely that the Americans are a working nation; third, in order to provide employment for educated Filipinos, for the rising public school population outside the civil service.

Even under the most favorable circumstances it is hardly to be presumed that an immediate transformation will take place in the social ideals and industrial capacity of the Filipino people. A French sociological writer has well said:^(a) “A race possesses psychological traits as permanent as its physical traits. Like the anatomical species, the psychological species is only modified by the influence of ages. Next to this psychological character ideas are the chief factor in the evolu-

^aGustave Le Bon, *Lois psychologiques de l'évolution des peuples*.

tion of a civilization. But these become effective only after a slow process of evolution has transformed them into sentiments and so made them part of the race character." Such ideas can best be presented to the Filipinos through concrete example, and industrial ideas must precede—indeed, they create the only conditions under which free government can become anything more than a form—the mold into which petty and national absolutism is cast.

Conditions in the Philippines are progressive—neither stationary, or nearly so, as in China, nor reactionary. Up to a certain point the Spaniards succeeded better than any other nation in imposing their own civilization upon subject peoples. Spain gave her colonies pretty near everything that she possessed herself. The Filipino is the most European Oriental in existence. He is more European, even, than the Japanese, because the thinking of the masses in his country has been cast into western form by the influence of the church. He is nominally a Christian, and no matter how crude his religious conceptions they are more or less sympathetic with our own. Whatever his practices, his theories of morality, of the family relation, of the fundamental bases of society, are those that our own customs and habits of thought impose. The Japanese is the superior of the Filipino in energy and industry, in intelligent adoption of European processes and forms; but his subjective life, his soul pictures, are very slightly influenced by occidental thought. Some of the essential ideas of European civilization have already become "sentiments," unconscious habits of thought, part of the "race character" of Filipinos. In these matters our influence will be confined to carrying on a process already begun, a process hardly initiated yet in the materially more prosperous and civilized Java. But while Spain could give the Philippines elementary religious sentiments and the primary social and political conceptions of western civilization, she was not able, because of lack of resources and population and because of the subordination of industry in her own national life, to contribute greatly to the industrial ideals of the Filipino. In this respect the Japanese, the Javanese, even the colonial Chinese, are in advance of the latter. This is the element that we especially need to supply and foster in the civilization of the archipelago.

CONCLUSION.

The Philippines present the phenomenon of an old and established, if superficial, European civilization in the Orient, combined with but rudimentary industrial development. Over 41 per cent of employment is agricultural, and in these industries peonage, serfdom, and slavery still exist, and the wage system is not really established. Where wages are nominally paid, they are often but a new method of

continuing the relationship of peon and patron. In this far greater and more important circle of occupations, the labor is apparently sufficient for the maintenance of present enterprises, though difficulties would be encountered in the rapid extension of new ones. It is probable that these difficulties might be greatly lessened by more tactful administration of labor, and by taking special measures to attract and create a resident population in the vicinity of new plantations. Were free trade and ample steamship connection with the United States established, a rapid development of many agricultural industries would probably ensue, and the higher profits that these would afford under such conditions might enable planters to pay wages that would attract labor from Japan and other neighboring countries, in case a very great deficiency in the local supply was manifested. Urban and skilled industries are suffering from lack of trained workmen. These trades have heretofore been so largely monopolized by Chinese mechanics that the exclusion of immigrants from China has cut off the usual source of labor supply and raised wages, until some industries can not profitably compete with those of the mainland. The Filipinos are apt at acquiring manual skill, however, and in some establishments, notably the Cavite Navy-Yard, the supply of native mechanics is growing so rapidly that the present dependence on Chinese will soon cease. Any new manufacturing industry undertaken in the Philippines, however, would encounter difficulty at first in securing competent and reliable employees. Only gradually can a mechanic and operative population be created large enough to make the local supply of skilled labor sufficient to induce new industries to come to the islands. This has been accomplished as yet only in the tobacco trades. The possibility that "cheap" Filipino labor will ever compete seriously with our home labor in manufacturing industries is too remote to be considered.

A demand for the admission of indentured Chinese coolies for agricultural labor exists among some tobacco planters. The shipbuilders and machine-shop owners and some other manufacturers in Manila, Iloilo, and Cebu wish the admission of Chinese mechanics or, at least, tariff protection against Hongkong and Shanghai competition adequate to cover the difference in labor cost of production created by the exclusion law. No demand for the admission of Chinese skilled tobacco workers was discovered.

All Filipino employers and employees interviewed, and some American employers, were opposed to the admission of Chinese on any terms. It was generally agreed that Chinese would engage in field labor in the Philippines only under the compulsion of penal contracts. Many merchants and small manufacturers feared the competition of Chinese in their own line of business more than they appreciated any advantage to be derived from having Chinese workmen in the country.

Many feared that the admission of Chinese would preclude all possibility of more favorable tariff arrangements with the United States. A plebiscite of all persons in the Philippines would appear almost unanimous in favor of the present exclusion laws.

Wages and the cost of living have risen in the Philippines since the American occupation. The real increase, however, is not nearly so great as many American residents suppose. A large part of the recent change is to be accounted for by the depreciation of silver. Had the Philippine currency been upon a gold basis from the first it is doubtful if this factor of the labor situation would have come prominently to public attention. This rise in wages is not, as is commonly assumed, a phenomenon that has occurred entirely subsequent to the American occupation. A slow but constant and appreciable increase in prices and wages has been taking place in the Orient for the last 20 years. It is popularly supposed to have begun in Hongkong about 1882. This movement has been accentuated in Manila, however, by the conditions attending and following the Spanish-American war. Experience shows that a rise in the price of provisions in the oriental market tends to remain permanent, though it may have been due to a temporary cause. The Chinese butchers and fishers' guilds put up prices in Hongkong in 1882 to pay the expenses incurred in an official celebration, and succeeded in maintaining them at the new rate. This may be because prices are so largely a matter of tradition in such countries, and the haggling price is determined by the relative persistence of the buyer and seller, backed by custom, rather than by an intelligent survey of the entire market supply in relation to demand. At any rate the recovery from siege and war prices in Manila has been slower than it would have been in an American or European city. Higher labor prices have also been favored by a sentiment prevailing among many American industrial and domestic employers in favor of higher wages than formerly prevailed, a form of industrial altruism that evokes very little sympathy among European residents in the Orient.

Dissatisfaction as to industrial conditions in the Philippines is manifested by all employing classes and reflected to some extent among the laboring population. This is partly due to the present business depression and reaction after the boom period of the war, to the disappointments and losses of speculators, adventurers, and unwise investors who came to the Philippines with anticipations untempered by experience in a tropical country and entirely unjustified by the prospects afforded in the islands, and to some degree, perhaps, by the strict attitude of the authorities toward any enterprise that might take advantage of present unsettled conditions to exploit the country and the people or to acquire rights that might prove embarrassing from their actual extent or as precedents in the future.

There was general agreement that the land laws should be modified in the way of affording an opportunity of acquiring holdings of public land by individuals larger than the present maximum, and that some of the embarrassing details of the present forestry regulations should be abolished. The latter has already been undertaken by the insular government. The former can only be done by the American Congress, by an amendment to the act of 1902. Comprehensive and protective land legislation would cover alienation and mortgaging of native holdings to nonnatives as well as provisions for acquiring freeholds and leaseholds on the part of white settlers. The arguments in favor of substituting a larger limitation than 16 hectares (40 acres) for public land homesteads seem conclusive. One hundred hectares (247 acres) would be a limit much better suited to the exigencies of tropical agriculture. A labor law defining and enforcing the respective obligations and rights of both parties to the contract for service, and thereby affording protection to both employer and employee, suggests itself as desirable legislation.

Sound political and social, as well as economic, reasons are believed to exist for a moderate immigration of American settlers, as well as the investment of American capital in the Philippines. Only through the extension of plantations and industrial undertakings through American and European enterprise will a field be opened for the employment of the Filipinos being educated in the public schools. At present public service is almost the only career before these people. Without the presence and example of Americans in industrial life they will not enter other employments readily, and indeed such employments will not exist. It will be of questionable advantage to future governments of the islands to have a class of partly educated, idle political agitators to conciliate, whose whole ambition is centered in the public service. Our public school instruction is largely wasted if it is to present a transient, soon forgotten moment of youthful enlightenment to a population of paddy-field taos. Present conditions suggest also that a small resident American population "with a stake in the country" will be a wholesome check upon arbitrary administration, whether by native or by American officials.

The labor problem, therefore, has very profound significance for the Philippines outside of its legitimate economic sphere. Our general success in increasing the welfare of the Filipino people must rest upon material and moral bases which are grounded in industrial development. There is no political panacea for a backward civilization. The form of government we create is immaterial, and even its administration of secondary importance, compared with the way we employ the people. A government may be ideally constituted and honestly run and the citizen remain a machine at the end of a hoe handle. With an imitative nature higher forms of industrial life must

be taught by example. American mechanics must train Filipino mechanics, American plantation managers train Filipino plantation managers and overseers, American business men train Filipino clerks, salesmen, managers, and merchants; and unless we can create the industries that will attract these practical instructors of the people from abroad we shall fail of attaining the primary condition of success. Many phases of civilization are indigenous. The germs of native institutions may be developed in many instances until they serve the highest social needs. But industrial civilization is cosmopolitan. It speaks no single language, has no creed, and disregards the color of the skin. We violate no sanctities of national life in imposing our industrial ideals upon another people, so long as we are just and observe natural economic laws. There is not even a sentimental objection to this kind of influence. Teaching the laborer how to work and securing him the largest possible return for his labor constitute our most immediate and possibly our highest mission in the Philippines.

APPENDIX.

The following tables of wages were compiled by the census authorities from information specially gathered when the population of the Philippines was enumerated in 1903, and present the fullest statistical study of this subject covering the entire dependency that has been made. Wages in Manila have previously been compiled by the Bureau of Labor. Where discrepancies occur between wages reported in these tables and those stated in the text they are due to the fact that the latter are reported from individual investigation and are not averages derived from the comparison of extensive data gathered by a large corps of agents. Many difficulties stand in the way of accurate statistical investigations in the Philippines. These are more fully commented upon in the census reports and need not be repeated here. To these reports also the reader should refer who wishes more detailed information as to special industries than it has been possible to give within the compass of this article.

DAILY AND MONTHLY WAGES PAID IN CERTAIN OCCUPATIONS IN THE PHILIPPINE ISLANDS PRIOR TO 1898 AND IN 1902, IN MEXICAN CURRENCY.

[From the Philippine census. When two rates are shown for the same occupation, the figures indicate the lowest and highest rate reported in the provinces to which they relate. Equivalents in United States currency have not been computed on account of the fluctuations in value of silver currency, as shown on page 739.]

Occupation.	Ilocos Norte, Cagayán, Ilocos Sur, Abra, La Unión.				Lepanto-Bontoc, Isabela, Benguet, Nueva Vizcaya.				Zambales, Pangasinán, Nueva Ecija, Tárlac.			
	Daily.		Monthly.		Daily.		Monthly.		Daily.		Monthly.	
	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.
Accountants.....			\$16.00	\$40.00			\$20.00	\$40.00			\$15.00	\$20.00
Bakers.....	\$0.15	\$0.40	30.00	100.00			40.00	100.00			30.00	100.00
Barbers.....	.20	.40	2.50	10.00	\$0.30	\$0.50			\$0.50	\$1.00	8.00	12.00
Boatbuilders.....	.50	2.00	4.00	16.00					.30	.50	15.00	30.00
Boatmen.....	.50	1.00							.50	1.00		
Brickmakers.....	.20	.50	30.00	60.00					.25	.50		
Brickmakers.....	1.00	5.00	4.00	12.00								
Brickmakers.....	.15	.40	15.00	30.00						.40	8.00	15.00
Carpenters.....	.25	.50	9.00	20.00	.20	.25			.25	.50		
Carpenters.....	.75	2.00			.40	1.00			1.00	2.00		
Cigarmakers.....	.12	.50							.12	.40		
Cigarmakers.....	.30	1.00							1.00	1.50		
Clerks.....	.30	.50	4.00	12.00			5.00	25.00			5.00	15.00
Clerks.....			10.00	75.00			45.00	110.00			30.00	45.00
Coachmen.....	.20	.40	2.00	6.00							2.00	6.00
Coachmen.....			5.00	12.00							6.00	15.00
Cooks.....	.30	.50	2.00	6.00			5.00	2.00			2.00	3.00
Cooks.....			4.00	25.00				25.00			3.00	20.00
Copyists.....			4.00	12.00							3.00	10.00
Copyists.....			10.00	25.00							8.00	25.00
Draftsmen.....									1.00	1.50		
Draftsmen.....									1.50	2.00	4.00	8.00
Dressmakers.....	.50	.75		15.00							6.00	12.00
Fishermen.....	.15	.30							.20	.40		
Fishermen.....	.50	4.00							1.00	2.00		
Hat makers.....	.30	.50							.20	.40		
Hat makers.....	.50	1.00							.50	1.00		
Horseshoers.....	.50	1.50									8.00	10.00
Household servants.....	.20	.30	1.00	2.00	(a)	(a)	2.00	2.00			10.00	15.00
Household servants.....	.12	.40	2.00	8.00			6.00	18.00			2.00	6.00
Laborers, day.....	.12	1.00			.25	1.00					4.00	8.00
Laborers, day.....	.15	1.00			.75	2.00				.50		
Laborers, farm.....	.20	.50	3.00	12.00	.20	.30		3.00	.20	.40	4.00	10.00
Laborers, farm.....	.50	1.00			.30	.50		8.00				
Lumbermen.....	.25	.75							.20	.50		
Lumbermen.....	.62	1.50							.30	1.20		
Machinists.....											30.00	50.00
Machinists.....											30.00	50.00
Masons.....	.25	.50	9.00	30.00	.20	.40			.25	.50		
Masons.....	.50	2.00			.40	.60			1.00	1.50		
Painters.....	.15	.50	15.00	30.00	.20	.40			.32	1.00		
Painters.....	.50	1.50			.40	.60			.50	2.00		
Pottery makers.....	.20	.50	10.00	25.00	.20	.40			.40	.20		
Pottery makers.....	.25				.40	.60			.60	.80		
Printers.....			8.00	10.00								
Saddlers.....	.20	.50	30.00	60.00					.45	.50		
Saddlers.....		.75							.75	1.00		
Sailors.....	.75	1.50	3.00	12.00							8.00	15.00
Sailors.....	1.00	5.00									15.00	
Salesmen.....	.20	.40						10.00	.40	.50	6.00	12.00
Salesmen.....	.25	1.00						25.00	.60	1.00		
Seamstresses.....	.12	.25							.25	.50	3.00	6.00
Seamstresses.....	.50	1.00			.30	.50						
Shoemakers.....	.15	.40	4.00	16.00					.30	.50		
Shoemakers.....	1.00	2.50							1.00	1.50		
Silversmiths.....	.20	.75	30.00	65.00					.50	1.00		
Silversmiths.....	.75	1.25							1.00	1.50		
Stonecutters.....										.75		
Tailors.....	.25	.50	6.00	20.00	.30	.50			.40	.75		
Tailors.....	1.00	3.00				.60			.75	1.50		
Teachers.....			12.00	10.00			5.00	8.00			12.00	15.00
Teachers.....			40.00	60.00			10.00	20.00			35.00	150.00
Wood sawyers.....	.25	.75			.20	.40			.40	1.00		
Wood sawyers.....	.75	2.50			.30	.60			1.00	2.00		

^a Day laborers in the province of Lepanto-Bontoc receive 5 to 10 cents local currency per day. The figures here given relate to the province of Isabela, the wages of day laborers in the provinces of Benguet and Nueva Vizcaya not being reported.

DAILY AND MONTHLY WAGES PAID IN CERTAIN OCCUPATIONS IN THE PHILIPPINE ISLANDS PRIOR TO 1898 AND IN 1902, IN MEXICAN CURRENCY—Concluded.

[From the Philippine census. When two rates are shown for the same occupation, the figures indicate the lowest and highest rate reported in the provinces to which they relate. Equivalents in United States currency have not been computed on account of the fluctuations in value of silver currency, as shown on page 739.]

Occupation.	Leyte, Cebu, Negros Occidental, Negros Oriental, Iloilo.				Samar, Cápiz, Antique, Surigao, Misamis, Zamboanga.				Bohol, Paragua, Dapitan, Cottabato, Dávao, Basilan, Joló, Siassi, Tawi Tawi.			
	Daily.		Monthly.		Daily.		Monthly.		Daily.		Monthly.	
	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.	Prior to 1898.	In 1902.
Accountants			\$12.00	\$25.00			\$20.00	\$60.00			\$20.00	\$30.00
Bakers	\$0.12	\$0.50	100.00	175.00	\$0.25	\$0.50	60.00	100.00				100.00
Barbers			25.00	50.00	.12	.50	10.00	30.00	\$0.15	\$0.25	8.00	30.00
Boat builders	1.25	.50	12.50	18.50	.75	1.50	30.00	45.00	.50	.80	15.00	35.00
Boatmen		2.00	18.50	30.00	.50	2.00			1.00	2.00		
Brickmakers			3.00	8.00	.20	.50	10.00	20.00	.05	1.00	4.00	8.00
Carpenters	.25	.50	12.50	18.50	.25	.50			.75	2.00	10.00	18.00
Cigar makers	.75	1.50	18.50	30.00	1.00	3.00			.25	.50		
Clerks			6.00	8.00		.50			.15	.40		
Coachmen			4.00	10.00		6.00	30.00	30.00	.25	.40	2.00	18.00
Cooks			3.00	8.00		3.00	8.00	8.00			20.00	30.00
Copyists			15.00	20.00		5.00	10.00	10.00	.05	.15	2.00	
Draftsmen			2.00	8.00		5.00	10.00	10.00	.20	.40	2.50	5.00
Dressmakers			15.00	25.00		10.00	25.00	25.00	1.00	1.00	15.00	40.00
Fishermen			2.00	20.00	.40	1.00	6.00	25.00	.20	.30	4.00	40.00
Hat makers	.50	2.00	10.00	15.00	1.00	2.00	40.00	100.00	.50	1.00		
Horseshoers	1.00	3.00				.50	6.00	19.00	.15	.25		
Household servants			6.00	15.00	.25	.50			.05	1.00	5.00	
Laborers, day	.25	.20	30.00	40.00	.50	2.00			1.00	1.50	8.00	
Laborers, farm	.37	1.50				.40			.15	.25		
Laundress		.40				.50			.40	.70		
Launderers			7.00	12.00		3.00	15.00	15.00	.40	1.00	1.00	5.00
Lumbermen	.25	.50	15.00	35.00	.25	.50	6.00	20.00	.50	1.00	6.00	15.00
Machinists	1.00	1.50	22.50	35.00	1.00	1.50	10.00	30.00	.20	.40	4.00	
Masons	2.00	5.00	60.00	80.00	2.00	8.00	30.00	35.00	.75	1.50	6.00	
Painters	.25	.50	18.50	30.00	.25	.50	80.00	150.00	.40			
Potters	.75	2.00	30.00	45.00	.50	1.50			.25	1.00		
Printers	.16	.13	7.50	10.50	.12	.20			.25	.37		
Saddlers	.30	.50			.25	1.00			.50			
Sailors	1.50		25.00	70.00		1.00						
Salesmen	.50	1.00	22.50	37.50	.50	1.50			.25	.50		
Seamstresses			3.00	8.00		3.00	10.00	10.00	.10	.25	2.00	7.00
Shoemakers			40.00	60.00		6.00	15.00	15.00	.25	.50	11.00	30.00
Silversmiths			1.00	4.00	.40	.75	6.00	34.00	.50	1.00	8.00	12.00
Stonecutters	.20	.25	50.00	125.00	.50	1.00	20.00	50.00	.50	1.00	15.00	30.00
Tailors	.85	.65	2.00	4.00	.10	.40	3.00	6.00	.10	.15	4.00	
Teachers	.50	1.00	15.00	22.00	.25	.40	8.00	25.00	.50	.80	6.00	
Wood sawyers	.67	.50	22.50	40.00	.50	.50			.40	.70		
	.50	1.50	30.00	55.00	1.00	1.75						

a United States currency.

AVERAGE WAGES PAID FILIPINO WORKMEN IN MANILA PRIOR TO 1898 AND IN 1902, IN LOCAL (MEXICAN) CURRENCY, BY THE DAY OR BY THE MONTH, IN THE OCCUPATIONS SPECIFIED.

[From the Philippine census. Equivalents in United States currency have not been computed on account of the fluctuations in value of silver currency as shown on page 789.]

Occupation.	Average wages paid prior to 1898 (pesos).		Average wages paid in 1902 (pesos).	
	Per day.	Per month.	Per day.	Per month.
Accountants		30.00		80.00
Bakers		15.00		25.00
Bakery, foremen		20.00		35.00
Bamboo and rattan furniture makers	0.75		2.00	
Band musicians	2.50		5.00	
Barbers		20.00		30.00
Barbershop, foremen		20.00		30.00
Blacksmiths	1.50		3.00	
Blacksmiths, foremen	2.00		4.00	
Boat builders	2.00		2.00	
Boat builders, foremen	2.00		4.00	
Boatmen .....	.50		1.50	
Bookbinders .....	.25		1.00	
Bookbinding, foremen	1.00		2.00	
Brickmakers .....	.37		1.00	
Brickmakers, foremen	1.00		2.00	
Brick masons .....	.62		1.00	
Brick masons, foremen	1.00		2.00	
Butchers	1.00		3.00	
Cabinetmakers	2.00		4.00	
Cabinetmakers, foremen	2.00		5.00	
Candle makers .....	.75		1.50	
Candle makers, foremen	1.50		4.00	
Carpenters .....	.62		1.50	
Carpenters, foremen	1.00		2.50	
Carriage blacksmiths	2.00		4.00	
Carriage carpenters	1.25		2.50	
Carriage factory foremen	2.00		3.50	
Carriage leather workers .....	.75		2.00	
Carriage painters	1.00		2.50	
Carriage wheelwrights	1.00		1.75	
Cart builders .....	.75		1.50	
Cart builders, foremen	2.00		3.50	
Cart wheelwrights .....	.75		1.50	
Chocolate makers		15.00		35.00
Chocolate makers, foremen		25.00		45.00
Cigar box factory, foremen .....	.75		2.00	
Cigar box fillers .....	.80		2.00	
Cigar box makers .....	.50		1.50	
Cigar factory foremen		35.00		80.00
Cigar makers .....	.80		2.00	
Cigar sorters .....	.80		2.00	
Cigarette makers .....	.40		1.37	
Cigarette packers .....	.50		1.00	
Clerks		25.00		45.00
Coachmen		15.00		30.00
Compositors in printing establishments		15.00		40.00
Confectionery makers		15.00		25.00
Confectionery makers, foremen		30.00		50.00
Cooks		15.00		30.00
Day laborers .....	.37		.80	
Distillery foremen .....	.75		2.00	
Distillery workmen .....	.75		1.50	
Draftsmen	2.00		4.00	
Dressmakers		200.00		200.00
Fishermen	2.00		3.00	
Handsawyers .....	.75		1.50	
Harness makers .....	.62		2.00	
Harness makers, foremen	1.50		3.00	
Hat makers .....	.40		.80	
Hat makers, foremen .....	.75		1.50	
Horseshoers .....	.50		1.00	
Horseshoers, foremen		30.00		45.00
House and sign painters .....	.80		1.50	
House and sign painters, foremen	1.00		3.00	
House servants		10.00		15.00
Iron foundry foremen		125.00		250.00
Iron ladders .....	.75		2.00	
Iron molders	1.50		3.50	
Iron polishers	2.50		3.50	
Laundry foremen .....	.40		.80	
Laundrymen .....	.20		.50	
Lithographers .....	.40		1.00	
Lithographers, foremen	1.25		2.50	
Machinists .....	.40		1.00	

AVERAGE WAGES PAID FILIPINO WORKMEN IN MANILA PRIOR TO 1898 AND IN 1902, IN LOCAL (MEXICAN) CURRENCY, BY THE DAY OR BY THE MONTH, IN THE OCCUPATIONS SPECIFIED—Concluded.

Occupation.	Average wages paid prior to 1898 (pesos).		Average wages paid in 1902 (pesos).	
	Per day.	Per month.	Per day.	Per month.
Machinists, foremen	1.00	.....	2.50	.....
Pottery makers .....	.37	.....	1.00	.....
Pottery makers, foremen .....	.37	.....	1.00	.....
Printing office foremen .....	.....	45.00	.....	120.00
Rope makers.....	.75	.....	2.00	.....
Saddlers .....	.75	.....	2.00	.....
Saddlers, foremen .....	.75	.....	2.00	.....
Sailors .....	.....	12.00	.....	24.00
Salesmen .....	.60	.....	2.00	.....
Seamstresses .....	.20	.....	.40	.....
Shirt makers.....	.50	.....	1.00	.....
Shirt makers, foremen	1.00	.....	2.00	.....
Shoemakers .....	.75	.....	2.00	.....
Shoemakers, foremen .....	.75	.....	2.00	.....
Silversmiths .....	.75	.....	1.25	.....
Silversmiths, foremen	1.25	.....	2.25	.....
Soap makers .....	.75	.....	1.50	.....
Soap makers, foremen .....	.75	.....	1.50	.....
Spinners .....	.50	.....	1.50	.....
Stationary engineers.....	.....	60.00	.....	125.00
Stationary firemen .....	.....	12.00	.....	28.00
Steam sawmill foremen .....	.....	25.00	.....	40.00
Steam sawyers	1.00	.....	2.00	.....
Steamboat engineers.....	.....	80.00	.....	150.00
Steamboat firemen .....	.....	12.00	.....	28.00
Stonecutters .....	.62	.....	1.00	.....
Stonecutters, foremen	1.00	.....	2.00	.....
Stone masons .....	.62	.....	1.00	.....
Stone masons, foremen	1.00	.....	2.00	.....
Tailors .....	.75	.....	2.00	.....
Tailors, foremen .....	.....	30.00	.....	80.00
Teachers.....	.....	25.00	.....	120.00
Tinsmiths .....	.60	.....	1.00	.....
Tinsmiths, foremen	1.00	.....	3.00	.....
Trunk makers .....	.50	.....	1.00	.....
Trunk makers, foremen	2.00	.....	3.00	.....
Umbrella makers .....	.50	.....	1.50	.....
Umbrella makers, foremen	1.00	.....	2.00	.....
Watch repairers .....	.75	.....	2.00	.....
Weavers .....	.50	.....	1.50	.....
Wood sawyers.....	.75	.....	1.50	.....

AVERAGE NUMBER, HOURS AND DAYS OF LABOR, AND WAGES OF RAILROAD EMPLOYEES IN THE PHILIPPINES DURING THE YEAR 1902.

[From the Philippine census. Equivalents in United States currency have not been computed on account of the fluctuations in value of silver currency as shown on page 739.]

Occupation.	Average number of employees.	Days of labor per week.	Hours of labor per day.	Average wages paid per day or month (pesos).
TRAFFIC DEPARTMENT.				
Assistant freight and telegraph clerks.....	11	(a)	(a)	b 20.00
Brakemen	20	(a)	(a)	b 20.00
Car cleaners	10	(a)	(a)	b 10.00
Conductors.....	17	(a)	(a)	b 30.00
Freight clerks	23	(a)	(a)	b 24.00
Inspectors	3	(a)	(a)	b 100.00
Lampmen	5	(a)	(a)	b 12.00
Porters	64	(a)	(a)	b 10.00
Shunters and couplers	9	(a)	(a)	b 15.00
Station masters	35	(a)	(a)	b 50.00
Subinspectors	3	(a)	(a)	b 60.00
Switchmen	51	(a)	(a)	b 14.00
Telegraph clerks.....	15	(a)	(a)	b 26.00
Ticket clerks	6	(a)	(a)	b 26.00
Ticket revisors.....	9	(a)	(a)	b 27.00
Watchmen	7	(a)	(a)	b 18.00
Other station men	18	(a)	(a)	b 16.00

a According to the requirements of the service.

b Per month.

AVERAGE NUMBER, HOURS AND DAYS OF LABOR, AND WAGES OF RAILROAD EMPLOYEES IN THE PHILIPPINES DURING THE YEAR 1902—Concluded.

Occupation.	Average number of employees.	Days of labor per week.	Hours of labor per day.	Average wages paid per day or month (pesos).
LOCOMOTIVE DEPARTMENT.				
Apprentices.....	4	6	9½	a 0.50
Blacksmiths.....	5	6	9½	a 1.50
Boiler makers.....	5	6	9½	a 2.00
Boys (faginantes).....	3	6	9½	a .50
Carpenters.....	41	6	9½	a 1.50
Chinese smiths.....	14	6	9½	a 2.00
Cleaners.....	18			b 15.00
Coal men.....	19			b 14.00
Drivers, freight.....	12			b 45.00
Drivers, passenger.....	18			b 65.00
Drivers, switch.....	2			b 35.00
Filers.....	2	6	9½	a 1.10
Firemen, freight.....	17			b 20.00
Firemen, passenger.....	18			b 25.00
Firemen, switch.....	4			b 20.00
Fitters.....	60	6	9½	a 1.75
Laborers.....	14	6	9½	a .50
Lathe men.....	5	6	9½	a 2.00
Oilers.....	16			b 20.00
Painters.....	14	6	9½	a 1.10
Planers.....	2	6	9½	a 1.60
Shed foremen.....	4	(c)	(c)	b 100.00
Shunters.....	3	6	9½	b 25.00
Strikers.....	4	6	9½	a .75
Timekeepers.....	3	6	9½	b 80.00
Tinsmiths.....	2	6	9½	a 1.50
Watchmen.....	5			b 40.00
Workshop foremen.....	4			b 100.00
WAY AND WORKS DEPARTMENT.				
Blacksmiths.....	1	6	10	a 1.12½
Bridge watchmen.....	9	(c)	(c)	b 10.00
Carpenters.....	10	6	10	a 1.50
Drivers, pile.....	1	(c)	(c)	b 32.00
Gaugers.....	56	6	10	a .52
Inspectors.....	3	6	10	b 250.00
Level crossing keepers.....	38	(c)	(c)	b 2.00
Painters.....	9	6	10	a .75
Plate layers.....	263	6	10	a .42
Strikers.....	1	6	10	a .80
Subinspectors.....	10	6	10	b 25.00
Switchmen.....	2	6	10	b 10.00
Timekeepers.....	1	6	10	a .75
Track walkers.....	30	6	10	b 12.00
Trolley boys.....	8	(c)	(c)	b 12.00
Watchmen.....	1	(c)	(c)	b 10.00
Works foremen.....	1	6	10	b 100.00
TELEGRAPH.				
Inspectors.....	2	(c)	(c)	b 50.00
Linemen.....	6	(c)	(c)	b 15.00
STORE DEPARTMENT.				
Foremen.....	2	6	9½	b 30.00
Helpers.....	6	6	9½	b 15.00
Laborers.....	11	6	9½	a .50
Watchmen.....	2	6	9½	b 40.00
GENERAL.				
Caretakers.....	1	(c)	(c)	b 30.00
Clerks, auditor's department.....	10	6	7½	b 36.00
Clerks, general office.....	6	6	7½	b 40.00
Clerks, locomotive department.....	9	6	7½	b 30.00
Clerks, stores department.....	9	6	7½	b 40.00
Clerks, traffic department.....	7	6	7½	b 30.00
Clerks, way and works.....	5	6	7½	b 36.00
Draftsmen.....	3	6	7½	b 70.00
Messengers.....	10	6	7½	b 12.00
Pay clerk.....	4	(c)	(c)	b 45.00
Salaried officials.....	18	(c)	(c)	(d)
Ticket printers.....	2	6	7½	b 50.00

a Per day.
b Per month.

c According to the requirements of the service.
d Not reported.

LABOR CONDITIONS IN JAVA.

BY VICTOR S. CLARK, PH. D.

INTRODUCTION.

Java is the principal island of the Netherlands Indies from the point of view of population and industrial development. In many respects it presents in a typical and perfected form the results of a consistent colonial theory, wrought out during a century of national administration by a European government, and applied to an oriental people. Success and failure, the possibilities and the limitations of occidental influence upon the political, social, and economic condition of an eastern nation, are alike recorded in the history and in the present condition of the colony. An investigation of any group of sociological facts relating to this country, therefore, has a more or less general application wherever the problem arises of governing an oriental nation in conformity with the ideals of western civilization.

The island of Java resembles Cuba in area, outline, and agricultural capabilities, although its topography and geological features differ in many ways from those of its West Indian counterpart, and it lies 15° nearer the center of the Torrid Zone, or just south of the equator, while the latter island lies slightly within the northern tropic. Nevertheless the greater elevation of the interior plateaus of Java counteracts the effect of its lower latitude, so that oppressive heat is hardly more common than in Cuba. The climatic differences of the two countries reveal themselves rather through prolonged effects upon organic life—upon flora and fauna—than by phenomena directly sensible to the visitor from other lands. The same influences probably help to shape sociological and economic conditions, which are doubtless as plastic as organic forms, and thus react indirectly upon industries. But in the main Java and Cuba produce the same agricultural commodities for export. Turning to the Philippines, if we exclude manila hemp, of which those islands seem to have a natural monopoly by virtue of some obscure endowment of soil or climate, our own insular dependency is engaged in similar lines of production. The kinship of the Javanese and the Filipino races is close, and there is evidence to suggest that the social traditions and instincts and the institutional

inheritance of the two peoples are intimately related and probably identical in origin. Similar climatic conditions prevail throughout the Philippine and the East Indian archipelagoes. Therefore the Philippines and Java, and a typical West Indian island like Cuba, present the problem of tropical labor in three equations, so to speak, each with the unknown quantities in different but comparable relations, and consequently a study of labor conditions in any one of these countries throws light upon corresponding conditions in either of the others. Especially is a study of Javanese workers valuable as showing us a number of conditions as general among the Malay peoples under all forms of government, that we might otherwise wrongly attribute to accidental and easily remediable political or economic causes.

Java has an area of about 49,000 square miles, and is 5,000 square miles larger than Cuba and 8,000 square miles larger than Luzon. The population is, in round numbers, 29,000,000, or several times the total of the whole Philippine group, and fully sixteen times that of Cuba. Only about 63,000 of the inhabitants are classed as Europeans, and this includes a considerable number of persons who rank politically rather than racially with the whites. The long and slender outline of the island, running parallel with the equator, is, as in the case of Cuba, due to the presence of a more or less continuous mountain axis, whose prolongation in either direction is marked by adjacent land bodies. Sumatra to the west and the islands continuing to Timor on the east are the remaining links of this otherwise submerged ocean highland. A comparatively slight change of sea level would make of Java two islands of nearly equal extent, composed, respectively, of the Preanger and the Tosari plateaus, which now dominate the western and the eastern ends of Java, affording with their bracing air and temperate climate a welcome refuge for the white residents during the hot season.

The central plains between these two mountain regions were the seat of the lost and forgotten Hindoo civilization which flourished in the island ten or twelve centuries ago, and which has left no trace of its existence except massive Buddhist and Brahman ruins, whose origin the degenerate descendants of the builders ascribe to the gods themselves. Later the same district was the home of a Mohammedan empire, whose more or less disputed boundaries extended to Borneo and beyond, but which became a vassal state of the Dutch East Indies Company and now is divided into two equally impotent sultanates of limited extent. These remain as convenient administrative divisions, distinguished from ordinary residencies by a numerous and ceremonious court, more involved governmental procedure, and certain remnants of official privilege and property rights retained by the native rulers that affect private law and especially the conditions of land tenure. The mountain districts, on the other hand, were not organized into powerful states prior to the Dutch occupation, and therefore have been

assimilated more completely into the uniform administrative system which the Netherlands Government is gradually extending to all its possessions in the Indies.

Racially the native inhabitants of Java are divided into three main branches, all of whom are allied and profess the Mohammedan religion, but whose features, language, and customs differ in a marked degree. The Preanger highland is inhabited by the Soudanese, who are lighter colored, as a rule, than the coast dwellers—a people given to the cultivation of rice and the smaller food crops upon peasant holdings, or employed on tea and cinchona plantations. Coffee, which was formerly the staple crop of this district, has of recent years suffered from blight to such an extent that it is rapidly disappearing from cultivation in many places. The Soudanese are said to work best at occupations not involving the exertion of great physical strength, such as coffee and tea picking; but this direction of aptitude is probably the result of training rather than of racial peculiarities, as the home of this people is not in a country where cane raising and other severer forms of tropical labor have been profitable. Central Java is occupied by the Javanese proper, a darker, stockier, and more hard working race, trained to habits of plodding, if rather inefficient, industry by generations of subservient obedience to despotic rulers. These people were the subjects of the ancient Hindoo kings and their Mohammedan conquerors, and they live in the most densely populated portion of the island. They are employed in the cultivation of rice, tobacco, and sugar, and are recruited by cooly agents for work in other islands of the Netherlands Indies, and even for northern Borneo, the Straits Settlements, and the French colonies of New Caledonia. In the eastern end of Java, around the chief commercial center of Surabaya and upon the adjacent island of Madura, the Madurese are settled, a race of more typical Malay habits and aptitudes than the natives previously mentioned. They have something of the mechanical handiness that characterizes this sailor people, and furnish the best mechanics that Java affords. However, this superior skill may be accounted for in part by the fact that for over a century Surabaya has been the chief naval depot of the Dutch Indies, and that a population of several thousand natives has been almost constantly employed by the government at ship and boat building and other mechanical trades for several generations, while private employers have naturally settled near this source of labor supply. Surabaya is the headquarters through which sugar machinery is supplied to most of the Javanese plantations and where repairs are usually effected. Accustomed from youth to the stricter industrial administration of the workshops, the Madurese are said to be the steadiest workers among the natives. They appear to have a keener sense of the value of money, probably for the same reason,

and possess some rudiments of thrift. But they do not engage with equal willingness in the more arduous forms of field labor, and when left alone with nature are said to take to sea pursuits and stock raising rather than to the cultivation of the soil.

In the mountains and in some of the remoter coast districts there are communities which appear to be quite distinct from the three main divisions of the native population of Java just described, and some of the port cities, like Batavia, have a mongrel population quite beyond the possibility of classification, but composed largely of imported elements. The great source of labor supply, however, is from the three branches of the people just mentioned. Practically there is no immigrant labor. Europeans are employed in supervising capacities, and some discharged soldiers and half-castes follow mechanical trades in the larger cities. The Chinese, who are fairly numerous in the towns, engage to some extent in petty manufacturing, but are chiefly employed in mercantile pursuits. They do practically no unskilled manual labor and very little arduous work of any kind. Essentially they are a race of traders everywhere in the Tropics, except when working under cooly contracts. They number about 280,000 in Java, or rather less than 1 per cent of the whole population. There are also some 18,000 Arabians and 3,000 other Orientals in the island, who are likewise almost entirely engaged in trade.

Cuba, with a population hardly exceeding 1,500,000, exports nearly \$15,000,000 more per annum than Java, with equal natural resources and 29,000,000 people. On the other hand, Java consumes but \$40,000,000 worth of imported commodities, including machinery and textiles. Deducting the value of the articles imported for the 63,000 Europeans, the average native hardly consumes foreign goods to the value of a dollar a year. This indicates the degree to which his energies are devoted to the production of those things which he personally consumes. The food that he imports is a negligible quantity. While the per capita value of exports from the Philippines ranges from \$3 to \$4.50, that from Java varies from \$2 to \$2.25. But if we were to deduct the value of food imports in each instance from the value of native commodities exported, we should find the difference in net export values thus resulting very slight, though apparently the Filipino must be credited with a somewhat larger production than the Javanese, as is to be expected from the sparser population and relatively more abundant natural resources of the archipelago. However, the Filipino consumes more imported goods than the Javanese, and in this sense his standard of living is higher. So, while exports exceed imports in Java in all normal years and are not infrequently 50 per cent higher than the latter, the balance of trade has been upon the other side of the ledger in the Philippines.

The natural resources of Java are largely agricultural. Undeveloped coal measures of as yet undetermined importance exist, and the relation of the island to the Borneo-Sumatra oil fields suggests the possibility that petroleum deposits may be discovered. Tin figures in the Java-Madura exports, but the mines are on the island of Banca, north of Sumatra. About \$1,000,000 worth of timber, including dye woods, leaves the country annually. Among the exports sugar is easily first, however, the amount shipped from the island approaching 1,000,000 short tons per annum, with a value of \$28,000,000. Tobacco follows, with a product worth well over \$8,000,000, and the coffee sent abroad is valued at about \$1,000,000 less than that amount. Copra, tea, and clean rice are the next important items, with which must be included the product of the recently established quinine industry, which returns the island nearly \$2,000,000 per annum.

The geographical distribution of some of the leading crops, especially of coffee, is changing. Formerly the Preanger highland was the chief center of this industry, but the damp climate of west Java having proved favorable to the spread of blights recently introduced into the island, there is at present a tendency to concentrate the plantations in the drier eastern plateaus. Meantime tea is usurping the place formerly occupied by coffee in the western part of Java. Copra is of course confined largely to the coast country, and sugar is cultivated on the great plains of central and eastern Java, not a single factory of importance being situated in the country tributary to Batavia. Tobacco also is chiefly raised in the flat country, though there are some plantations in the uplands. Rice is an almost universal crop, which is cultivated wherever water for irrigation is present. The cinchona forests are in part government undertakings, and are found only in those high altitudes that resemble their original Andean habitat.

Most of the commerce of Java is carried on from the north coast and is shared by three principal cities. Batavia, which is farthest to the west, is the seat of government, though the residence of the governor-general of the Indies is at Buitenzorg, a small town situated two hours' railway journey from the coast in the Preanger highland. This city receives produce from nearly all the Preanger district and the coast country for 100 miles in either direction. Samarang, near the center of the north coast, is supported by the large areas of fertile sugar land and densely settled rice country in its vicinity and by the remoter tobacco and sugar plantations of the old sultanates of central Java. The most eastern of the three ports, Surabaya, while in some respects the least agreeable for residence, has the largest population and carries on the most extensive commerce of any city in the island, besides being a manufacturing center of local importance. Connecting these three cities is a trunk line of railway over 400 miles long,

while branch lines and a very extensive system of steam trams, operating for several hundred miles through central and eastern Java, render nearly every part of the island accessible for freight and passengers.

Although Java is a densely settled country, netted with railways and macadamized highways, and oftentimes presenting the aspect of a highly cultivated garden to the traveler, its forests and remoter districts still harbor wild elephants and tigers, the rhinoceros and the bantong, or forest buffalo, while pythons of incredible size at times wind along the hedges and through the rank herbage of the rice dikes almost to the streets of Batavia. Men by millions only half triumph over the wonderful fecundity of tropical nature, and the moment the restraining hand of the cultivator relaxes its vigilance the jungle and its thousands of denizens resume possession of their former home. Nowhere in the West Indies, or even in the Philippines, is this struggle of man with nature so unremitting, and in few places in the world is its successful issue rewarded with more pleasing results.

HISTORY AND GOVERNMENT.

Java illustrates what can be accomplished by the consistent application of a single theory of colonial government to a country with a docile population and sufficient natural resources. It is sometimes cited as the most prominent example of successful colonial administration in the Orient and used to prove the validity of the theory which has guided its rulers. But the Orient has no single example of unqualified success in colonial administration, and if such could be discovered, it would probably disprove in one application every theory that it confirmed in another. Sumatra is a larger island and in many ways more richly and variously endowed by nature than Java, and it has been under Dutch sovereignty during the whole period of Javanese development, but lacking a population disciplined to obedience by generations of serfdom under native despots, it has remained in large part undeveloped and is yet the seat of a warfare that has been carried on almost continuously for over 40 years between the Netherlands Government and the native tribes. Holland has been successful in Java not alone on account of its colonial policy, but also on account of the character of the people and of the country with which it has had to deal.

This policy is no man's invention, but has been gradually evolved out of the necessities of early colonial conditions. Indeed few persons of the present generation would hasten to claim the credit of its discovery, for originally it was in essence the economic exploitation of the people through the machinery of native administration. Within less than half a century the progress of public opinion and altruistic

sentiment in Holland has forced a change in this primary motive from economic exploitation to economic and social betterment, but the method of attainment, through the institutions indigenous to the native race, remains unchanged. Americans, forced by the logic of their own political system, which is wholly antagonistic to that of the Orient, have been driven to a radical reconstruction of native institutions in the Philippines, at least in form, and have installed quite new political machinery with which to attain their ultimate object of social betterment. If the leaven of representative government takes among oriental races, the recent growth of American influence in the East may mark the beginning of a conflict of social and political ideals among those peoples that will have far-reaching consequences. For this reason alone a study of the Dutch policy will be wholesome for us, because its guiding principles are distinctly the reverse of our own.

Holland's war of independence with Spain in the sixteenth century was accompanied by the rapid expansion of her commerce and the formation of a number of trading corporations whose special purpose usually was to invade the markets of the two Indies, over which that nation's present antagonist and former suzerain preserved such a jealous monopoly. In 1602 six of these corporations, representing as many different towns of Holland, were united to form the Dutch East Indies Company, which purchased a monopoly of the Eastern trade from the states-general. At first the Government reserved some rights of supervision over the powerful company, requiring that its governor should be appointed subject to the consent and approval of the State authorities, but with the lapse of time the effectiveness of this supervision decreased. The company possessed powers almost as extensive as those of a sovereign state and could make treaties with foreign governments, levy war, and maintain fleets and armies. During the two centuries of its existence Portugal and Spain were deprived of most of their possessions in what are now the Netherlands Indies, and the present colonial domain of Holland in the East was founded. At the time of the Napoleonic wars, almost two centuries after the formation of the company, the control of the colonies passed into the hands of the Government, and they later fell an easy prey to England. They were returned to Holland in 1815, and since then have been continuously administered by the Netherlands Government.

The object of the Dutch East Indies Company was exclusively commercial. The promoters cared nothing for the welfare of the people with whom they dealt. Oftentimes they looked for immediate returns rather than for distant but more permanent profits. Still, the administrators of the company in the Orient were as a rule practical men, not without a degree of foresight and of that self-interested humanity that prevents masters from starving their servants. Unnecessary war and disorder, piracy, and unprofitable oppression went counter to the

commercial ends of the company. Among the earliest regulations were provisions to prevent overcrowding of habitations, uncleanness, and the plague. The company ruled directly but small areas around its principal factories, which were obtained by treaty from the native rulers. Its influence over the native states was moral rather than mandatory. It subsidized petty despots in return for trade privileges, always driving bargains redounding many-fold to its own advantage; it intervened in disputed successions, supporting the weaker aspirant to the throne and making him the real if not nominal vassal of the company; and when wars broke out unavoidably or in accordance with its own intentions, employed these to weaken too powerful or hostile potentates, and to multiply the number rather than to strengthen the individual dominion of its own allies. Therefore for 200 years the Dutch authorities did not concern themselves with problems of government—with the direct administration of the affairs of the natives—except in the rather limited but ever growing territories owned in fee simple by the company. The precedent of operating through native officials and of preserving unimpaired local and indigenous institutions was established, not in response to theory but in compliance with necessity. Political authority was exercised for the sole purpose of earning dividends.

When the Netherlands Government assumed control of the East Indian colonies there was more recognition of the national aspect of colonization—of the need of having a policy and the duties incurred by European rulers toward the subjects thus mediately included within the boundaries of the suzerain State. But Dutch writers give the English governor (Raffles) who ruled Java during the period of British control and later founded Singapore, credit for having introduced the principle that the welfare of the natives was the first object of colonial government. Certainly the influence of the few years of English administration was far-reaching, and modified the whole spirit with which Holland viewed her colonial obligations thereafter, though it did not cause an entire break with the earlier theory of economic exploitation.

Briefly, the subsequent history of Java may be divided into two periods, from the restoration of Dutch sovereignty in 1815 to the publication of "Max Havelaar," by "Multatuli," in 1860; and from the latter date to the present time. The novel just mentioned, written by a former employee of the East Indian civil service, revealed many of the abuses that had continued or had grown up in Java and Holland's other possessions in the East, and did much to awaken the conscience of the people in the home country and to stimulate their sense of responsibility for the welfare of the nation's brown subjects in the Orient. In this sense it was the starting point for many reforms, and though it was a result rather than a cause of the growing colonial

altruism of the Dutch nation, it marks conveniently the time when the modern attitude toward the problem of governing dependent races was assumed by the authorities.

Speaking broadly, and allowing—as in all general statements—for many exceptions and qualifications, the policy of the Dutch East Indies Company was economic exploitation without accepting moral responsibility for the welfare of the natives; from 1815 to 1860 or thereabouts the Dutch Government directly administering the colonies followed a policy of economic exploitation, at the same time accepting moral responsibility for the welfare of native subjects; since 1860—or at least for several decades—Holland has ruled the East Indies as a national duty, deriving very little profit from their administration, and considering primarily the welfare of the people intrusted to its care. The theory of economic exploitation is no longer accepted.

When the Netherlands Government became universal heir of the East Indies Company, and the property was turned over by the English Government as temporary administrator, no one seems to have questioned the propriety of making this new domain return the largest possible revenue for the home treasury. It was looked upon as a national asset. But the usual method of raising revenue from a country by direct taxation or some form of tribute was ineffective when enforced against a people who lived from hand to mouth and were for the most part hidden in the jungle. Therefore the Dutch authorities, following a suggestion derived from the practice of native princes, inaugurated the form of forced cultivation known as the “culture system.”

This system is distinguished from similar institutions at other periods and places chiefly by its more efficient administration. The tobacco monopoly in the Philippines antedated forced culture in Java by 30 years, and was in principle and detail identical with the latter, though confined to a single crop. The germs of the system appear in the long-established privilege of native rulers to control the crops and the trade of their subjects, which still persists in the Javanese sultanates of Djokjokarta and Soerakarta, and manifested itself in a half Europeanized form in the alcalde monopoly, which controlled the interior commerce of the Philippines until about 1850, and is not yet entirely abolished. The essential feature of this system is that the ruler requires the subject to sell all or a portion of his produce to him at a fixed price. This is still a condition of tenancy in many parts of the Philippine Islands. The Netherlands Government also required that the native should cultivate a minimum amount of land in a manner prescribed by the authorities, so that he might have something to sell to the Government. Coffee was the crop that received the most attention, and our familiar market term, “old government Java,” dates from this period. On account of its gradual derivation

from native sources the exact time when forced culture was inaugurated is difficult to determine, but it was not fully established until 1830. The obligations which it imposed rested upon village communities rather than upon individuals, and the earliest ordinances required that one-fifth of the communal land should be planted in government crop, for which the villagers received payment for all excess above the value of the rice that might be raised upon the ground thus occupied. If the value of the government crop was less than the estimated value of an equal area of rice, the cultivators received nothing. In other words, the result of the system was to impose a double tithe upon village lands. As early as 1810 an ordinance in Java relieved permanently-employed mechanics in country districts from the obligations of forced culture. Indigo, coffee, sugar, tobacco, pepper, tea, and some minor crops were cultivated under this system. An ordinance passed in 1832 fixed the area that should be cultivated for government profit in each district, limited the competition of private enterprises with these official undertakings, and fixed a per cent upon the income from forced culture to be paid to native officials and European administrators engaged in supervising this department of taxation. In these last provisions, which placed a premium upon the profits of government cultivation wrung from the laborers for the administrators, were the germs of evils that later contributed largely to arouse public sentiment in the home country against the entire system.

When at its height forced culture employed nearly 800,000 families in cultivating over 101,000 acres. The fixed price at which coffee was received by the government was sometimes less than 30 per cent of the export price. But if each family working under the system cultivated on an average but one-eighth of an acre the burden could not have been a heavy one. The earlier regulations of the Preanger district required that every four families or 22 persons should cultivate 12 coffee trees, whose product should be sold to the government at the official price. In a modified form, and in restricted districts, this system of tax still continues in Java, although it is disappearing. When forced culture was applied to sugar production the people were required to devote a certain area of land and a certain amount of labor to the cultivation of cane in the districts where this crop was most profitable, and private sugar mills were required to sell their product to the government. In 1879 one-third of the cane area was free from this form of government control, and one-thirteenth of the remainder was freed every successive year, so that forced culture ceased in this industry in 1891. Even earlier the manufacturers were allowed to market one-third of their product privately. Within 5 years of the time that the production of sugar was left entirely to voluntary effort the amount made increased from 453,342 to 607,243 long tons per annum, thus repeating almost exactly the experience of the Philip-

pinus with tobacco after the abolition of the government monopoly in those islands. From 1840 to 1871 the revenue of the government from forced culture was about \$8,800,000 yearly, 78 per cent of which was derived from coffee alone.

The following description of the system of forced culture in actual operation is from a Dutch colonial writer:

Everything was under forced culture, and before daybreak high and low officials and their attendants appeared in the village to drive the men, often by force, to their work in the pepper, coffee, and rice fields, or to their labor upon the roads, bridges, and irrigation ditches, where they must toil arduously, under strict supervision, often 14 days in succession. Laziness or neglect were punished by extra work, fines, penal labor, or arrest. Until 1852 the workers must furnish their own food while in service, and if their relatives brought them no food, were compelled to purchase it from the gendarmes or wardens at high prices, or else go hungry.^(a)

Flogging was common. The native headmen were made directly responsible for the remissness of their villagers. If the latter were indolent, soldiers were quartered upon them. As showing another side of the picture, a recent writer, who has resided in the Netherlands Indies for 28 years, says, in speaking of certain provinces in Sumatra:

In relation to these people, Holland as the ruling power has the moral duty of a teacher, to lead the people to labor, and, if necessary, to compel them. Experience teaches the justice of this policy. Compulsion is necessary in order to bring the "grown up child" to a realization of the blessing of labor. We see now, for instance, in the province of Palembang, that a single district—and only the particular district which for generations groaned under the burden of forced culture—now recognizes the advantages of coffee cultivation and voluntary labor. In other portions of the province, which because they were independent were never subject to forced culture, the conditions are not far above those which mark the lowest stage of civilization, and the great treasures that rest in the bosom of the earth remain unutilized.^(b)

The system of forced culture was intended to yield a revenue or direct profit to Holland, to make the colonies pay. In other words, it was a labor tax. In the native's mind it was probably confused with other communal obligations, the so-called *desa* and *herren dienst*, a form of *corvee* reproducing many of the feudal burdens of Europe, and surviving in our own country in the road tax.

The constitution of Holland applies to her colonies only where this is expressly stated. The Netherlands Indies have a total area of about 680,000 square miles and a population of between 35,000,000 and 40,000,000, and are divided into some 37 territorial districts or residencies, of which 17 are in Java. These districts are created by order

^a P. F. Kooreman, *Indische Gids*, 1890.

^b Breitenstein, iii, 189, 190.

of the King, and their boundaries include all the Indies, whether under native princes or ruled directly by the Dutch authorities. They are units of internal administration, and each is under a European officer known as a resident. In some parts of Sumatra the title of the territorial executive is governor. All these officials are subordinate to the governor-general of the Indies, whose residence is at Buitenzorg, in Java. The organized territories are further divided into regencies under an officer of the same title, appointed by the governor-general upon the advice of the resident in whose territory the regency is situated. The principal officials of each residency or territorial district are Europeans and the regents are Europeans or half-castes, but the entire subordinate local administration is in the hands of native officials. The judicial system of the natives is also preserved nearly intact, the European courts dealing chiefly with cases affecting whites. There is no legislature, as the authority of the governor-general is autocratic, subject only to the supervision of the home authorities; consequently most governmental functions are purely administrative or executive, or are exercised under executive forms. Where laws are referred to later in this report the reference is to acts of the Netherlands Parliament applying specifically to the colonial possessions. In the nominally autonomous sultanates and principalities the processes of government are somewhat more involved, but they resolve themselves in principle into obeying the directions or "advice" of the European resident, who is known as the "elder brother" of the native ruler and represents the governor-general at his court.

The most important political unit for the student of institutional history, or for the investigator of modern economic problems, is the village, or "dessa," as it is locally known. All the rest of the political system is more or less artificial and imposed; it could be removed without changing materially the life of the people; but the village community is organic, an institution that must be understood by the industrial administrator as well as by the political ruler. It is at once a social, an economic, and an administrative unit. In the older territories, formerly ruled directly by the East Indies Company, the dessas have been partly disintegrated and habits of individualism created, but they are still vigorous throughout the greater part of Java. Their importance is not to be traced through the history of any single village or corporation, as in case of old borough towns in England or a New England township. They have not the same fixity and formal significance as the barangays or municipalities of the Philippines, which are probably identical with them in origin. It is not the individual village that commands attention, for such communities may be constantly disappearing and reforming, and might, theoretically, have little permanency without affecting their importance as an institution. The significant fact is the village habit, the manner of living that

reproduces itself everywhere among the Malay races—as among the Hindoos and early Europeans—as naturally and instinctively as the swarming of bees. The Javanese exercises both his civic and his industrial activities through collective or communal forms. He is comparatively helpless when left alone. He is not a responsible party to the contract of service, nor is he individually competent to administer property. He can realize himself, so to speak, only through association. This is still to a large extent true of the Filipinos, and is a fact that will sooner or later force itself upon the attention of our people. But the Javanese is in this respect a more primitive man than his Tagalog or Visayan kinsman, and his institutions, therefore, afford a better key to his race psychology.

The English governor (Raffles) tried to strengthen the *dessas* by increasing their autonomy and allowing the members to elect their headmen. The more bureaucratic disposition of the Dutch has caused them to favor appointing these officials by the superior authorities. Neither system appears to be universal, although in central Java, where the native rulers still nominally control the local government, appointment is more common and the same is said to be true of villages situated on the large estates held by private owners in west Java, where the proprietor names the headman. The duties of this official are various, and he is the medium by which the authority of the government is brought directly to bear upon the rural population. He maintains order, collects taxes, and is responsible for the maintenance and repair of public works of exclusively local utility. He also administers the communal lands and controls, to some extent, planting operations. The influence of the *desa* is to be traced in three directions: In the land system and legislation, in the administration of labor upon public works, and somewhat less obviously in the laws governing labor and industries.

LAND SYSTEM AND LEGISLATION.

Land tenure in Java is slowly changing from a communal to an individual basis. In a few districts, especially around Batavia, where private ownership was early introduced by the East Indies Company, communal holdings have practically disappeared. This is true to a less degree of the whole Preanger region, and of a few other districts where political causes like the one just mentioned or local industrial conditions have overthrown the older system. Elsewhere communal and individual tenure exist side by side, the former gradually yielding to the latter under the pressure of interests that probably are similar to those that broke up the same system in early Europe and Britain.

The transitional phases from pure forms of common ownership to individual tenure which appear in Java are numerous, and affect, in a

different degree, different classes of land. The village lands may be roughly classified as uncultivated forest and grazing tracts, tilled fields, and garden and residence plats. Of these three classes the last naturally changes most readily into individual property unless some outside cause has intervened to modify the normal order of development. In some of the remoter regions of Java, where the country is still very wild and the natives possess a low degree of culture, communal residence plats still exist, the group of huts being surrounded by a ring fence—sometimes still retaining its old function of a tiger guard—the rice field assigned to each member for the time being lying just without the fence and opposite to his house. In this instance the community of tenure is complete. Tilled fields are subject to three types of holding, the earliest, which still persists in many districts, being where the land is periodically divided and periodically assigned to holders of village rights. In the second type, the divisions have become permanent, but the periodic assignments, usually by lot or vote, or by the direction of the headman, are continued. These standing divisions are a matter of convenience in the rice country, where fields are often separated by dykes and irrigation ditches of a more or less permanent character. The third type, which to the casual observer would seem hardly to differ from individual ownership, is where both divisions and assignments have become permanent. That is, each village member cultivates the same field year after year without fear of dispossession by the community. Nevertheless he is not in the position of a fee-simple owner. His title is conditioned by the possession of communal rights, is verified like other communal rights and obligations, and is subject to the interpretation of the village headman. The land can not pass to his widow except under conditions, as women can not directly fulfill the communal obligations resting upon the land, such as watch service and road labor; and if the owner dies leaving surviving sons, instead of being divided equally among them, as would happen in case of individual holdings, the partition of the land remains fixed and the allotment as a whole passes to the son whom the village authorities designate. Finally, communal holdings of the sort mentioned are subject to the same restrictions of sale as other village property, and usually can not be alienated to strangers without the consent of the villagers. Fish ponds and nipa forests are sometimes held in common, and communal grazing rights exist in districts where the population is not so dense that all the arable land is constantly under tillage.

Villages in the vicinity of sugar plantations sometimes lease a portion of their lands each year to the planters, so that cane rotates with rice and other crops. This system tends to preserve communal tenure by making it advantageous to retain the old flexibility of field divisions, thus allowing the *dessa* authorities to rent out larger continuous tracts than would be possible were individual holdings the rule.

The private land system of Java dates back to the time of the East Indies Company, which disposed of considerable tracts irrespective of native tenures to European owners, who dealt with the natives whose possessions were thus arbitrarily transferred to them as tenants, and probably imposed no burden upon them more severe than those to which they were accustomed from their native rulers. Raffles adopted the theory that all the land in the island was state domain, and that taxes should be treated as rent, probably basing this view upon that held by the native princes, who regarded all the real property of their subjects as a personal possession. By the general land law of 1870 the land of Java is recognized as either native or government. During the period of forced culture there was a constant struggle between the opponents and the supporters of this indirect form of state cultivation, which was reflected in land administration. The partisans of government control of cultivation defeated all efforts made by the advocates of free cultivation and private enterprise to secure land legislation favorable to their own undertakings or projects. In 1862 a law had been passed allowing natives to lease land to nonnatives, and shortly afterwards it was proposed to recognize native freehold tenures, but this second proposal was defeated. In its place a law was enacted recognizing the right of natives to hereditary and individual usufruct in land. The law of 1870 was soon amended, and was in 1875 extended to the other Dutch possessions in the Indies. By an amendment in 1885 it was permitted the dessa holders by a three-fourths majority to change from communal to individual tenure under certain restrictions, but this is seldom done. The lack of action is said to be due to the apathy and conservatism of the peasantry and partly to the influence of European planters, who prefer to lease from communal rather than from individual holders. Between 1876 and 1892 the proportion of native land held under individual tenure increased from slightly under 42 to 48.64 per cent of the total. Under the existing laws natives can alienate only to natives. Europeans can not acquire land even under execution; and the only way that land belonging to natives can pass out of the hands of people of their own race is by its condemnation for public use. Since 1872 government land, as distinguished from native land, may be sold to natives as freeholds, when it becomes subject to restrictions preventing its transfer to Europeans just described. The governor-general can not authorize the sale of public land to Europeans except in small tracts, not exceeding 17 acres in extent, for factory sites or residence lots near towns. Since 1836 no public land has been sold to Europeans except under this provision. In case of estates sold to white owners in early times by the East Indies Company, the proprietor has the right to cultivate land that is not occupied by native tenants, and to receive rent for land used by natives. The rent shall not exceed one-fifth the crop, and

shall be in kind unless the peasant expressly agrees to pay in money. There is no right of ejection and no hereditary right of tenancy. It is provided that the village organizations upon the estate shall remain unimpaired. There are a few places in the Batavia district where natives have the right to alienate their lands to nonnatives, and on account of the diversity of race and custom in different parts of the island many local variations affecting the detail of communal and individual tenure exist among the peasantry. But the review just closed covers the main features of existing law and custom relating to proprietary rights in land.

The regulations regarding leaseholds are of more practical importance to Europeans, because nearly all business enterprises in Java are forced to operate, so far as they involve the use and administration of real estate, under these provisions. Here again land is to be classified as either government or native.

Public lands are leased under three titles. The first is a short lease for 20 years, or for 40 years when the land is to be used for cocoanut plantations, after a preliminary survey by the government and assignment to the lessee by auction. Leases may be renewed, and the land may be sublet, subject to the approval of the authorities. This form of leasehold is not very popular and is disappearing. The second form is for 75 years, at a rental of from 40 cents to \$2 an acre, beginning after the sixth year. The land is surveyed by the government, advertised, and auctioned; the expenses of this procedure being paid by the lessee. If the land is not put in the market by the government, any person desiring to obtain the use of it may cause a survey to be made at his own expense, and the formalities of leasing are carried through after this initiative as though the land had been originally allotted for this purpose by the government. No mining rights are conveyed. This form of holding is slowly increasing. The third class of leases is for 30 years, at one-half purchase value, and applies only to building sites not exceeding 17 acres in extent in towns and cities or their vicinity. The improvements are bought in by the government at the end of the 30-year period, or they may be destroyed by the lessee.

Natives have been allowed to lease their lands to Europeans since 1862, but the present procedure is governed by subsequent regulations, most of which date from the law of 1870. No lands planted in coffee can thus be leased. The lessees must be citizens or regularly domiciled residents of Holland or of the Netherlands Indies, or companies under the jurisdiction of those countries. The term of the lease is limited according to the original tenure of the land and can not exceed 20 years in case of freehold; or 12 years in inherited possession, or where the holder possesses by virtue of communal rights and the land is not subject to either repartition or reassignment; or 5 years in case of

communal holders whose land is subject to reassignment, but in no case for longer than the period for which the land has been assigned; and it can not exceed one year in case of certain lands whose usufruct forms a part of official perquisites. The communal lands subject to reassignment can be leased only by consent of two-thirds of the members of the village. The lease must be in writing in both the Malay and the Dutch language, properly registered, and upon a form prescribed by the government. The lessors are bound to pay all taxes and to render all services with which the land is burdened.

The number of leases of land from natives registered during 1902 was 12,602 for a total area of 234,845 acres, of which 212,803 acres were rented for sugar cane, 8,085 for tobacco, 6,041 for rice, 3,535 for indigo, and the remainder for miscellaneous crops and for other purposes. The sugar lands were leased for terms varying from 1 to 12 years, at rentals ranging from \$4 to \$16 an acre; tobacco lands were in some instances rented for 12 years, but in other cases for a single crop—that is, for 4 months—the rental being in some instances as low as a guilder a “bouw,” or about 24 cents an acre, for the shorter term, and rising to \$13 an acre per annum in other cases. Rice lands were always let for comparatively short terms, the longest period being 23 months and the shortest for a single crop, or 6 months. The rental varied from \$2.25 to \$16 an acre per annum. Indigo lands were leased for from 18 to 23 months, and the rental was about the same as for rice lands. The irregular terms of the leases are accounted for by their adaptation to crop seasons, which are timed as accurately by the monsoons and other recurrent climatic phenomena in the Tropics, as they are by spring thaws and autumn frosts in the Temperate Zone.

A new law was passed in 1899, entitled “An act to protect the economic condition of the natives,” which restricts somewhat the freedom with which land can be leased by natives to sugar and indigo planters, and may be extended by regulation to other forms of agricultural industry, the home Parliament having left this to the discretion of the governor-general. The principal provisions of this new act are as follows:

(a) All new sugar or indigo plantations or old plantations resuming operations after a period of cessation, that depend upon land rented from natives, must be specially authorized by the governor-general.

(b) All plantations in actual operation are forbidden to lease a greater area of land from the natives than the maximum area of such land under cultivation during any one of the three years immediately preceding the enactment of the law.

(c) Plantations purchasing their cane from native growers must not become renters without special permission from the governor-general.

(d) The governor-general will grant permits for hiring or for extending hired areas, upon application, unless lack of irrigation water or of sufficient land in the *dessas* for proper crop cultivation is shown.

(e) A permit to hire must be used within a year in order to be valid.

(f) The governor-general may designate certain ground, on account of its relation to irrigation works or for other reasons, as not to be leased to plantations by natives.

(g) Plantations in the sultanates of Soerakarta and Djokjokarta, and those upon private land and not leasing from natives, are expressly exempted from all these provisions.

(h) Planters violating the provisions of this act are subject to a fine of from \$20 to \$200 a day for every day of such violation.

This legislation is clearly inspired by the desire to protect the native from spoliation by the shrewder European or Chinaman. But originally many of the restrictive features of the laws governing the business relations of the two races were intended to prevent private enterprise from competing with the government in coffee raising and the production of other tropical commodities. The essential principle of the policy is in either case protective. The native is treated like a child—or at least as incompetent in business matters. Any person even superficially familiar with the Javanese peasant will hardly question the fact that the government is simply recognizing an obvious truth in thus regarding the native agriculturalist; but at the same time one is inclined to question whether a policy is adequate to present-day demands that contemplates keeping a race in permanent pupilage. This subject will be considered in other relations later, but is mentioned here in order to call attention immediately to the paternal attitude of Dutch colonial administration in its application to land legislation.

PUBLIC SERVICES AND LABOR UPON PUBLIC WORKS.

Nothing impresses the visitor to Java more favorably than the excellent system of roads and bridges, the admirable sanitation of the more important towns—considering their unfortunate situation in many instances—and the general good repair in which all public works are kept. Everywhere there is evidence of thrift, order, and careful maintenance. The expenditure of money and labor here involved is justified by a special reason in a tropical colony, apart from the general consideration of public convenience. The individual members of tropical races seldom accumulate property. Neither does their standard of living respond quickly to higher wages. If their rate of pay or other sources of income are doubled, they neither save half of these increased receipts nor devote a larger amount to the purchase of

luxuries and the pursuit of pleasure. As a rule they continue in the same habits of expenditure as before, and adjust their income to their wants by working only half as much as previously. This has proved remarkably true in the Philippines, and everywhere in Java the testimony of employers shows a similar disposition on the part of the natives. After an abundant rice harvest they idle, although the demand for labor may be urgent and wages above the usual rate. Therefore the accumulation of a tropical nation must be accomplished by collective action. It must be communal rather than individual. Formerly these national savings went to enrich the hoards of oriental despots and to support the luxury of a sensual court. Under modern colonial government they are devoted to the construction of works of general-utility. Public buildings, roads, bridges, irrigation works, wharves, and railways represent the crystallized savings of the Javanese. From them they secure an assured income in public convenience and security, the ready movement of their commodities to market, the improved health of the people, and that gradual spread of culture that must come in time with the increasing mobility of the population and the increased activity of interchange of every kind. But these savings are not voluntary. The people of Java have not made them of their own accord. They would still be threading obscure footpaths through unbroken jungle and crossing streams by fords and fallen trees had they been left to their own free will. It is by a system of enforced labor that the Dutch have accomplished so much for the permanent general welfare of Java—by a system that was successful only because administered with more integrity than in many other colonies—and if they are now able to substitute a different method of obtaining the same object, it is because the results of the past have secured them this advantage.

The public service which the Javanese renders to the authorities is of two kinds. One is the so-called "dessa-dienst," which is a purely communal obligation. It usually rests only upon those persons enjoying full village rights, including the holding of communal lands—and was probably at first a burden upon real estate. This form of service is required for building and maintaining local roads and bridges, watch houses, markets, and cemeteries, and for guard and patrol duty. The policing of the hamlets is largely in the hands of these irregular watchmen. The villagers are also required to render certain services to their headman, such as caring for the grounds of his house, carrying fuel, cutting grass for his horse, and accompanying his wife to market in order to carry back her purchases. The second form of public service is more important, and includes all labor required by the government upon highways and irrigation works not paid for out of general revenues, watching irrigation ditches, and in certain cases the transport of soldiers' baggage. In the sultanates the ruler requires

about one day a week of service from his subjects, and it is this labor tax that has been assumed by the Dutch Government in the districts under its direct administration. This obligation has lost its earlier personal character and been transformed into a public contribution, although the old name of "herren-dienst" has been retained. The original character of this service as a land tax or rental is indicated by its varying incidence in different parts of the island. Where communal holdings predominate it rests upon members of the *desa*, and in some cases only upon those who hold a portion of the common rice lands. Sometimes in such villages it rests upon all holders of tilled lands, and occasionally upon all house occupiers. Holders in two or more *dessas* are required to do double or treble *desa-dienst*. Sometimes the burden of *herren-dienst*, or general public service, rests only upon married men. In districts where there is individual land tenure the tax rests upon individuals, with or without reference to their holding land, according to the district. In Batavia all able-bodied men between 15 and 50 years of age are required to render service, without regard to property. Sometimes the tax and its amount are assessed against land and chattels, and occasionally also against the propertyless, as in the city just mentioned; but the latter is rare, as the theory of the law appears to be that only those having presumable means to support themselves while working for the government shall render this service.

Herren-dienst is being abolished gradually by the Dutch authorities, and many of the older forms of service are no longer required. The average number of 12-hour days of labor that might have been called for by the authorities, in 1892, varied in the different districts from 8 to 52. The largest number was in Batavia and other districts where there are private estates. The number of days actually worked, however, averaged about 5 for the year throughout Java, and ranged from a minimum of 3 to a maximum of 8. The distribution of this service is shown in the following table:

STATISTICS OF HERREN-DIENST IN 1902.

Total persons liable to service	3,493,753
Total days of service due	71,614,166
Days actually worked:	
Road maintenance.....	4,711,058
Road construction.....	245,942
Irrigation maintenance	2,023,568
Irrigation construction	232,336
Stone-breaking, etc.....	6,794,544
Watchhouse service	3,092,077
Carrying baggage	89
Total days worked	17,099,614

It is estimated that all the personal services required by the government could be profitably commuted for a poll tax of \$1.60 per annum upon all persons at present liable for this duty. A similar tax formerly existed in the Philippines, but was abolished by the American authorities because of the complaint that it was used by petty magistrates as a means of oppressing the peasants. During the last year reported in Java, not a single instance came to the knowledge of the government where herren-dienst was illegally required of any native, though instances were discovered where natives were illegally freed from this obligation by the assessing officers.

PRIVATE LABOR CONTRACTS.

No cooly labor is imported into Java proper, on account of the abundant supply of workers afforded by the dense native population; but Chinese are imported into the tobacco districts of Delhi, in Sumatra, into parts of Borneo, and form part of the force working the government tin mines of Banca. However, coolies are recruited in Java for other parts of the Dutch possessions, and even in some cases for service in colonies under another flag, and the contractual relations between employers and their native servants are regulated in considerable detail within Java itself. The existing regulations are based upon a definite recognition of the communal social organization of the Javanese, and apply most directly to collective bargains for service. They provide in substance: (a) That the promoters or managers of any industrial enterprise may enter into formal contracts with the elders and chief men of any *desa* for the cultivation of ground, the delivery of produce, or for the rendering of personal service, providing that the contract is approved by the Dutch resident after ascertaining that the conditions are assented to by the members of the community; (b) the period of such contracts shall not exceed 5 consecutive years, or any lesser term that the resident may determine.

In case of cane cultivation, especially, it is necessary that contracts for cultivation or field labor cover a term longer than a single year. The contract must further specify the amount of money to be paid for the cultivation of each acre of ground, or the pay for each day's work; and in case conditions make it necessary that laborers be fed by the employer, the rations that each worker shall receive in addition to his wages. The resident is further charged with providing that the number of day's labor to be supplied by any village shall be so apportioned as to allow of the proper cultivation of the communal rice fields, and shall not be so excessive as to prevent the members of the village from giving proper attention to their own ground. The dates at which services are to be rendered must also be specified, and likewise the character of the supervision under which the men are to work—it being particularly provided in each case that in all matters not relat-

ing directly to the performance of the duties for which they are engaged by their employer, the laborers shall remain under the exclusive jurisdiction of their own communal authorities. No contract is valid unless duly registered with the resident of the district within which the laborers reside and render service. The resident must assure himself, by personal inquiry or through reliable agents, that no compulsion or threats or other improper means have been used to force the natives to agree to the terms of the contract, and that they fully understand the meaning and obligation of the engagement they are making. During the continuance of the contract the officials are required to watch over the parties thereto, and to see that no undue advantage is taken by either side of any laxity in its provisions, but that it is equitably enforced in accordance with the original intent of the makers.

These communal labor contracts do not cover all engagements entered into by employers with their workmen, and natives are hired for many purposes, even in agricultural undertakings, as individuals, much as they might be in the United States. In all these allusions to the *desa* structure of Javanese society it must be borne in mind that this older type of communal organization is slowly passing away, and that it does not exist uniformly throughout any district; but it is almost as important in explaining the psychology and habits of the laborer as if it still flourished intact.

No cooly ordinances apply to Java; but there are ordinances, similar to each other in all essential respects, applying to the different districts of Sumatra, Amboina, and the Banda Islands, to Terrate, the Celebes, Borneo, and practically all the Netherlands Indies where there is any industrial development, with the exception of the older colony mentioned. And in Java itself these ordinances have practical importance, for, although they do not control labor employed in the island, they establish conditions under which Javanese are recruited for service in other parts of the Indies. These regulations require that coolies shall be engaged by written contract, containing provisions stipulated by the government, and drawn up in accordance with an official form prescribed in the ordinance itself.^(a) The contract becomes effective only

" OFFICIAL FORM FOR COOLY CONTRACT.

We, ———, of ———, aged ———, born at ———, by nationality ———, party of the first part, and ———, representing ———, of the ——— (company), situated at ———, party of the second part, hereby contract and agree as follows, to wit:

I. Said party of the first part shall perform services specified as follows ———, for the ——— company.

II. The number of working hours in each day during which said party of the first part shall work for said ——— company shall be as follows: ———.

III. Said party of the second part shall pay said party of the first part a wage of ———, reckoned in ——— (currency), payable ———.

IV. Said party of the first part acknowledges to have received from said party of

after registration with the district supervisor of the place where the service contracted for is to be performed. If the coolies are imported from a country where the traffic is subject to government control, the registration takes place without further formality, providing the contract complies with the conditions required by the ordinance. If the cooly is imported from a country where the trade is not regulated, the supervisor can not register the contract until he has assured himself personally that the cooly understands the terms of the contract which he has signed, and freely assents to them. If the laborer in this instance refuses to agree to the terms of the contract, he must be returned to his point of departure at the expense of the employer. The contracts are registered in duplicate, one copy remaining with the register and one being given to the employer. The registration fee amounts to 40 cents in American currency for every cooly employed, and is payable by the employer.

The cooly can not refuse to work on days stated in the contract, except upon written authority from the employer or the latter's agent, or when he is presenting a complaint for ill-treatment to the proper officials.

The employer is required to treat his employees well, to pay them fairly their contract wages, to provide them without cost with proper lodgings and necessary medical attendance and medicines, even in case of injuries not occurring in his service, and to see that they are provided with wholesome water for drinking and bathing.

The employer must also provide each cooly with an identification card, with the conditions of his contract stated thereon—which the latter must carry on his person—and he must pay the wages of his

the second part an advance of ———, which shall be deducted from the wage above quoted in the following manner: ———.

V. No work shall be required from said party of the first part on the following days: ———.

VI. Said party of the second part shall provide said party of the first part, at the cost of said second party, with sufficient lodgings and necessary medical attendance.

VII. Said party of the second part shall provide said party of the first part with rice, salt, and other food, and proper clothing, as follows: ———.

VIII. Said party of the first part shall report himself, ready for work, to the superintendent of said ——— company, on the ——— day of ———, 19—.

IX. This contract is entered into for the period of ——— (not to exceed 2 years in West Sumatra or 3 years elsewhere), reckoned from the signing of this contract.

Signed at ———, on this ——— day of ———, 19—.

Registered by me ———, on the ——— day of ———, 19—, under No. ——— of the register provided by article 3, paragraph 9, of the ordinance, etc.

(The registration data are date of signing, date of registration, name, age, nationality, birthplace, race of first party, name of second party, company, description of labor, number of working hours, wages, currency, dates of payment, advances, how deducted from wages, holidays, lodging, medicine, term of contract, date of expiration, any subsequent modifications of the contract, and remarks.)

men in full, making no other deductions than those stipulated in the contract or authorized by a judicial sentence against the employee. His pay rolls are always subject to official inspection.

Disputes arising out of a contract are tried before a district supervisor or before a civil or criminal judge indicated by him.

At the expiration of a contract the employer must give his employee a letter of dismissal, upon an official form, with data for identification, and within 8 days he must notify the supervisor of the district where the contract is registered of such dismissal.

If the cooly after sufficient trial proves himself incapable of performing the services for which he has contracted, the supervisor may authorize the employer to annul the contract; but the latter must return the cooly at his own (the employer's) expense to his point of departure, maintaining him until his arrival there, unless the cooly petitions to remain in the district and shows that he will not become a public charge.

An employer who willfully violates a contract may be punished by a fine not exceeding \$40 for the first offense. For a second violation the provincial supervisor may annul the contract. If the violation is by the cooly, he may be fined not to exceed \$20, or sentenced to labor upon the public works not to exceed 1 month. For repeated offenses he may be sentenced to 3 months' labor, and upon the request of the employer the provincial supervisor may annul the contract, relieving the former of all obligations regarding the offending workman. Among the specified offenses that render a cooly liable to the penalties just mentioned are failure to comply with any term stipulated in the contract, desertion, and continued refusal to work. Any person inciting a cooly to violate his contract, or giving shelter and aid to any cooly not provided with an official letter of dismissal as required by law, is liable to a penalty not exceeding \$40 or 8 days' imprisonment in case of Europeans, or \$20 or 1 month's labor on the public works in case of natives. Only the employer or his authorized agent can sue a cooly for violating his contract.

The maximum working day is fixed by law at 10 hours, or at 12 hours in case of railway employees. No person can leave his post on the government railways without 24 hours previous notice.

These ordinances are probably based upon earlier legislation in the various British colonies exporting or transmitting labor. Hindostan, and especially the southern provinces, are a main supply of workers for many other provinces of British India and for the Straits Settlements, Fiji, Mauritius, Natal, and Demerara. This labor, however, is not allowed to leave the British possessions. Hongkong and Singapore are great labor depots, from which Chinese coolies are distributed to the chief points of demand in all the Eastern countries. The Nether-

lands Government has recently sent a commissioner to British India to study the operation of the recruiting laws in that country. This gentleman said to the writer:

I was sent to British India to investigate their methods of cooly recruiting, which are in some ways superior to our own, especially in the prohibition or restriction upon advances paid to laborers against their future wages. The chief evils in Java have arisen from these advances, which are paid to coolies when they are recruited, and which were later taken away from them by the recruiting agents. The Javanese are so timid that they will not complain of this until they have reached their destination, far away from the presence of the man who has oppressed them. We have thought of establishing regular recruiting depots, where the coolies could live under government inspection until ready to embark. Of the three chief races of Java, the Soudanese, Javanese, and Madurese, the second make the best coolies, because they work well and are very docile. We have been sending emigrant labor to Delhi (Sumatra) for 30 years, but the first foreign emigration to Surinam was quite recently. It costs a cooly about 0.15 florin [6 cents] a day to live in Java, and he is usually paid about 0.23 florin [9½ cents] a day under the contracts.

Some of the recruiting evils complained of still occur in British India, however; for in testimony recently taken by a commission sent to that country from the Straits Settlements the following appears, from the manager of a large cooly exporting firm:

He frankly said that it was impossible to obtain honest and straightforward recruiters in southern India. The very nature of the business precluded such a possibility. The recruiters have always and will always introduce an element of fraud into their work. The only way to combat this was for the agent at Negapatam to explain clearly to the men before embarkation the terms of the contract they would be required to sign. Even this is often ineffectual to prevent fraudulent enlistment, as the coolies are so terrorized by the recruiters that they say "yes" to everything.

The chief secretary of the government of Madras is quoted by the commission as saying: "They [the coolies] would be bamboozled from their homes by false promises, and then terrorized until they could not call their souls their own, and perhaps, if necessary, drugged—it often happens." At the present time many Chinese coolies are distributed from Singapore, where there is a large government cooly depot, and a special bureau under an official known as "The Protector of the Chinese." The coolies are indented, like live stock or merchandise, by brokers, who market them to the planters. From the time of their arrival they are kept at the depot, under government inspection, until they are assigned under contract to employers. During this period they can be communicated with only through government officials, and are therefore protected to some extent from extortion and fraudulent engagements.

One of the leading cooly agents of Java said in reviewing the system in that country:

Our method of recruiting has been the same for 20 or 30 years—through local agents—and is not satisfactory. The government now has reforms under consideration and we are coming to an understanding by which we propose to establish cooly depots in 7 or 8 of the principal cities of middle Java, where coolies can be enlisted and detained for 5 or 10 days until the official inspectors can investigate each case. We could not supply more than 10,000 or 12,000 coolies from all Java, most of these coming from the central districts, where we have the best cooly labor, though the Madurese of east Java are better mechanics and skilled workers. A large part of the men who pass through our hands have physical imperfections—about 50 per cent have enlarged spleen and other evidences of malarial affections, so that a change of climate is apt to give them fevers and frequently fatal diseases. As a race the Javanese cling to their homes, and when we have a sufficient rice crop it is very difficult to get them to enlist for labor elsewhere.

We have shipped about 400 coolies to the Straits Settlements for the Straits Sugar Company, and have orders for more. By a special permit, granted by the governor-general in 1903, we are allowed to export beyond the colonies not to exceed 1,000 coolies, on contracts for not longer than 3 years, at a minimum wage of \$0.25 silver [about 10 or 12 cents in American currency] a day, plus lodging, food, and medical attendance. The latter three things must also be provided while the cooly is awaiting his return ship after the expiration of his contract. Though this is more than they can earn at home, our best coolies do not migrate. We are also shipping coolies to Sumatra right along—sent away 300 this morning. In fact, we are chiefly engaged in supplying this labor market in the less populated parts of the Dutch possessions. These men are to work in the tobacco districts, and are usually engaged at a piecework rate of payment; but they must receive a minimum wage of \$0.23 silver for men and \$0.15 for women, besides food, lodging, medical attendance, and medicines. They can live on \$0.12 per day. Women are paid \$0.04 for sorting 10 bundles of tobacco and \$0.01 for making 10 bundles. (^a)

A few coolies have also been shipped to the French possessions of New Caledonia. Physically these workers resemble the Visayans in the Philippines, and are probably about equally efficient laborers.

AGRICULTURAL WORKERS.

The agricultural labor of Java is performed entirely by natives of the peasant class. High-caste Javanese do no manual work, at least of an unskilled character. Apparently there is little or no peonage, although in the sultanates of mid-Java practically all the rural workers

^a The Dutch guilder or florin, equal to \$0.402 United States currency, is in general use in Java, but the silver dollar, worth about \$0.45 to \$0.50 in United States currency, is used in the Dutch possessions immediately tributary to Singapore.

live in economic as well as political dependence upon the native proprietors and are to all intents and purposes sold with the soil. Slavery has not existed legally since 1860. Communal labor is more common than communal landholding, as even after the title of "sawahs" or paddy fields has become vested in individuals local irrigation and harvesting are carried on by cooperative effort.

Rice culture presents the least clearly defined conditions of service, as there appears to be very little wage employment in this industry. In 1898 the number of native landholders and their employees was 3,807,440, and there were 2,784,120 "bouws," or nearly 5,000,000 acres, of rice land reported. About 3 acres of native land were occupied by rice for every acre in other crops. The peasants are said to work their own land, occasionally with the help of a neighbor, though some of the native proprietors have fairly large estates. This is especially true of the "hadjis" or Mohammedan priests, who have considerable holdings in the vicinity of the more important towns. These large landowners and the more prosperous peasants employ hired labor, paying in rice at harvest time, and meantime supplying their workmen with board and lodging. The latter often work for years for the same employer, becoming a class of family dependents. They are paid in paddy or unhulled rice. Laborers temporarily employed are seldom paid by the day, but more usually by the task, such as weeding a certain area or transplanting a specified number of plants of rice. They earn from 0.20 to 0.25 florin (8 to 10 cents in American currency) a day without food, or half that amount with a ration. Animal tillage is usually by carabaos or water buffalo. They are worked for shorter spells than most draft animals. In some districts plowmen go about offering their services, with animals and plow, for the equivalent of 10 or 12 cents and breakfast for a morning's work, which generally lasts from 6.30 or 7 a. m. until three hours later. Transplanting from seed beds and weeding are largely done by women, who also appear to be active in the fields at other seasons, especially during the harvest. They receive from one-half to two-thirds of a man's wage. Where laborers work by the share they receive from two-twenty-fifths to one-fifth of the crop, according to the number of operations, such as transplanting, weeding, and harvesting, that they perform. During the harvest season in Java one frequently sees the laborers returning home with the bundles of rice heads, which constitute their earnings, suspended from either end of a carrying pole. In many places the area of the "sawahs" is so small and the hillsides are so intricately terraced and diked that animal cultivation is obviously impossible. Tobacco is alternated with rice, however, in the central plains of Java, and here cultivation is conducted on a larger scale and the ground is worked with carabaos. The rice in this case is planted

during the west or wet monsoon. The average yield is said to be about 25 piculs a bouw, which is equivalent to about 19 hundredweight an acre.

It seems to be a rule of quite general application throughout the East that the peasants of the rice districts are less prosperous and have a lower standard of living than those in regions where there are large plantations and employing industries. This is partly because oriental methods of rice culture are so primitive that they give but a small return for the amount of labor employed, while cane, tobacco, and coffee are cultivated on a large scale and by scientific methods; and partly because the direct consumption of the crop by the producer, or in the immediate vicinity of its production, leads to an adjustment of rents and wages exceedingly oppressive to the laborer. It is not the large European capitalist, but the small native or oriental capitalist, who is the most conscienceless exploiter of peasant labor. Many of the Javanese peasants have their crops mortgaged for 3 years in advance, and are forced to pay interest at the rate of from 10 to 50 per cent a month. A renter pays the landowner 50 per cent for 6 months on the value of the seed rice advanced him. If the seed is advanced by some person not the owner of the land, the usual interest is 100 per cent for the 6 months until harvest. Were it not for the protection afforded to the natives by their land laws a considerable part of their lands would soon pass into the hands of Chinese usurers through mortgage foreclosures. But on the other hand the high rates of interest may be due in part to the fact that the loaning classes have no realty security for the money they lend. Chattel security is confined apparently to the crop itself. Nevertheless the most usurious lenders are said to be the hadjis, who are in most instances entitled to hold land under native titles.

The peasants in the tea and coffee growing districts present a more prosperous appearance, though their wage is little higher than that just quoted as prevailing on the rice farms. But as a rule payments are in money, and are evenly distributed throughout the year, while the rice wage, coming in a lump at harvest time, is depreciated by that fact, and is of less practical benefit to the thriftless natives. Picking is usually paid for by the quantity turned in at the end of the day. Thirty pounds of tea is considered a fair day's work. This employment continues in the Preanger district throughout the year. Men receive a guilder (40 cents American currency) a week, for 9 or 10 hours work a day. Sunday is not observed, the population being Mohammedan. Laborers are paid monthly, and receive half their wage in rice, which is said to be an arrangement satisfactory to them. Women and children are usually paid daily, because they work less regularly. They receive about one-tenth of a cent a pound for sifting tea. Men working in the mill and drying rooms earn about 10

cents in American currency a day. In these districts good household servants were reported to earn as high as 4 guilders (\$1.61) a week. Advances are common at certain seasons of the year, but it is not the policy of employers to keep their workmen permanently in debt. The laborers, through the Preanger district especially, appeared to be well fed and comfortably clothed. In fact on some plantations there was evidence of surplus wealth, manifested in what were from a native point of view expensive sarongs, belts, and turbans.

One of the most interesting upland occupations in Java has been created by government initiative. This is the cultivation of chincona trees and the gathering of their bark for quinine. In addition to private groves, more recently started, there are at present 8 government plantations, at altitudes ranging from 1,250 to 1,950 meters (4,101 to 6,398 feet). About one-half of the trees are at 1,560 meters (5,118 feet). The government owned 4,425,379 trees in 1902, of which 2,701,779 were transplanted and 1,723,600 were in the nurseries. The manager of a private chincona plantation stated that he paid his laborers daily, at the rate of 0.20 florin (8 cents) a day, all in money. About 10 of his employees were salaried hands, paid semimonthly, and these were advanced upon application store checks against their wages. The manager dealt so far as possible with his overseers, paying them a bonus of from \$0.40 to \$1.20 a month if their gangs did exceptionally good work, and fining them if the work of the men in their charge proved unsatisfactory. He seldom had any direct transactions with individual workmen. He marked personally the trees which he wished stripped, and paid at the rate of 0.06 florin (2.4 cents) for every 10 kilograms (22 pounds) of bark brought into headquarters. Land clearing and building were done by contract. The manager always paid contractors in the presence of their men, so that the latter saw the money transferred and had a chance to get their share upon the spot. No advances were paid except at Malay New Years, when the men in each gang were made jointly responsible for the sum advanced. If any man ran away after receiving his advance his fellow-workers had to make up the amount, and therefore, they were careful not to allow any irresponsible persons to enroll among their number. This manager stated that there was "very little" corporal punishment used in administering his plantation.

A quinine factory owned by a private corporation is in operation at Bandung, in the Preanger district, which produces about 50,000 kilograms (110,231 pounds) per annum. Planters are charged a uniform rate of \$2 per kilogram for manufacture, the factory making no effort to market its output directly, but leaving this to the planters themselves. All of the employees except those in supervisory capacities are natives. Foremen receive \$6 a month, and machine tenders 14 cents a day. Female packers are paid 6 and 8 cents a day, and ordinary laborers 8

to 10 cents. Mechanics, repairers, tinsmiths, and similar workmen receive from 20 cents to a maximum of 24 cents a day. One half-caste foreman is paid \$30 a month, and white superintendents receive \$40. The latter are usually retired noncommissioned officers, who have a small army pension in addition to their salaries. The natives work two 12-hour shifts and the whites 8 hours, for 6 days a week. There is no complaint that the native workmen are irregular; but it is difficult to get them to wear glasses and respirators in the bark-grinding room, and to take other precautions for their health. The factory has been in operation since 1897, and all the native workmen were trained in the place. The white staff of the factory expressed themselves as perfectly satisfied with native labor.

Cane raising affords the most wage employment of any agricultural industry in Java. Sugar cultivation was first initiated by the government under the system of forced culture, but has long since passed into private hands. Much of the land occupied by the plantations is leased from the natives, in accordance with the regulations previously described. The plantations are entirely in eastern and middle Java, and in the former districts the workers are Madurese. They are paid usually on a day-wage basis. But around Passoeroean, in the extreme east, cultivation contracts are used to some extent, and 2 of the 38 mills in that vicinity depend upon cane bought from local planters who are mostly natives. The custom of making a gang of men jointly responsible for all advances paid to its members is common. To a certain extent cheapness of labor is said to have discouraged the introduction of machinery, especially for loading cane. The proportion of Europeans to natives employed on the plantations is very small. On one plantation visited near Surabaya, where in the mill alone 120 men were employed, or 60 to the watch, there were only 7 whites, including the manager, upon the payrolls in both manufacturing and planting departments. Field hands are paid 8 cents a day without rations in east Java and get \$2.75 an acre for cutting. In the province of Kadoe, in middle Java, the rate was about the same, varying from 6 to 10 cents a day. In this district the more common method of paying for field labor is by the stint, but earnings average the sum just mentioned. Cane is stripped, but on the older plantations it is no longer possible to ratoon. Native overseers are employed almost exclusively for field supervision, though they are under the general direction of Europeans. One European to every 350 or 400 acres is considered sufficient, with a half-caste assistant during the busy season. Planting and cutting usually come together in Java.

The Madurese, who possess more typical Malay characteristics than the Javanese proper, give evidence of a lawless and probably revengeful disposition in their habit of burning the cane of planters against whom they have a grievance. Whether this is always a method of

silently remedying real abuses is not clear. In several cases where offenders have been detected and punished, it appeared that they were not employees of the plantation where the fire occurred, and were actuated by little else than love of mischief and excitement in their incendiary undertakings. These fires are on the increase. Those occurring in a single district rose from 29 in 1889 to 218 in 1899, and to 616 in 1903. Mills have never been burned in this manner. The laborers will strive to destroy new and soft cane, especially seedling crops, which they find difficult or disagreeable to strip.

European employees are generally well paid, especially in comparison with the low salaries of white workers in other occupations in Java. Some managers receive \$400 a month and 10 per cent of the net profits of the plantation. Head engineers are paid up to \$250 a month. In 1899 the average cost of making a short ton of sugar on 15 plantations in Java, including all expenses except those for new machinery, improvements, and new areas brought under cultivation, was \$29.70, and on one plantation in 1903 it was \$26 a short ton. For the plantations mentioned the former year dividends averaged 15 per cent. Possibly the cost of production is falling, on account of the growing competition for employment due to an increasing population, for wages are said to be decreasing throughout the sugar districts of Java. The following rates for the years 1883 and 1900 are from the books of a Tagal sugar plantation:

RATES OF WAGES OF EMPLOYEES ON A SUGAR PLANTATION, 1883 AND 1900.

Occupation.	1883.	1900.
Cane cutters	\$4. 12 an acre..	\$2. 75 an acre.
Centrifugal men	(a)	. 10 a day.
Defecating-pan men .....	. 10 a day ...	. 08 a day.
Drying-room men .....	. 10 a day ...	. 08 to \$0. 10 a day.
Field hands .....	. 10 a day ...	. 08 a day.
Filter-press men .....	. 10 a day ...	. 08 a day.
Firemen .....	. 12 a day ...	. 10 a day.
Mill hands (feeders) .....	. 12 a day ...	. 10 a day.

^a Piecework.

An experienced sugar engineer and plantation manager in eastern Java drew up the following estimated pay roll of an average plantation, with about 3,000 acres under cultivation and an annual product of 10,000 short tons per annum:

ESTIMATED PAY ROLL OF AN AVERAGE PLANTATION OF 3,000 ACRES.

Occupation.	Number employed.	Race.	Rate of compensation.
Managers	1	European	\$300. 00 per month. (a)
Bookkeepers	1	European	80. 00 per month.
Chemists	1	European	100. 00 per month. (b c)
Chemists, assistant	2	European	75. 00 per month.
Clerks, sugar	1	European	50. 00 per month.
Engineers, chief	1	European	160. 00 per month. (b)

^a With 10 per cent of net profits in addition.

^b With 1 per cent of net profits in addition.

^c On many plantations the chief engineer is also the chemist.

ESTIMATED PAY ROLL OF AN AVERAGE PLANTATION OF 3,000 ACRES—Concluded.

Occupation.	Number employed.	Race.	Rate of compensation.
Engineers, assistant.....	1	European.....	\$60.00 per month.
Foremen, night.....	2	European.....	45.00 per month.
Overseers.....	6	European.....	80.00 to \$100 per mo. (a)
Centrifugal men, chief.....	2	Native.....	.20 per day. (b)
Centrifugal men.....	58	Native.....	.10 per day.
Clarifier foremen.....	2	Native.....	.16 per day. (b)
Clarifier helpers.....	4	Native.....	.10 per day.
Field foremen.....	60	Native.....	.20 per day.
Field hands.....	5,000	Native.....	.08 per day.
Filter-press foremen.....	4	Native.....	.18 per day. (b)
Filter-press helpers.....	52	Native.....	.10 per day.
Firemen, chief.....	2	Native.....	.24 per day. (b)
Firemen.....	32	Native.....	.12 per day.
Lime burners, chief.....	2	Native.....	.16 per day.
Lime burners.....	20	Native.....	.12 per day. (b)
Limers, chief.....	2	Native.....	.13 per day. (b)
Limers.....	8	Native.....	.10 per day.
Mill feeders, chief.....	2	Native.....	.24 per day. (b)
Mill feeders.....	80	Native.....	.12 per day.
Overseers.....	15	Native.....	12.00 to \$24 per month.
Packers.....	100	Native.....	.08 per day.
Pump men.....	2	Native.....	.20 per day. (b)
Sugar boilers, chief.....	2	Native.....	.24 per day. (b)
Sugar boilers (triple effect).....	2	Native.....	.20 per day.
Sugar boilers, helpers.....	82	Native.....	.10 per day.
Tank foremen.....	2	Native.....	.13 per day. (b)
Tank men.....	16	Native.....	.10 per day.
Timekeepers.....	1	Native.....	15.00 per month.
Vacuum-pan men.....	15	Native.....	.10 per day. (b)

^a With 1 per cent of net profits in addition.

^b One foreman and gang for each 12-hour shift in the mill.

An average of about 12 per cent sugar is obtained from the cane of the better Javanese plantations, and the yield per acre is about 4.5 short tons. Fertilization and intensive cultivation are practiced, and attention is given to selected varieties and seedling cane. The ground rent for land leased from the natives has been referred to incidentally in the review of the land laws. In the vicinity of Surabaya it was estimated to average about \$12 an acre. The cost of cultivation is said to vary from \$25 to \$35 an acre.

UNSKILLED LABOR.

Most of the unskilled labor of Java, outside of agricultural occupations, is employed upon railways, roads, and other public works. The wages of road laborers vary widely according to locality, being very much higher in places where the population is sparse and workers have to be brought from other neighborhoods than in thickly settled districts. All common laborers in Java lack mobility, and it requires a comparatively large inducement to draw them even a short distance from their homes. In Bantam, in the extreme western part of Java, road foremen are paid \$6 a month, and the average wage of 4,850 road coolies was 10 cents a day. In the island of Madura, near Surabaya, in the eastern part of the colony, foremen are paid from \$4 to \$6 a month, salaried road workmen \$3 a month, and casual laborers 14 cents a day. In the province of Kadoe, in middle Java, the rate of pay for ordinary laborers ranges from 5 to 12 cents a day, about three-fourths of the laborers receiving 10 cents. On the other hand, in

some of the other Dutch possessions where population is sparse wages are higher. In Sumatra coolies are paid from 16 to 20 cents a day for road work, and European foremen receive from \$26 to \$30 a month. Upon a stone crusher in Bantam the foreman received 40 cents a day, the fireman the same amount, and common laborers 20 cents. The highest-paid employee was the engineer, who received \$1.97 a day. Where a new railway was under construction in middle Java the laborers were paid 8 cents a day. They were employed in making a fill at one point, carrying the earth 100 to 200 yards in baskets, and the cost of construction was probably as high as it would have been in the United States with the use of labor-saving machinery. Laborers regularly employed upon the government railways receive from \$1.20 to \$4.80 a month, according to experience and length of service, while shop laborers begin as helpers at 6 cents a day and may rise to a wage of 26 cents a day.

While there is very little mining in Java proper, Javanese coolies are employed in the government tin mines on Banca. In the privately owned Billiton tin mines coolies are employed on a 2-year contract at \$2 a month and rations the first year and \$3.60 a month and rations the second year. Workers not under contract receive food and \$2.80 a month in some instances.

TRANSPORTATION.

Java is well supplied with railways, and these have proved, upon the whole, profitable undertakings. Although on account of the greater density of population in that country no close parallel can be drawn between the results of railway development in Java and those likely to attend similar development in the Philippines, the experience of the former colony may throw some light upon the probable success or the reverse of projected enterprises in the latter islands. The railways of Java are partly government and partly private undertakings, while the steam tram lines or narrow-gauge railways are almost entirely private. The following table gives the latest statistics available to the close of 1902:

STATISTICS OF RAILWAYS AT THE END OF 1902.

	Railways.		Steam trams.
	Public.	Private.	
Miles of line.....	1, 074	162	a 1, 118
Cost per mile.....	\$49, 596. 21	\$62, 221. 22	\$13, 331. 83 to \$44, 042. 04
Cost of operating per mile.....	\$3, 172. 34	\$4, 922. 03	
Cost of operating per train mile.....	\$0. 586	\$1. 19	
Income per mile.....	\$4, 611. 10	\$9, 847. 92	a \$1, 931. 22
Income per train mile.....	\$0. 972	\$2. 388	
Passenger revenue.....	\$1, 750, 632. 40	\$383, 832. 80	\$1, 001, 134. 00
Freight revenue.....	\$2, 813, 244. 00	\$1, 148, 437. 60	a \$1, 091, 600. 00
Total revenue.....	\$4, 776, 886. 40	\$1, 596, 952. 40	
Per cent of net profits on capital.....	3. 58	7. 91	b 1. 2 to 13

a Approximate or incomplete returns.

b Of the 15 steam tram lines 8 paid dividends, and 3 of these 10 per cent or over, while 3 lines made no profit.

More than 97 per cent of the 13,000,000 passengers traveled third class at a rate of about two-thirds of a cent a mile. They contributed over 80 per cent to the total passenger revenue. Less than one-half of 1 per cent of the passengers traveled first class, paying about 3½ cents a mile. The government railways employ 1,167 Europeans and 1,198 natives in their permanent service. The hours of labor are 8 in the offices, 8½ in the shops, and 11 on the line, or 12 hours less meal time. Employees receiving more than \$6 a month are entitled to pensions after sufficient service. In case of Europeans this amounts to one-fourth of full pay after 20 years' service, and in case of natives to one-sixth of full pay after 20 years' service and one-fourth of full pay after 30 years' service. A few Chinese mechanics are employed in the Bandung shops in the Preanger district, but they are only engaged temporarily, pending the time when enough trained natives are available to fill the demand. The Javanese are said to make satisfactory locomotive engineers and trainmen. The trains do not run at night, however, but on the through trip from Batavia to Surabaya make a stop of about 9 hours at a station almost midway between the two cities.

The salary schedule for native employees upon the government railways is as follows:

SALARY SCHEDULE OF NATIVE EMPLOYEES UPON GOVERNMENT RAILWAYS.

Occupation.	Monthly salary.		Service increase.	
	Minimum.	Maximum.	Amount.	Period of years.
Clerks, administration.....	\$6.00	\$24.00	\$2.00	3
Clerks, station.....	8.00	24.00	2.00	2
Conductors (local trains).....	6.00	12.00	1.00	3
Brakemen.....	4.80	6.00	.60	3
Draftsmen, first class.....	18.00	30.00	2.00	3
Draftsmen, second class.....	10.00	20.00	2.00	3
Engineers, locomotive, first class.....	30.00	30.00	.....	.....
Engineers, locomotive, second class.....	25.00	25.00	.....	.....
Engineers, locomotive, third class.....	20.00	20.00	.....	.....
Firemen, locomotive, first class.....	12.00	16.00	2.00	3
Firemen, locomotive, second class.....	8.00	14.00	1.00	3
Firemen, locomotive, roundhouse.....	8.00	12.00	(a)	(a)
Firemen, steam pump.....	6.00	10.00	1.00	3
Foremen, car.....	10.00	20.00	2.00	3
Foremen, freight house.....	6.00	12.00	1.00	3
Foremen, general.....	4.00	12.00	1.00	3
Foremen, head.....	10.00	18.00	2.00	3
Foremen, line.....	8.00	20.00	2.00	3
Foremen, pilot.....	4.80	12.00	1.00	3
Foremen, plow.....	6.00	12.00	1.00	3
Foremen, storehouse.....	10.00	18.00	1.00	3
Foremen, yard.....	8.00	18.00	2.00	3
Inspectors, first class.....	30.00	30.00	.....	.....
Inspectors, second class.....	25.00	25.00	.....	.....
Inspectors, third class.....	20.00	20.00	.....	.....
Inspectors, way.....	4.80	7.20	.40	3
Laborers, pilot.....	1.20	4.80	.40	3
Laborers, plow.....	3.00	6.00	.40	3
Laborers, general.....	1.20	4.80	.40	3
Lamp men.....	3.20	6.00	.40	3
Messengers.....	4.00	6.00	.40	1
Porters.....	4.80	7.20	.40	3
Signalmen.....	3.20	4.80	.40	3
Station attendants.....	4.00	7.00	1.00	2
Telegraph operators.....	8.00	20.00	2.00	3
Trackmen.....	4.80	7.20	.40	3

a According to efficiency.

SALARY SCHEDULE OF NATIVE EMPLOYEES UPON GOVERNMENT RAILWAYS—Concluded.

Occupation.	Monthly salary.		Service increase.	
	Minimum.	Maximum.	Amount.	Period of years.
Train cryers	\$4.00	\$6.00	\$0.40	3
Watchmen, bridge.....	4.80	7.20	.40	3
Watchmen, crossing.....	6.00	12.00	1.00	3
Watchmen, crossing, assistant.....	4.80	7.20	.40	3
Watchmen, night.....	2.40	6.00	.40	3
Watchmen, switch.....	2.40	7.20	.40	3
Watchmen, tunnel.....	3.00	6.00	.40	3

DAILY WAGES OF SHOP EMPLOYEES OF GOVERNMENT RAILWAYS.

Occupation.	Daily wage, minimum. ^a	Daily wage, maximum.
Bench men	\$0.10	\$1.10
Blacksmiths .....	.12	1.30
Boiler makers .....	.08	1.10
Cabinetmakers.....	.10	.40
Carpenters .....	.16	.74
Coppersmiths .....	.16	1.04
Firemen .....	.12	.50
Fitters .....	.08	1.00
Instrument makers .....	.16	.32
Laborers .....	.06	.26
Molders .....	.08	1.10
Painters .....	.10	.48
Polishers .....	.10	.48
Turners (lathe men) .....	.14	1.40
Upholsters .....	.10	.76

^a The minimum wage is for apprentices, and the rate of pay is graded according to skill and efficiency rather than time of service.

The conductors on the through passenger trains are Europeans, and at some of the larger stations the ticket agents and other employees handling money are Chinese. The wages of shopmen are fairly representative of the wages of skilled native mechanics.

Upon the coasting steamers natives and Malays recruited from the port towns always form the major part of the crew. The wages in a representative instance were as follows: Master, \$20; engineer, \$24; quartermaster, \$8, and sailors \$4.80 a month, in addition to food, which was estimated as costing \$1.60 a month for ordinary hands.

SKILLED LABOR.

There are few skilled native mechanics in Java outside of the building trades and naval and railway shops. Much of the furniture locally manufactured is made by the Chinese, and the same race controls a large part of the boot and garment making trade. Ordinary construction is said to be cheaper than in Holland, though of course the expense of erecting a house or of carrying through any other building enterprise involving the use of materials or the application of a degree of technical skill not customary among the Javanese would be very great. A well-built frame plantation residence of six rooms, having a tile roof

and masonry foundation and very ample verandas, was reported to have cost \$1,400. There was no plumbing or heating and the interior was ceiled. Mechanics employed about public institutions are paid from \$4.80 to \$6 a month, according to experience and length of service. Masons engaged in rebuilding brickwork and setting boilers in a sugar mill were receiving 20 and 30 cents a day. The following table of wages for skilled and unskilled labor was obtained from official sources, and applies to the principal city and a representative country district of middle Java:

WAGES OF SKILLED AND UNSKILLED WORKINGMEN IN SAMARANG AND IN KADOE.

Occupation.	Samarang (urban and suburban).		Kadoe (rural).	
	Japanese.	Chinese.	Japanese.	Chinese.
Blacksmiths	\$0.20 to \$0.60	\$0.46	\$0.12 to \$0.30	\$0.80 to \$1.00
Bricklayers .....	.20 to .60	.18	.12 to .30	.80 to 1.00
Carpenters .....	.20 to .60	.14	.12 to .30	.80 to 1.00
Foremen, laborers .....	.10 to .14	.20		
Laborers, builders .....	.10 to .14		^a .04 to .10	
Laborers, general .....	.12	.24	.06 to .10	.12 to .20
Laborers, railway .....	.14 to .16		.10	
Sugar boilers .....		.26		.20 to .80
Sugar foremen .....		.80		.20 to .80

^a Apprentices.

A leading planter of this section said that the natives were gradually supplanting the Chinese as sugar boilers throughout middle Java, but no wages are quoted as showing this in the table. No explanation was afforded for certain discrepancies in these figures as for the higher wage of Chinese laborers in Samarang than of Chinese bricklayers and carpenters in the same city, and the fact that Chinese mechanics, as a rule, are better paid than natives in the country and yet receive a lower wage than the latter in Samarang. This may be because the Chinese reported from the country are almost exclusively skilled men employed about sugar mills, while those in Samarang work for contractors of their own race and receive lodging and food in addition to wages. Most Chinese mechanics in the building trades are said to work in cooperative companies similar to the "huis" in Hawaii and the butty gangs and artels of British and European workmen. This makes it difficult to ascertain their actual earnings. In a machine shop in Samarang the daily wage of native hands reaches a maximum of 60 cents a day, but the men are said to work irregularly. A number of discharged soldiers and other whites and half-castes do skilled manual labor in Java. One Luxemburg mechanic, who had worked for many years in a country town as a carpenter's foreman, was paid 80 cents a day, while the best native mechanics under him received half that amount. Builders' laborers in his gang received 10 and 12 cents a day. A newspaper advertisement was seen calling for a white mill engineer,

at a salary of \$60 a month, and a bookkeeper, who must understand English as well as Dutch, was offered, through the same paper, \$24 a month. The wages and salaries of white workers in Java are adjusted to a European rather than to a colonial or a New World basis. This is partly due to the moderate cost of living in Java compared with many other countries in the eastern tropics, and probably also because of the fact already indirectly referred to—that there are a number of civilian and army pensioners who are always glad to secure light employment in order to add to their scanty income. Many of these people make their home in Java by preference, or are held there by family ties contracted in the island.

Little or no factory production exists in Java outside of the manufacture of sugar, which has been already described. The following rates of pay of shop mechanics were taken from the pay roll of a private establishment in Surabaya. Only natives were employed, and the hours of labor were about the same as in government workshops. Double pay was given for night work.

RATES OF WAGES OF SHOP MECHANICS IN SURABAYA.

Occupation.	Number employed.	Daily wage.	Occupation.	Number employed.	Daily wage.
Boiler makers.....	1	\$0.40	Laborers.....	1	\$0.18
	1	.34		7	.16
	1	.30		1	.12
	2	.20	Molders.....	1	.46
Boiler makers' helpers.....	1	.12		1	.44
	1	.10		2	.36
Fitters.....	1	.46		1	.34
	2	.44		1	.32
	1	.40		2	.26
	1	.36		2	.24
	1	.34	Molders' helpers.....	4	.22
	2	.26		1	.20
	1	.24		2	.18
	2	.22		3	.16
Fitters' helpers.....	3	.20		1	.12
	1	.16	Pattern makers.....	2	.34
Foremen, boiler makers.....	1	.80		3	.32
Foremen, fitters.....	1	.80		1	.30
Foremen, molders.....	1	.80		5	.28
Foremen, pattern makers.....	1	.50		4	.26
Laborers.....	14	.20		2	.22

The natives employed in this shop are Madurese, and are reported to be satisfactory workmen. They work directly from drawings, without other white supervision than that casually given by the manager, and make castings up to 10 tons. The proprietor of this establishment said that the cost of manufacturing a triple-effect sugar pan or a large boiler was less than the expense of importing on account of the freight, though this would not be true of less bulky articles. German iron costs about \$40 a ton in Surabaya. No complaint was made, as in similar establishments in Samarang, of the irregularity of the workmen. In the Government naval yards of Surabaya about 4,000 native mechanics and laborers are said to be employed, but it was not practi-

cable to secure information as to conditions of employment in this branch of public service. However, wages are said to be about the same as in private machine shops.

STANDARD AND COST OF LIVING.

The remarkable growth of population in Java during the last century is often cited as an indication of the prosperity of the people. Within a hundred years the number of inhabitants increased from about 3,000,000 to nearly ten times that number without the assistance of immigration. The large excess of births over deaths is supposed to show a high degree of material well-being on the part of the natives, which in turn is often assumed to be an indirect blessing derived from the Dutch colonial administration. Had it not been for the maintenance of law and order and the freedom from excessive taxation and other forms of oppression accompanying the rule of Holland in the Indies the population would not have increased to the same extent, but Java is nevertheless a striking demonstration of the fallacy of any theory that traces an absolute relation between birth and death rates and the fluctuations of wages in relation to the cost of living. The rapidly multiplying Javanese—a nation where out of every 1,000 inhabitants 458 are under 15 years of age—are thus described by a Dutch official of the colony: "The Javanese are a race of paupers. It is only in very rare instances that the income of a native bears a favorable relation to his primary needs." The unsatisfactory economic condition of the people is even now the subject of a special investigation by the Government. The race is said to be deteriorating physically because of lack of food and lowered standard of living. The lack of progress which it shows is variously ascribed to the fatalism of the Mohammedan religion and to the peasant's own lack of energy and foresight. With the increasing population wages are said to be falling. On the other hand, each and all of these facts are disputed by people who are also familiar with Java. A planter of 30 years' experience in the Preanger district said, in speaking of that particular vicinity: "The labor cost of production, the cost of living for natives, and the income and standard of living of the natives are all increasing." Such economic depression as exists among the Javanese is probably more manifest in some regions than in others, but that the condition of the people is not wholly satisfactory is evidenced by the very fact that an active controversy has arisen over the question.

Wages for hired service may have been higher a hundred years ago than they are to-day and yet the condition of a majority of the people have been worse than it is at present, because the peasantry were at that time living to a great extent in quasi-servile relations and were

not free—or had no disposition—to avail themselves of opportunities for economic betterment. In 1746 the official rates of pay for laborers in Batavia were 3 stuivers (5 cents) an hour, or 12 stuivers (20 cents) for a full day.^(a) In the naval docks at Surabaya, in 1810, native foremen received one-half the wages of European foremen, or 15 stuivers (about 25 cents) a day, while 32 carpenters and 24 ironworkers employed received 1 “catty”—apparently about 1½ pounds—of rice and 1 stuiver a day. Laborers received from 8 to 12 stuivers (13 to 20 cents) a day. In the Preanger district the following year the official wages of carpenters were 12 stuivers (20 cents) and of laborers 8 stuivers (13 cents) a day. Unless the price of provisions was higher than at present, these rates of pay were better than those now prevailing. The wholesale price of white rice has recently ranged in Java from \$1.20 to \$3.20 a picul and of red rice from \$1 to \$3 a picul (133 pounds). At the prevailing retail prices, which are considerably higher, the day's wage of an average adult laborer in the country will buy something over 1½ kilograms (3.3 pounds) of rice, possibly 2 kilograms (4.4 pounds) in some places. This means about 4 pounds of rice a day, the proceeds of which do, of course, feed and clothe most native families. In the markets of middle Java a dish of rice and vegetables, served from the braziers to the native laborers, sometimes with a bit of fish or meat, sells for somewhat less than 1½ cents in American currency. The consumption of textiles and of other manufactured commodities must be very small in proportion to the population. This is evidenced by the export statistics and appears at once when the larger markets are visited. Cheap cotton sarongs, turbans, belts, and a few gaudy handkerchiefs constitute most of the goods displayed. The natives of middle Java dress almost exclusively in a coarse cotton fabric dyed with indigo. In some parts of the island there are household workers who print sarongs by a native process, producing curious and, according to native tastes, artistic designs. Footwear is not used by the laboring population outside of the larger towns, and then only to a limited extent.

While the cost of living is fairly uniform throughout Java, on account of the extremely simple needs of the natives, there is some local variation in the condition and manner of life of the working people. The Soudanese of the Preanger highland enjoy many advantages which they do not share with the dense population of central and coastal Java. Upon the lofty uplands of Tosari there dwells a race of mountaineer peasants, quite distinct from the plainsmen, who do not work willingly for wages, but cultivate industriously their own farms of fruits and vegetables and are said to have more comforts and a

^a The stuiver is worth 5 guilder cents, or about 2 cents in American currency. However, the copper guilder, in which wages were probably reckoned at that time, was at a discount of 16 to 18 per cent early in the last century.

higher standard of living than the natives in any other part of the island. As a rule, also, the mountain races appear to have more initiative and force of character than those of the Javanese lowlands. Probably the economic condition of the people is least satisfactory in the two sultanates of middle Java, where they have the burden of supporting the native court and an official caste, and possibly in the densely settled rice districts in the vicinity of Samarang. The sultans of Djokjokarta and Soerakarta are said to possess the right to two-fifths of the crop of their subjects and to one day's labor out of every six. These rights are subgranted to planters and lower officials. As the population of Java is Mohammedan, Sunday is not observed, and there are not more than five or six regular holidays in the course of the year.

The following list of provision prices is interesting for purposes of comparison with other countries, but it has little significance as indicating the cost of living of native laborers, for the commodities quoted are consumed by the more prosperous rather than by the working classes. It should also be borne in mind that the Javanese are almost exclusively village dwellers. Probably not over 1 per cent of the natives reside in urban centers. The following table shows the contract prices at which food was supplied to government institutions in the three chief cities of Java in 1902:

CONTRACT PRICES OF VARIOUS COMMODITIES SUPPLIED TO GOVERNMENT INSTITUTIONS IN BATAVIA, SAMARANG, AND SURABAYA.

Article.	Unit.	Batavia.	Samarang.	Surabaya.
Bananas	Each		\$0.001	\$0.002
Bread	Pound	\$0.055	α .02	.055
Beef, fresh	Pound .....	.13		
Ice	Pound .....		.01	.005
Kerosene	Quart. ....	.064	.053	.057
Milk, fresh	Quart. ....	.136	.075	.075
Potatoes	Pound .....	.04	.015	.013
Pork, fresh	Pound .....	.173		
Rice, white	Pound .....	.03	.018	.018
Sugar, white	Pound .....	.014	.018	.018
Tea	Pound .....	.28		

α Per loaf.

The usual hotel rates throughout Java are \$2 and \$2.40 a day, though there are many cheaper places, patronized by soldiers, the lower paid civil servants, and private employees, where the charges are not more than one-half that amount. Furnishing goods are nearly as cheap as in the United States. White duck suits made by a good tailor cost from \$2.50 to \$9, khaki drill suits from \$3.50 to \$5, and a serge suit costs about \$7.50. As the native merchants have no fixed prices, it is difficult to ascertain just what a person familiar with the country would be charged for articles. Probably the cost of living for a white family is not much higher than in Holland and is lower than in many parts of the United States. But most white residents, especially those occupying official positions, are required by custom

to maintain a more imposing style of living than at home, and therefore probably find their family expenditure greater. These facts have little bearing upon labor conditions, as Java affords no market for workers from Europe or America, and the laws of the country do not encourage industrial enterprises undertaken by foreigners.

EDUCATION.

Fair educational facilities exist for all the white population of Java, and a small proportion of the natives receive elementary instruction. The Dutch Government has not made any such effort for the universal education of its East Indian subjects as the Americans have made in the Philippines and Porto Rico. About four-tenths of 1 per cent of the native children of school age are said to receive instruction. This is usually given by native teachers and in their own language. The temple schools, conducted by the hadjis, may teach the elements of reading and writing to a larger number. There are probably about 7,000,000 Javanese children of school age. According to official statistics the primary schools for natives had the following enrollment the last two years reported:

ENROLLMENT IN PRIMARY SCHOOLS, 1901 AND 1902.

	Public.		Private.		Total.	
	1901.	1902.	1901.	1902.	1901.	1902.
Number of schools.....	254	265	282	326	536	591
Pupils registered.....	47,911	50,734	30,864	35,098	78,775	85,832
Pupils attending.....	(a)	33,320	(a)	20,591	(a)	53,911

a Not reported.

The cost of primary instruction for natives the latter year reported was \$730,430, of which about \$60,000 was derived from fees and similar sources. A number of scientific books and literary works have been translated into the native dialects and published by the colonial government. These are supplied at cost to persons desiring them. Besides the primary schools there are several subsidized trade and technical schools, and three normal schools for native teachers, which had in 1902 a total enrollment of 121, and 21 graduates. The trade school at Surabaya had 265 matriculated and 19 visiting pupils, of whom 182 were following mechanical courses and 102 agricultural branches. The salaries of native teachers are as follows:

MINIMUM AND MAXIMUM MONTHLY SALARIES OF NATIVE TEACHERS.

	Monthly salary.		Service increase.	
	Minimum.	Maximum.	Amount.	Period of years.
Head masters, normal graduates.....	\$20.00	\$36.00	\$4.00	3
Head masters, not normal graduates.....	14.00	18.00	2.00	5
Assistants, first-grade schools.....	12.00	20.00	4.00	3
Assistants, normal graduates.....	10.00	18.00	2.00	3
Assistants, not normal graduates.....	8.00	12.00	2.00	5
Normal students.....	4.80	6.00	1.20	3

A college preparatory school and a school for native physicians and hospital assistants are conducted at Weltevreden, near Batavia. All the natives trained for the professions, including teaching, come from the upper class of the people, and are divided by the same wide gulf from the laboring population that separates the "ilustrados" from the "taos" in the Philippines.

Even the comparatively modest programme of the Dutch Government for the education of the natives under its control does not find universal favor with the authorities, and those who indorse this programme or would extend it criticise the present methods. One writer says:

Too much attention is given to developing the intellectual and too little to developing the character and the moral principles of the child. The native pupil is regarded too much as a Caucasian with a brown skin, with little or no heed to what the psychology of the race tells us.

If this criticism is well grounded, how many well-meaning errors our American teachers are committing in the Philippines.

During 1902 the cost of schools for the white children of Java was \$1,086,313, of which \$127,133 was derived from fees. There were 9,900 male pupils and 6,687 female pupils enrolled at the end of the year, of whom 7,810 paid fees and 8,777 received tuition entirely at the expense of the State. Among these pupils were 2,494 Chinese and high-caste native children, who were admitted to the white schools as a special privilege or in consideration of fees.

ACCUMULATION.

The private savings banks of Java have 8,895 depositors, of whom but 247 are natives and 243 other Orientals. But the government conducts a postal savings bank—an institution that appears to be of special importance in an eastern colony. The timid natives, who have few enough inducements to save money or to practice other forms of thrift in any case, naturally distrust private institutions. During 1902 the deposits in this institution were \$925,822, and the withdrawals \$866,011, leaving a net increase of deposits of \$59,811, although the year was a disastrous one for many parts of Java on account of the partial failure of the rice harvest. The depositors were as follows:

DEPOSITORS IN POSTAL SAVINGS BANK.

	Men.	Women.	Children.	Associa- tions.	Total.
Europeans.....	9,473	2,913	5,008	268	17,662
Natives.....	9,565	846	1,078	8	11,497
Other Orientals.....	714	96	111	6	927
Total.....	19,752	3,855	6,197	282	30,086

Of the native depositors, 2,571 were soldiers, 2,391 were village headmen, 1,994 were other officials or civil servants, and somewhat

over 1,600 were working people. The amount of the deposits was less than 1 guilder (40 cents) in 2,142 cases; 5,625 natives had between 40 cents and \$4 in the bank, 3,046 had between \$4 and \$40, and 35 had more than \$480. The remarkable preference shown by the natives of Java for a government savings bank, conveys a suggestion to our administrators in the Philippines, where an institution similar to that in the Netherlands Indies might well become a valuable instrumentality for encouraging thrift, and, through the habit of saving, of adding to the persistency in labor and the industrial efficiency of the people. In the same way that the absence of an attractive display of wares deprives money of value for the rural laborer of the Philippines, because that instrument of exchange can not perform the function which gives it worth where purchasable commodities are absent, so likewise, an incentive to accumulation is absent where there is no ready depository for savings. The advantage of investment can not be taught where the opportunity for investment is absent.

CONCLUSION.

The Javanese are perhaps the best example of an oriental nation that has been ruled for several generations by a European power without any untoward circumstances to modify the effect of scientific and for the most part conscientious and disinterested administration upon the social and economic life of the people. The resources of modern invention have been at the call of the rulers, and the conveniences of occidental civilization have long been installed wherever they would be of service to the public. The country has not been subjected to the drain of foreign or internal war. Great natural disasters have seldom afflicted it. Efficient sanitation and medical supervision have checked the ravages of plagues and epidemics. The rate of mortality among the European troops in the Indies is but 15.1 per 1,000, or hardly more than in Europe itself. The white population has been at home in the country so long that it has placed its impress upon architecture, commerce, and social customs, and has built up a life of its own in the colony. For a generation Java has been ruled philanthropically, with the welfare of the native population the first and chief object in the eyes of its administrators. Quite opposite—and perhaps equally true—judgments might be formed as to the success that has attended this effort to guide the destinies of a dependent nation.

The Americans and the Dutch follow almost diametrically opposite policies of colonial administration. The latter discourage any attempt to Europeanize the natives. The Javanese are regarded as a people placed by nature in a state of permanent childhood. Their primitive institutions, their relations of caste or class, the rank and privilege of native rulers, even the manner of dress and habits of living of the common people, are sedulously guarded. A Javanese planter said to

the writer: "I think you Americans make a mistake in encouraging the Filipinos to wear European clothing." Little attention is paid to formal education, and such instruction as is afforded by the State is given with the purely utilitarian object of creating a corps of educated native civil servants and administrators. In other words, Holland has endeavored to confine her influence upon Java to purely material things. She has given the people roads and bridges, peace, and justly administered civil laws. She has placed within their reach the opportunity of developing a native culture and of striving after ideal attainments, if they were disposed to seek these things, but she has left such a direction of national endeavor entirely to native initiative. Religious proselyting has been discouraged, if not forbidden. The spiritual life of the people, such as it is, has not been affected by the contact of European thought. Holland has refrained from exercising any positive influence upon the life and culture of the Javanese.

The result has been an almost purely material one. Protected in their sole voluntary activity of obtaining food, the Javanese have eaten and reproduced. Java has been a breeding place for human beings, no individual of whom rose appreciably above his fellows or his progenitors. The result of a century of colonial administration is that there are now 29,000,000 people where a hundred years ago there were 3,000,000, all of them, so far as can be discovered, just like their ancestors. Among the 29,000,000 is not a single person whose name is known to the world, or whose life has contributed anything of importance to the history of the human race.

This fact should not be regarded as necessarily an indictment of the colonial policy pursued by Holland, but rather as possibly a demonstration of a sociological law. In certain latitudes and among certain races the only attainable progress, if such it can be called, may be purely physiological. The absence of spontaneous culture in Java may indicate that an imposed European culture would never fructify into a thing of value, but it is possible, on the other hand, that there is something in the conditions created by colonial government that checks the higher activities of the dependent people, and that the application of the theory that they are children to the methods of their control keeps the natives in a state of mental pupilage. This is a possibility that deserves serious consideration from those who regard the duty of western nations toward the people of the tropic Orient from the Dutch point of view.

There are indications that the policy of regarding exclusively the material welfare of the Javanese may defeat its own end by causing the overpopulation of the island and through competition lowering still further the standard of living. Such, at least, is the fear of some officials at the present time. The margin between the annual production and consumption of food always remains near the danger line,

and a recognition of this fact is said to have influenced the government to make the recent tentative modifications in its policy as to the exportation of coolies to foreign possessions. It is certain that without some radical modification in their existing economic condition the progress of the Javanese race in civilization must remain at a standstill.

Americans have inaugurated a policy with reference to the Philippines almost opposite to that of the Dutch in Java, and one that is much more of an untried experiment, because it differs greatly not only from that of Holland but from that of all other European nations holding possessions in the Orient. We are seeking first of all to impose our political system and our own culture upon the people with whom we have to deal. We have opened public schools under American teachers and placed the ballot in the hands of the natives. Within a century the consistent application of this policy will certainly have some more beneficent result than a mere increase of population and extension of orderly material development. It is rather peculiar that we, reputed to be a nation of materialists—of machine makers and money getters—should have espoused an idealistic theory of governing dependencies with such fervor and conviction. Doubtless we are destined to suffer many disillusionings, and we may modify our policy in detail with broader experience, but we can hardly change it radically, because it is dictated by the will of the whole nation, which pursues its outlined course without regard to temporary defeats. However, in considering the other way of governing a dependent nation—the method that has certainly attained up to the present its primary object of public order and security, and material development—we are in duty bound to study its effect upon the economic condition of the people governed.

Cuba and the Philippines are supposed to have been notoriously ill-governed, and both have recently suffered all the evils of protracted warfare. But the former island produces nearly twenty times as much exported wealth per capita as Java, and its net production is much greater than that of the East Indian island. The standard of living and the general welfare of the people of Cuba are naturally higher than those of the Javanese. In comparison with the Philippines, considerable allowance needs to be made for the diversity of conditions obtaining in different parts of the archipelago. But taking equally settled and developed districts, for instance, the country along the Manila-Dagupan Railway in Luzon and that along the central railway of Java, there is little to choose in the apparent condition of the people in either island. The standard of living of the Filipino is probably somewhat higher than that of the Javanese. He was, even in Spanish times, better educated. Almost everywhere in the Philippines the wages of field laborers are nominally higher than in Java, but the prevalence of peonage and of peculiar forms of tenancy makes it difficult

to estimate just how closely the nominal wage corresponds with the average real earnings of laborers in the former country. But the pay of skilled mechanics, and their real wages in proportion to the cost of living, are higher in the Philippines, and it seems fair to assume that the same might prove true if an exact comparison could be made of the average wage of rural workers. There is also a greater diversity of industry and variety of occupations in the Philippines, and domestic weaving and other household handicrafts afford a gradation of skill and forms of labor that does not exist to the same extent in Java. When we confine the comparison of material welfare in these two islands to individual natives, therefore, the result is, to say the least, not more than negative, with a probability that the Filipino "tao" enjoys a somewhat higher degree of well-being than the Javanese *dessaman*.

In the matter of wages and standard of living the peasants of Java seem to stand upon about the same plane as the coolies of some of the more densely populated portions of British India, and they are hardly so well off as the the farm laborers of southern China. A Chinese merchant in Hongkong stated that upon his farms in China he was paying laborers "3 taels and chow" a month, which at the rate of exchange then prevailing amounted to about 5 cents a day in American currency besides board. The Javanese rural worker can not save clear this amount after paying for food. Probably the hours of work average longer in China than in Java, and the Chinese worker doubtless accomplishes much more in a day than the Javanese. In the Straits Settlements, to which there is at present some movement of Javanese coolies, the wages on sugar estates are 20 cents silver and food, besides medical attendance. This money wage is equivalent to 9 or 10 cents in American currency. Upon railway construction and public works 5 cents more a day is paid. In Ceylon estate coolies earn about 40 rupee cents, or over 6 annas a day, which is the equivalent of about 16 cents in American currency. The wages paid in some parts of northern India, where the population is 600 to the square mile, are about one-half the amount just mentioned, or 3 annas a day. In Burmah, on the other hand, railway laborers earn half a rupee, or some 20 cents in American currency, a day. On account of the fluctuation of silver exchange these gold equivalents are only approximate. Evidently the economic condition of the Japanese peasant, whose daily wage ranges from 8 cents on sugar plantations to 10 cents for road work, is little if any better than that of the poorest paid workers of India and China. But Java has not been afflicted with famine or plague, or similar special occasions of distress, as have the other countries mentioned. This advantage is partly due to climatic and geographical causes, especially to the fact that Java is an insular country in the track of the monsoons, but it is also to be credited in part to wise government. How-

ever, the conditions that create our admiration for Dutch colonial administration—and such admiration can not be refused by the visitor who really knows Java—are chiefly those that through their superficial or obvious character appeal directly to the European or American, not those that reside in the profounder depths of native society. They are manifested in substantial and well-maintained public works, in fields so carefully tilled that they almost tell the story of the intense struggle of the teeming population for food, and in the comforts and conveniences of occidental civilization everywhere within one's beck and call.

Holland is a small country with a surplus population, where opportunities for self-advancement do not abound. The number of well-educated young men of good antecedents who are willing to make a life career of public service in the colonies is very large. Holland can, therefore, command a better supply of men for her colonial administration than can the United States for similar positions in the Philippines, because in the latter country ability is better rewarded at home than it can be elsewhere. In traveling in Java and coming in contact with public officials in that country, one is impressed with the high standard of intelligence, ability, and gentlemanly conduct prevailing throughout the colonial service. Holland has one wise provision in her colonial laws. This is the prohibition which prevents European officials from becoming interested financially, in person or through their relatives, in agricultural or other business enterprises or speculative undertakings in the colony.

The colonial government of Java is interested in several industries from which it derives revenue. In 1902 the authorities of the Netherlands Indies sold 12,457,830 pounds of coffee, from which the net receipts were \$1,214,585, and 830,359 pounds of chincona bark, from which the net receipts were \$116,944. The latter was from plantations conducted directly by the government. The most profitable source of revenue, however, is the tin mines of Banca, an island north of Sumatra and not a part of Java. From these mines 33,769,960 pounds of tin were exported the year in question, affording the government a net revenue of \$8,330,330.

The Javanese are charged by white employers with all the sins of industrial remissness that are anywhere imputed to a tropical race. They are said to be thriftless, lazy, and unambitious. One planter said: "The Javanese have no moral sense of laziness. For them there is no such vice. They consider it perfectly proper not to work so long as they have enough to eat and wear." At the Malay New Year all servants and employees usually receive an advance of a month's wages, which they spend in two or three days. It sometimes takes them the whole following year to work off this debt. When the peasant has gathered his rice harvest he sits idling until it is eaten, and

then seeks work as a common laborer at any wage that offers. The East Javanese or Madurese are said to be somewhat more thrifty and to work regularly for a money wage. Possibly this is a result of industrial discipline alone, as Surabaya and the sugar country adjacent have long been the seat of employing industries. If this is so, and if the superior thrift and persistency as workers reported of these laborers is not a product of race differences, the fact would seem to show that the industrial vices of the Javanese may be corrected to some extent by training and the habit of regular employment. Europeans familiar with Java say that it will be difficult to create new wants and through them new ambitions among the natives. One instance was cited of a Javanese who was worth \$60,000, who rented to white tenants several fine residences, but himself was content to live in a hovel. The complaint often heard in the Philippines that the natives do not know the value of money, and therefore that it does not constitute for them an inducement to labor, is equally common in Java.

Nevertheless, the dense population of the colony prevents any serious dearth of labor, though planters sometimes complain of a shortage during the season of the rice harvest. A number of interviews with Javanese employers were quoted in a report upon labor conditions in the Philippines, all indicating the importance that is attached to tactful administration of labor by the Dutch. Sometimes, even in Java, new plantations are opened or railways and other public works are constructed in districts where the population is sparse and labor has to be imported. It is then that the Dutchman's mastery of native sociology reveals itself. He does not attempt to do violence to the communal instincts of the peasants and to treat them as he would a gang of Italians or Chinese. In the new locality he reconstructs so far as possible the physical surroundings of a Javanese village. He uses the same policy that the manager of a zoological garden might in accustoming new visitors from the wilds to their future home. If the population is to be permanent, as in case of a plantation opened in the wilderness, the *dessa* organization soon begins to take root, and a local labor supply is rapidly created. Homesick laborers are allowed to return to their villages, rather than compelled to remain to affect the whole body of workmen with their nostalgia. Usually these men eventually return, often bringing their families and settling in the vicinity of their work.

The Javanese have an art and a romantic or heroic literature, though neither appears to possess much culture value. In the courts of the sultans there is an exceedingly deliberate and elaborate ceremonial, part of the grotesquely artificial life of an earlier day. Upon the whole what little of these concrete evidences of higher activity is reported to the traveler, or can be observed by him during a visit to the island, bears out the statement of the Dutch rulers that the

Javanese are a race with immature mental and moral endowments. . A couple of hours in the Batavia museum, where there is a large collection of wooden models, illustrating the use of a great number of machines of execution and torture, throws a sidelight upon the generations of cruelty and oppression that made the Javanese one of the most docile races in the world. This people might be described as a nation of obedient children.

Java, then, is under one aspect a materially progressive country. The value of its public works and of its fields and plantations is increasing. Under another aspect it is a materially stationary country. The standard of living and physical well-being of the masses has not risen and wages appear to be falling. From a social and intellectual point of view it is a stagnant country, without a vigorous native culture and deprived of the possible inspiration of contact with occidental thought and science. As one drives through this land, populated with crouching peasants, transplanting rice by hand in the mud of overflowed paddy fields, or threads the narrow streets of palm-hut villages teeming with lively children and lethargic adults, or pushes his way through the crowded markets, where thousands haggle over a handful of rice or a bunch of field herbs, and round out a day with a few cents' worth of sales or purchases, he sometimes asks himself the question: For what end? Is the welfare of the race or any other sane end furthered by the mere process of multiplying human lives? Ought conditions in Java to be what they are? Most growing races sooner or later make some contribution to the civilization, or the art, or the thought of the world. It seems hardly normal that the 29,000,000 people of Java should have done nothing. If the Dutch have failed anywhere, it has been through introducing a regimen that stultifies the intellectuality of the people under them. But it would be a hasty conclusion to attribute this result to government and to the policy of rulers. It may be a quality of the people themselves. All that can be said positively is that the policy of consulting only the material interests of a dependent race fails. The Javanese worker profits little by the well-ordered government under which he lives, because his interests have not risen above food, shelter, and the satisfaction of physical wants. The door to higher things has not been opened for him. No ambition spurs him to additional effort. His standard of living remains stationary, or even retrogrades with the increasing pressure of a growing population. Whatever the real cause, the elements of economic and social progress are lacking in Java.

In this respect the condition of the Philippines appears at present to be more hopeful. The people have national aspirations and the desire for culture. They possess more or less initiative in seeking ideal ends. If wisely directed these impulses will react upon their economic condition and establish a progressive movement in wages and labor efficiency.

THE NEW RUSSIAN WORKINGMEN'S COMPENSATION ACT.^(a)

BY I. M. RUBINOW.

The new Russian workingmen's compensation act, promulgated on June 2 (15), 1903, and effective since January 1 (14), 1904, is acknowledged by the Russian press to be the most important act of labor legislation since 1897, when a normal working day was established. Prior to this the workingman's right to compensation in case of accidents was based upon the civil law and necessitated litigation and proof of the employer's negligence. The laborer had neither the means nor the proper intelligence for such litigation, and a settlement for a ridiculously small sum was the usual way even in case of the severest injuries. There was special legislation to provide for compensation of miners.

The new law embraces in its provision the wageworkers of all the large manufacturing, metallurgical, and mining establishments; all employees, whether actual workers or supervisors and foremen, are included, provided their salary does not exceed 1,500 rubles (\$772.50) a year. The proprietor of the establishment must compensate his employees for any disability resulting from accidents (occurring while at work) which has lasted more than three days, unless purpose or gross negligence on the part of the person injured can be proved. Subletting the work to contractors does not relieve the proprietor of the establishment from the responsibility. Agreements between the employer and employee, waiving the right to a compensation under this act, are not legal and do not deprive the employee of his rights.

The act distinguishes between two kinds of relief—a compensation and a pension. The first is given for temporary and the latter for permanent disability. The temporary compensation is calculated on a basis of 50 per cent of the actual earnings for the time of disability; a pension equal to two-thirds of the average annual earnings is granted in case of total and permanent disability. Where the disability, though permanent, is not total—i. e., does not completely destroy, but only diminishes, the earning capacity of the workingman—only a proportionate share of the two-thirds of the average earnings must be

^aThe Government has recently had under consideration to replace this law a system of State insurance of workingmen against accidents, to form part of a general system of insurance against sickness, accidents, old age and invalidity, and death not caused by accidents.

paid. The compensation is to be paid from the day of the injury till the day of either a complete cure or of cessation of medical treatment, when the injury may be declared a permanent one. From that day the pension dates. If the pension is larger than the compensation, the difference for the time elapsed is to be paid to the person injured in a lump sum.

If the person injured is a child (12 to 15 years of age) or a youth (15 to 17 years), the amount of payment is calculated on the basis of actual earnings; but with the growth of a child into a youth or the youth into an adult the rate of compensation or pension is increased correspondingly with the rise of wages of unskilled labor for the various age periods. In addition to all payments the employer must compensate the workingman for actual expenses of medical attendance till the cure or cessation of treatment, unless the workingman has been receiving this medical aid from the employer, i. e., in the factory hospital.

In case of fatal accidents (whether death results immediately or within two years after the accident, as long as it is shown to have been caused by the accident) a special allowance of 30 rubles (\$15.45) for an adult, or 15 rubles (\$7.73) for a minor, is made by the employer for funeral expenses, and a pension is to be paid to the widow or heirs of the deceased wageworker according to the following scale: The widow, as long as she remains single, is entitled to one-third of the annual earnings of the deceased husband; children, whether legitimate, legitimized, illegitimate, or adopted, shall receive one-sixth each of the earnings of the deceased parent, in case the other parent remains alive, or one-fourth each if they are left with neither father nor mother, up to 15 years of age; where parents or grandparents were dependent upon the earnings of the person fatally injured, they are each entitled to one-sixth of the annual earnings; the same provision is made for youthful brothers and sisters, who have neither father nor mother, until they reach the age of 15; provided, however, that the total amount of pension must not exceed two-thirds of the annual earnings. If the total of the pensions exceeds two-thirds of the annual salary of the deceased, the wife and children are entitled to receive the total indemnity provided for them in the law. If anything remains after the wife and children receive their proportions, it is divided equally among the other beneficiaries. If the maximum fixed is exceeded by the total of the pensions coming to the wife and children, these pensions are reduced proportionately. Where both parents lose their lives as a result of accidents, there is nothing to interfere with the children receiving a double pension. If the widow marries again, she forfeits her rights to the pension, but is entitled to the payment of a sum three times as large as her annual pension as a final settlement.

As the amount of the compensation or pension depends upon the earnings of the injured workingman, the method of determination of

these earnings is of utmost importance to the efficacy of the law. The following method is prescribed by the act: The actual earnings of the person injured, as determined by the books of the concern, for the year preceding the day of accident are divided by the number of days of actual employment, and the quotient is multiplied by 260 (the average number of working days in a Russian factory) for establishments which are in operation the entire year. In establishments operated normally only through a part of the year, the computation of the annual earnings is made by allowing the average daily earnings for the possible number of working days during the period of operation, and for the difference between 260 and that number the average daily wages for unskilled labor in that locality. Where payment in kind (food and lodgings) constitutes a part of wages, 20 per cent of the money wages is added for lodgings in addition to the actual cost of the food supplied. Where the labor contract does not include any money wages (minors, apprentices, etc.), the calculation is made on the basis of the average local wages for unskilled labor, which are determined every 3 years by the local factory inspectors, for the various age periods, namely, children (12 to 15 years), youths (15 to 17 years), and adults (over 17 years).

By a very important provision the yearly payments of pension may be replaced by a single payment of a sum equal to ten times the amount of pension, if both sides agree.

The following method of determining the degree of injury and amount of compensation or pension due is outlined in the law: The police and factory inspectors must be notified of every accident without delay. Record is taken of every accident by the police, and evidence furnished by the employer or his representative and the injured person, if he be alive. A medical opinion is required as to the extent of the injury and disability. The physician must primarily testify as to the accident within the first four days after its occurrence. The termination of disability, the establishment of permanency of the disability, its degree, the termination of medical treatment, the dependence of a subsequent death upon the injury—all these facts must be set forth in the medical certificate. Either party has the right to the services of the police or municipal physician. In cases of failure to supply the necessary information or to keep required records of the accidents, the employer is fined 25 to 100 rubles (\$12.88 to \$51.50) for each offense.

Each agreement as to the amount of compensation or pension is drawn up in form of a contract and approved by the factory inspector, who has the right to withhold his approval if he finds it does not conform to this act. It is also the duty of the factory inspector to give the necessary explanations as to the provisions of the act, and enlighten the

injured workingman or his relatives as to their rights in the matter. Evidence must be furnished to the factory inspector by either side, if demanded, for the elucidation of their rights. If, however, the two sides do not come to an agreement, the factory inspector draws up the "protocol" containing the facts relating to the accident, and his conclusion as to the amount of lawfully due compensation, and the injured person may proceed to collect damages by suit according to existing legislation. Such appeals to the courts are discouraged, however, by the provision of the new law, denying the right to collect costs (1) if the case is carried to the court without presenting it to the factory inspector, or before the final protocol has been issued by the inspector, and (2) if the compensation granted by the court does not exceed the amount offered by the defendant. Guardians must be appointed to represent the interests of minors. Any private agreement, if not certified to by the proper authorities, does not destroy the right to demand compensation according to the provisions of this act.

The compensation in cases of temporary disability must be paid at the same intervals as wages are paid. Pensions for permanent disability must be paid monthly. Every six months evidence must be furnished by the beneficiary of his being alive; in case of a widow also evidence of not having married again. For delay in payment of pensions, interest is added to the amount due at the rate of 1 per cent per month. A new medical examination may be demanded every three years by either of the parties to the contract to determine if any changes have taken place in the degree of permanent disability.

The individual employer or the corporation is responsible for all the payments under this act, but reinsurance in any of the authorized Russian insurance companies is permitted, and this reinsurance transfers the responsibility from the employer to the company, which latter must be sued in cases of disagreement.

The act further provides for cases of voluntary or forced liquidation of private enterprises. When a private enterprise intends to wind up its affairs, the payment of all the compensations and pensions must be guaranteed either by reinsurance, or payment of the amounts due into some Government banking establishment. In cases of bankruptcy, the claims under this act constitute a preferred claim upon the assets.

Only the essential provisions of this act have been here indicated. The new law has been acknowledged by the Russian press to be vastly superior to previous legislation. At the same time many shortcomings of the law are pointed out. First, it applies to factory and mining workers only, i. e., does not include either agricultural wageworkers or employees in transportation or commerce. Moreover, the Russian law draws a distinction between workingmen in "factories" and in small industrial establishments (domestic, etc.), while neither term

is very accurately defined. As a result many industrial workers are also excluded from the protection of this law. The adjustment of claims is practically intrusted to factory inspectors or other official bodies, whose power may not always be wielded in favor of the workingmen, yet the desire to avoid litigation will force the workingman to accept any terms the proper authority recommends. The most serious objection is the insecurity of the payment, as the employer's financial standing may be uncertain and failures are frequent. The most important Russian organ, *Russkya Wedomosti*, therefore insists that the new law, though much better than the old law, is yet much inferior to a well-regulated system of State insurance.

The very first months of the action of the new law seem to indicate, however, that the compensation act will approach a system of insurance, though private. The manufacturers in Moscow, Lodz, and other industrial centers are reinsuring their workingmen in the authorized insurance companies in order to free themselves from the responsibility, others are organizing mutual insurance funds for the separate trades. In this manner trade liability is being substituted for individual liability.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

CONNECTICUT.

Nineteenth Annual Report of the Bureau of Labor Statistics for the year ending November 30, 1903. Wm. H. Scoville, Commissioner. 489 pp; Appendix, 67 pp.

The subjects considered in this report are as follows: New factory construction, 27 pages; statistics of manufactures, 149 pages; description of manufactories, 162 pages; labor organizations, 23 pages; strikes and lockouts, 90 pages; free public employment bureaus, 14 pages; labor laws, 61 pages.

NEW FACTORY CONSTRUCTION.—Under this head is given a list of buildings and additions erected during the year ending July 1, 1903, to be used for manufacturing purposes. Location, material, dimensions, and cost of construction are given for each new structure; also increase in the number of employees caused by building. In 40 towns of the State 101 manufacturing establishments reported having constructed 185 new buildings and additions to existing structures, at a total cost of \$2,367,214. The additional number of employees provided for by 45 of the 101 establishments was 3,628.

STATISTICS OF MANUFACTURES.—This part of the report consists chiefly of three tables showing, by industries for 860 establishments, the number of employees, number of days in operation, total wages paid, average annual and daily earnings, value of products, percentage of labor cost of value of products, and percentage of other expenses and profits. These items are reported for the years 1902 and 1903, and, except for the last two items, there is given the percentage of increase or decrease for the latter year. Summaries and analytical text are also given. A summary of the more important data for the fiscal year 1903 is presented in the table following.

STATISTICS OF MANUFACTURES FOR THE FISCAL YEAR 1903.

[The figures in the columns for average number employed, average days in operation, amount paid in wages, and gross value of product do not in each case represent the full number of establishments shown for the various industries, but only those reporting as to the individual items. The average annual earnings are based upon the average number employed and the wages paid in those establishments only which reported these items in 1902 as well as in 1903.]

Industries.	Estab-lish-ments.	Average persons em-ployed.	Average days in opera-tion.	Average annual earnings per em-ployee.	Amount paid in wages.	Gross value of product.
Brass and brass goods.....	90	25,323	305.5	\$514.51	\$13,049,349	\$63,161,559
Carriages and carriage parts.....	17	592	300.3	709.90	401,289	1,072,371
Corsets.....	12	5,070	293.4	308.23	1,607,045	5,457,488
Cotton goods.....	36	6,824	299.6	345.64	2,416,204	10,945,304
Cotton mills.....	26	7,862	296.3	366.39	2,884,677	9,308,599
Cutlery and tools.....	47	3,411	297.7	522.42	1,717,707	3,849,674
General hardware.....	48	13,636	301.1	473.63	6,497,344	17,504,950
Hats and caps.....	24	2,694	286.9	498.70	1,353,112	4,708,192
Hosiery and knit goods.....	15	3,163	290.9	356.38	1,111,129	4,401,723
Iron and iron foundries.....	52	7,508	300.9	521.64	3,923,655	11,104,062
Leather goods.....	10	443	301.6	500.38	221,663	1,321,517
Machine shops.....	97	11,973	302.2	578.52	6,899,847	16,157,762
Musical instruments and parts.....	12	1,544	300.4	567.70	876,526	3,534,038
Paper and paper goods.....	63	3,196	302.7	385.63	1,233,576	5,603,112
Rubber goods.....	16	5,961	294.2	463.23	2,759,869	18,967,505
Silk goods.....	32	6,721	299.7	400.98	2,686,563	10,755,146
Silver and plated ware.....	29	3,863	292.5	526.44	2,024,433	7,596,616
Wire and wire goods.....	21	1,527	283.6	456.30	684,692	3,292,978
Wood working.....	28	1,192	294.8	495.12	575,959	1,612,403
Woolens and woolen mills.....	61	7,293	293.3	407.90	2,973,585	14,605,158
Miscellaneous.....	124	8,534	294.7	478.25	3,981,157	12,077,024
Total.....	860	123,335	299.5	468.99	59,884,391	227,037,181

The manufacture of carriages and carriage parts shows the highest average annual earnings per employee, viz, \$709.90, while the manufacture of corsets, on the other hand, shows the lowest, or \$308.23.

Statistics of identical establishments for 1902 and 1903 show the following comparisons: For average persons employed, 1903 shows an increase over 1902 of 8 per cent; for average days in operation, 1903 shows an increase over 1902 of 0.4 per cent; for average annual earnings per employee, 1903 shows an increase over 1902 of 2.3 per cent; for amount paid in wages, 1903 shows an increase over 1902 of 10.5 per cent, and for gross value of product, 1903 shows an increase over 1902 of 8.4 per cent.

DESCRIPTION OF MANUFACTORIES.—Under this head are presented illustrations and descriptions of 73 representative manufacturing establishments of the State. Accompanying the descriptions of the different plants is a brief summary, taken from the Twelfth United States Census, of the volume of business done in manufacturing in the various towns wherein the establishments described are located.

LABOR ORGANIZATIONS.—In 1903 there were 591 organizations known to have been in existence in the State. During each of the prior four years the number that reported to the State bureau was as follows: 214 in 1899, 270 in 1900, 340 in 1901, and 510 in 1902. Organizations were found in 43 towns in 1901, in 48 in 1902, and in 49 in 1903. Following the statistical presentation is a list of the unions, grouped by towns, with the name and address of the secretary of each.

STRIKES AND LOCKOUTS.—Under this head are given brief accounts of the labor troubles of the State for the year ending October 31, 1903, and a tabulated statement showing the date, class of labor, name of employer, location, number of employees involved, duration, causes, and results of 99 disputes. The number of employees involved in these disputes was 9,217, with a reported loss of time of 270,449 days, and of wages to the amount of \$405,674. They took place in 33 towns of the State, and 39 occupations were represented. Of the 99 controversies, the workmen were unsuccessful in 42 instances, 26 resulted successfully for the workmen, 8 were partly successful, 20 were amicably settled or arbitrated, and 3 were unsettled at the time of the report.

FREE PUBLIC EMPLOYMENT BUREAUS.—The operations for the year ending November 30, 1903, of the five free public employment bureaus established on July 1, 1901, are set forth in this chapter. Detailed statements are given showing by sex the number and kind of situations secured, together with the nationality of the applicants. A summary of the results for the year covered is given in the following table for the five cities in which the bureaus are located:

OPERATIONS OF FREE PUBLIC EMPLOYMENT BUREAU FOR THE YEAR ENDING
NOVEMBER 30, 1903.

Location.	Applications for situations.		Applications for help.		Positions secured.	
	Males.	Females.	Males.	Females.	Males.	Females.
Hartford.....	3,014	2,053	1,512	2,268	1,433	1,428
Bridgeport.....	761	2,346	692	2,499	585	1,765
New Haven.....	1,518	1,258	578	1,189	515	846
Waterbury.....	626	1,131	413	1,208	383	922
Norwich.....	246	255	111	263	97	206
Total.....	6,165	7,043	3,306	7,422	3,013	5,167

During the 29 months from the date of the establishment of the bureaus there were 33,148 applications for situations, 15,746 by males and 17,402 by females. Employers made application for 7,811 male and 17,853 female workers, a total of 25,664 persons. As a result of the operations of the bureaus 19,000 positions were secured, 6,969 by males and 12,031 by females.

LABOR LAWS.—In an appendix to the report are presented the labor laws of the State, comprising those contained in the general statutes, revision of 1902, and amendments, January session, 1903.

MAINE.

Seventeenth Annual Report of the Bureau of Industrial and Labor Statistics for the State of Maine. 1903. Samuel W. Matthews, Commissioner. 227 pp.

The subjects presented in this report are: The cotton industry, 4 pages; the woolen industry, 4 pages; factories, mills, and shops built during 1903, 4 pages; trade unions, 58 pages; mineral springs, 26 pages; mineral resources, 21 pages; the apple industry, 25 pages; the development of Millinocket, 25 pages; railroads, 4 pages; manufacturing industries, 26 pages; report of the inspector of factories, work-shops, mines, and quarries, 18 pages.

THE COTTON AND WOOLEN INDUSTRIES.—For the year ending June 30, 1903, returns were received from 13 cotton mills and 26 woolen mills, showing for each the capital invested, cost of material, value of product, number of employees by sex and age, weeks in operation, and total annual and average weekly wages paid. In the 13 cotton mills there was a total investment of \$13,282,081, a product of \$13,553,240, and a wage payment of \$4,365,930 to 12,255 employees, of whom 5,034 were men, 6,658 were women, and 563 were children under 16 years of age. The cost of material used amounted to \$7,984,338, and the mills were in operation an average of 51.7 weeks during the year. In the 26 woolen mills there was a total investment of \$4,349,013, a product of \$7,297,722, and a wage payment of \$1,609,270 to 3,851 employees, of whom 2,643 were men, 1,171 were women, and 37 were children under 16 years of age. The cost of material used amounted to \$4,351,061, and the mills were in operation an average of 51.7 weeks during the year.

Eleven of the cotton and 20 of the woolen mills also reported in 1902, so that comparative statistics can be presented for identical establishments as follows:

STATISTICS OF 11 COTTON MILLS AND 20 WOOLEN MILLS, 1902 AND 1903.

Items.	11 cotton mills.		20 woolen mills.	
	1902.	1903.	1902.	1903.
Capital invested	\$13,391,722	\$13,105,481	\$3,380,064	\$3,926,013
Cost of material	\$7,093,385	\$7,673,874	\$3,438,076	\$3,371,612
Wages paid	\$4,057,111	\$4,289,300	\$1,238,494	\$1,266,870
Value of product	\$12,383,041	\$13,114,877	\$5,539,181	\$5,781,641
Average weekly wages:				
Men	\$7.81	\$8.01	\$9.23	\$9.12
Women	\$5.85	\$5.99	\$6.85	\$7.03
Children	\$3.07	\$3.22	\$3.94	\$3.97
Average weeks in operation	51.0	51.7	51.9	51.7
Average number of employees:				
Men	5,323	4,978	1,958	2,013
Women	6,224	6,530	895	917
Children	524	550	39	34
Total	12,071	12,058	2,892	2,964

The table following shows the proportion of the value of product applied to cost of material, to wages, and remaining for minor expenses and profits; also the average annual earnings per employee in these two industries for various years from 1880 to 1903:

PER CENT OF VALUE OF PRODUCT APPLIED TO COST OF MATERIAL, TO WAGES, AND TO MINOR EXPENSES AND PROFITS, AND AVERAGE ANNUAL EARNINGS PER EMPLOYEE IN THE COTTON AND WOOLEN INDUSTRIES, 1880 TO 1903.

Year.	Cotton industry.				Woolen industry.			
	Per cent of value of product applied to—			Average annual earnings.	Per cent of value of product applied to—			Average annual earnings.
	Cost of material.	Wages.	Minor expenses and profits.		Cost of material.	Wages.	Minor expenses and profits.	
1880	55.0	22.0	23.0	\$249.78	64.2	15.6	20.2	\$337.51
1890	55.2	28.5	16.3	312.50	65.9	21.7	12.4	377.03
1897	57.9	33.1	9.0	289.50	65.4	25.1	9.5	348.79
1898	52.4	34.8	12.8	270.91	60.1	23.4	16.5	375.20
1899	51.8	36.6	11.6	300.00	65.5	21.7	12.8	354.71
1900	53.9	35.0	11.1	319.62	55.9	21.9	22.2	416.10
1901	57.1	33.5	9.4	321.11	60.0	22.6	17.4	388.77
1902	57.3	32.8	9.9	336.10	61.9	22.4	15.7	427.80
1903	58.9	32.2	8.9	356.26	59.6	22.1	18.3	417.88

Since 1897 in the cotton industry the proportion of value of product applied to wages shows a range, approximately, of from 33 to 35 per cent, and in the woolen industry of from 22 to 25 per cent. During the period embraced in the table the general tendency of average annual earnings has been upward.

FACTORIES, MILLS, AND SHOPS BUILT.—The returns show that in 96 towns 124 buildings were erected, or enlarged, remodeled, etc., during the year, at a total cost of \$1,436,900. These improvements provided for 3,343 additional employees. The returns for the 13 years 1891 to 1903 are summarized below:

FACTORIES, MILLS, AND SHOPS BUILT OR ENLARGED, ETC., DURING THE YEARS 1891 TO 1903.

Year.	Number of towns.	Number of buildings.	Aggregate cost.	New employees.
1891	86	110	\$3,023,850	4,278
1892	89	114	2,123,000	4,812
1893	81	108	841,725	2,526
1894	48	55	663,700	1,039
1895	75	102	1,367,800	2,797
1896	62	77	1,055,900	1,470
1897	74	95	827,600	2,339
1898	64	72	675,100	2,024
1899	103	138	6,800,700	4,990
1900	114	167	2,174,825	5,539
1901	94	121	5,638,200	6,337
1902	91	129	2,776,980	5,017
1903	96	124	1,436,900	3,343

TRADE UNIONS.--A list of the labor unions, by cities and towns, is given, with membership, initiation fees, dues, benefit features, daily hours of labor, daily wages, and other essential facts. According to returns received by the bureau, there were, in 35 cities and towns of

the State, 174 unions, 164 of which reported an aggregate membership of 12,829.

There were 52 unions, with 4,041 members, which reported as to time and earnings. The results of these reports are summarized in the table which follows:

STATISTICS OF 52 TRADE UNIONS, 1903.

Unions.	Number reporting.	Membership.	Average days lost.	Average days worked.	Average daily wages.	Average annual earnings.
Builders	19	1,794	78	234	\$2.63	\$614
Cotton-mill workers	3	147	20	292	1.33	534
Clothing makers	2	80	94	218	1.33	291
Granite workers	9	555	44	268	2.50	671
Ironworkers	1	56	15	297	2.36	700
Laborers	3	377	33	279	1.63	455
Printers	2	117	12	300	2.09	628
Pulp and paper makers	4	157	.....	337	1.91	644
Railway employees	2	209	10	302	2.34	708
Stationary firemen	2	98	4	308	1.67	515
Team drivers	1	95	12	300	1.75	525
Woodworkers	1	250	152	160	2.50	400
Miscellaneous	3	106	15	297	2.14	635

RAILROADS.—For the year ending June 30, 1903, there were 8,111 employees in the service of the 20 steam railroads of the State. The amount paid in wages by these roads aggregated \$4,325,379.58. The average daily wages, including general officers, increased from \$1.81 in 1902 to \$1.86 in 1903; and, not including general officers, from \$1.76 in 1902 to \$1.82 in 1903. The average number of days worked was 287. The average annual income of employees, including general officers, was \$533; not including general officers, \$522.

For the year ending June 30, 1903, there was employed upon the street railways of the State 1,125 persons, to whom were paid \$553,500 in wages. The average number of days worked was 300, the average annual earnings \$492, and the average daily wages \$1.64.

MANUFACTURING INDUSTRIES.—This consists of statistics of the manufacturing industries of the State, including lumber, pulp, and paper, compiled from the returns of the Twelfth Federal Census.

VIRGINIA.

Sixth Annual Report of the Bureau of Labor and Industrial Statistics for the State of Virginia. 1903. James B. Doherty, Commissioner. v, 207 pp.

The subjects presented in this report may be grouped under the following heads: Industrial statistics, 57 pages; arbitration and conciliation, 24 pages; labor laws, 49 pages; decisions of courts relating to labor, 67 pages; Prison Association of Virginia, 4 pages; Negro Reformatory Association of Virginia, 3 pages.

INDUSTRIAL STATISTICS.—In 1902 returns were received from 118 general contractors in the building trades, reporting a volume of

business done aggregating \$3,200,571. Hours of labor had been reduced without encroaching on the daily wage, and in almost every city of the State 9 hours had been adopted as a day's work. A general increase in wages also prevailed, in the majority of instances the increase being 10 per cent, though a number of increases of 12½, 15, 20, and 25 per cent were reported. Fifteen subcontracting firms of bricklayers, 52 of painters and paperhangers, and 65 of plumbers, gas fitters, and tanners reported, respectively, value of work done during 1902 at \$235,111, \$258,589, and \$793,830. Where hours of labor were reported, they were, generally, 8 or 9 per day. Wages of skilled workmen were reported as being substantially advanced.

The value of product in 1902 of 13 firms manufacturing brick and tile, 9 manufacturing sash, doors, and blinds, and of 95 saw and planing mills amounted to \$315,261, \$708,884, and \$4,319,610, respectively. Hours of labor per day ranged from 8 to 12, 10 hours, however, being the number in the majority of establishments. In the sash, door, and blind factories the wages paid aggregated \$202,365, and in the saw and planing mills \$1,072,828. During 1902, 5 firms manufacturing agricultural implements reported as value of product \$407,031, aggregate wages paid \$128,879, average days worked 294, and daily hours of labor 10; 21 canneries reported as value of product \$217,509, aggregate wages paid \$37,730, average days worked 67, and daily hours of labor 10; 20 tanneries reported as value of product \$5,091,329, aggregate wages paid \$308,244, average days worked 266, and daily hours of labor 10, as a rule.

Twenty-eight reports received from the railroads of the State show for 1902 a total of \$10,949,384.56 paid in wages to 24,094 employees. The average daily wages were \$1.49. The table following shows, by occupations, the number employed and the average daily wages for 1901 and 1902, and the total paid in wages during 1902:

NUMBER AND WAGES OF RAILROAD EMPLOYEES.

Occupations.	Number of employees.		Average daily wages.		Total wages, 1902.
	1901.	1902.	1901.	1902.	
General clerks	1,149	1,092	\$1.91	\$1.90	\$724,172.57
Station agents	1,065	863	1.45	1.42	419,742.93
Other station men	2,220	1,916	1.34	1.25	729,314.77
Enginemen	1,247	923	3.84	4.22	1,120,589.70
Firemen	1,438	1,028	1.74	2.05	541,319.19
Conductors	871	679	3.03	3.07	623,990.89
Other trainmen	2,113	1,716	1.50	1.62	773,797.40
Machinists	905	712	2.15	2.24	466,134.43
Carpenters	1,848	1,512	1.63	1.68	726,430.87
Other shopmen	3,421	3,359	1.58	1.54	1,520,263.90
Section foremen	953	639	1.41	1.39	306,743.10
Other trackmen	7,449	5,405	.96	.99	1,201,529.96
Switchmen, flagmen, and watchmen	1,144	595	1.31	1.22	247,864.33
Telegraph operators and dispatchers	1,021	724	1.60	1.62	403,950.57
Employees, floating equipment	356	303	1.46	1.33	146,936.41
Other employees and laborers	4,006	2,628	1.33	1.26	996,603.54
Total	31,206	24,094	1.52	1.49	10,949,384.56

Accidents to railroad employees during 1902 resulted in 45 being killed and 646 being injured.

ARBITRATION AND CONCILIATION.—A historical review of this subject is given, together with a reproduction of the arbitration and conciliation laws of several of the States.

LABOR LAWS AND COURT DECISIONS.—In this part of the report are reproduced from the Bulletins of the United States Bureau of Labor decisions of courts affecting labor, and laws of various States relating to labor enacted during 1902. The complete labor laws of the State of Virginia are also published in this part of the report.

PRISON ASSOCIATION OF VIRGINIA AND NEGRO REFORMATORY ASSOCIATION OF VIRGINIA.—A brief account of the progress of the work of these two reformatory institutions, the former of which is for whites, concludes the report.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

AUSTRIA.

Arbeiterverhältnisse im Ostrau-Karwiner Steinkohlenreviere. Dargestellt vom K. K. Arbeitsstatistischen Amte im Handelsministerium. I. Theil. Arbeitszeit, Arbeitsleistungen, Lohn- und Einkommensverhältnisse. 1904. lii, 128, 583 * pp.

This report is the result of an investigation of labor conditions in Austria undertaken in 1901 by the Austrian bureau of labor statistics, covering what is known as the Ostrau-Karwin coal-mine district, for the period from July 1, 1900, to June 30, 1901. This district includes the Crown lands of Moravia and Silesia, in which about one-half of all the Austrian coal-mine workers are employed. The inquiry embraced in its scope the labor conditions in coal mining, coking plants, manufacturing establishments, various handicrafts, and agriculture.

This volume, which constitutes the first part of the entire report, relates to the hours of labor, efficiency, and earnings of wageworkers.

The main part of the volume consists of a series of tables covering 583 pages, and contains the detailed results of the investigation. These tables are preceded by a comprehensive analysis and by a reproduction of the schedules of inquiry used and instructions issued for guidance in the prosecution of the work of the investigation.

COAL.—By far the greater part of the report is devoted to coal-mine labor. The statistical presentation shows, in various combinations, for each mine separately and, by summarized statements, for the entire district, the number of mine workers, the number of shifts worked, the wages and the income of coal-mine employees. The investigation covers 38 mines, employing an average of 34,925 mine workers. The following table shows by occupations the actual number of mine workers employed in the entire district during each month and the average number for the entire year from July 1, 1900, to June 30, 1901:

ACTUAL NUMBER OF COAL-MINE EMPLOYEES IN THE OSTRAU-KARWIN COAL-MINE DISTRICT EACH MONTH DURING THE YEAR ENDING JUNE 30, 1901.

Occupations.	July, 1900.	Aug., 1900.	Sept., 1900.	Oct., 1900.	Nov., 1900.	Dec., 1900.	Jan., 1901.	Feb., 1901.	Mar., 1901.	Apr., 1901.	May, 1901.	June, 1901.	Average for year.
Below ground:													
Mine bosses, foremen, etc...	407	410	410	408	410	410	401	399	397	394	391	389	408
Enginemen.....	104	104	104	104	104	103	104	104	103	104	106	107	104
Miners	12,618	12,647	12,700	12,700	12,716	12,721	12,802	12,914	12,876	12,757	12,692	12,443	12,716
Trammers	7,545	7,642	7,815	8,298	8,820	8,979	9,200	9,272	9,284	9,096	9,119	8,959	8,669
Helpers.....	3,693	3,777	3,884	4,208	4,527	4,657	5,069	5,195	5,306	5,278	5,350	5,266	4,684
Total	24,367	24,580	24,913	25,718	26,577	26,870	27,576	27,884	27,966	27,629	27,658	27,164	26,576
Above ground:													
Foremen, etc ...	147	148	150	158	162	160	161	162	161	161	165	167	158
Enginemen.....	894	894	900	908	895	896	906	904	910	906	894	889	900
Skilled workers.	1,926	1,954	1,961	1,994	2,010	2,016	2,048	2,052	2,074	2,090	2,112	2,110	2,028
Laborers, male	2,771	2,780	2,837	2,910	2,976	2,992	2,997	3,130	3,170	3,159	3,207	3,190	3,010
Laborers, female	2,123	2,149	2,131	2,265	2,226	2,203	2,311	2,315	2,393	2,357	2,372	2,292	2,253
Total	7,861	7,925	7,979	8,130	8,269	8,267	8,423	8,563	8,708	8,673	8,750	8,648	8,349
Total above and below ground	32,228	32,505	32,892	33,848	34,846	35,137	35,999	36,447	36,674	36,302	36,408	35,812	34,925

An examination of the foregoing table shows that from July, 1900, to March, 1901, inclusive, there was a steady increase each month in the total number of employees, the total increase in the nine months being equal to 13.8 per cent. During the succeeding 3 months the number fluctuated somewhat. In April there was a decline of 1 per cent, in May a slight increase of 0.3 per cent, and in June a decrease of 1.6 per cent.

The following two tables show the average gross earnings and wage deductions of coal-mine workers in this district and the number of shifts worked during the year ending June 30, 1901:

AVERAGE GROSS EARNINGS, WAGE DEDUCTIONS, AND NET EARNINGS, PER EMPLOYEE, OF COAL-MINE WORKERS IN THE OSTRAU-KARWIN COAL-MINE DISTRICT DURING THE YEAR ENDING JUNE 30, 1901.

Occupation.	Average number of employees.	Gross earnings.			
		Wages. (a)	Gratuities, etc.	School contributions.	Total.
Below ground:					
Mine bosses, foremen, etc	403	\$264.59	\$10.99	\$1.99	\$277.57
Enginemen	104	223.85	2.51	1.16	227.52
Miners	12,716	225.72	1.11	.62	227.45
Trammers	8,669	138.26	.61	.05	138.92
Helpers.....	4,684	104.10	.23	(b)	104.33
Total	26,576	176.34	.95	.35	177.64
Above ground:					
Foremen, etc	158	229.74	10.18	1.12	241.04
Enginemen	900	215.14	3.91	.69	219.74
Skilled workers	2,028	206.86	.30	.21	207.37
Laborers, male	3,010	137.85	.61	.31	138.77
Laborers, female	2,253	64.86	.01	.....	64.87
Total	8,349	144.98	.91	.26	146.15
Total above and below ground.....	34,925	168.84	.94	.38	170.11

a After deductions for explosives.

b \$0.002.

AVERAGE GROSS EARNINGS, WAGE DEDUCTIONS, AND NET EARNINGS, PER EMPLOYEE, OF COAL-MINE WORKERS, IN THE OSTRU-KARWIN COAL-MINE DISTRICT DURING THE YEAR ENDING JUNE 30, 1901—Continued.

Occupation.	Wage deductions.					Total.	Net earnings.	Sick benefits received.	Actual total income.
	Tools, etc.	Marriage fees.	Insurance.	Fines.	Indemnifications.				
Below ground:									
Mine bosses, foremen, etc.....	\$0.05		\$12.36	\$0.03	\$0.01	\$12.45	\$265.12	\$1.23	\$266.35
Enginemen .....	.02		9.61	.05	.02	9.70	217.82	.61	218.43
Miners .....	.10	(a) \$0.03	9.11	.33	.14	9.71	217.74	2.11	219.85
Trammers .....	.07	.01	5.22	.40	.08	5.78	133.14	1.53	134.67
Helpers.....	.10	.01	3.47	.21	.11	3.90	100.43	1.06	101.49
Total .....	.09	.02	6.89	.33	.11	7.44	170.20	1.71	171.91
Above ground:									
Foremen, etc.....	.19	.04	9.99	.01	.01	10.24	230.80	1.08	231.88
Enginemen .....	.06	.03	9.07	.12	.01	9.29	210.45	.96	211.41
Skilled workers .....	.04	.03	7.97	.09	.02	8.15	199.22	1.64	200.86
Laborers, male .....	.02	.01	6.85	.13	.01	7.02	131.75	1.57	133.32
Laborers, female .....	.01		2.30	.06	(b)	2.37	62.50	.67	63.17
Total .....	.08	.01	6.20	.10	.01	6.35	139.80	1.28	141.08
Total above and below ground.....	.07	.02	6.73	.27	.09	7.13	162.93	1.61	164.54

a \$0.002.

b \$0.004.

SHIFTS WORKED BY COAL-MINE WORKERS IN THE OSTRU-KARWIN COAL-MINE DISTRICT DURING THE YEAR ENDING JUNE 30, 1901.

Occupation.	Average number of employees.	Average number of shifts worked during year.				
		Total.	Night shifts.		Sunday and holiday shifts.	
			Number.	Per cent of total.	Number.	Per cent of total.
Below ground:						
Mine bosses, foremen, etc.....	403	317.25	134.00	42.3	29.25	9.2
Enginemen	104	328.00	127.50	38.9	33.00	11.6
Miners	12,716	265.75	109.75	41.3	4.50	1.7
Trammers	8,669	251.75	101.50	40.3	4.50	1.8
Helpers	4,684	254.00	99.25	39.1	2.50	1.0
Total	26,576	260.25	105.75	40.6	4.50	1.7
Above ground:						
Foremen, etc.....	158	336.50	75.75	22.4	43.25	12.8
Enginemen	900	336.75	135.50	40.3	40.75	12.1
Skilled workers	2,028	287.25	32.25	11.2	17.00	5.9
Laborers, male	3,010	286.25	70.25	24.5	20.50	7.2
Laborers, female	2,253	265.50	67.00	25.2	4.75	1.8
Total	8,349	287.50	67.25	23.4	18.00	6.3
Total above and below ground	34,925	266.75	96.50	36.2	7.75	2.9

Of the 35,812 coal-mine workers employed on June 30, 1901, 25,757, or 71.9 per cent, were piece or contract workers, and 10,055, or 28.1 per cent, were paid by the shift. Of the underground workers 93.5 per cent were pieceworkers, and of the surface workers 69.3 per cent were paid by the shift, the pieceworkers predominating below and the time workers above ground.

The hours of labor of underground mine workers are regulated by the law of June 21, 1884, which provides that the duration of the shift

shall not exceed 12 hours, while the actual working time shall not exceed 10 hours. In this coal-mine district it was found that of the 38 mines investigated, the length of the shift worked by each individual worker was 8 hours in 2 mines, including the time for descending, but exclusive of that required for ascending, the shifts beginning at 6 a. m., 2 p. m., and 10 p. m. In 4 mines the regular working shifts of all mine workers—that is, the time between which the first man arrived and the last man departed—was 10 hours per day, including time for descending and ascending, the hours being from 6 a. m. to 4 p. m. and from 6 p. m. to 4 a. m. In the remaining 32 mines the length of the shift for each individual mine worker, including time for descending and ascending, was 10 hours, the day shift in 24 mines beginning at 6 a. m. and ending at 4 p. m. and the night shift beginning at 6 p. m. and ending at 4 a. m., while in 8 mines the day shifts were the same but the night shifts were from 4 p. m. to 2 a. m. In individual cases, however, mine workers at certain classes of difficult or straining occupations were found to work only 8 hours, even though the customary shift was 10 hours.

The hours of labor of surface workers were mostly 12 per day, with an intermission of 2 hours. Persons employed in handling the coal at the mouth of the pit, such as wheelers, screeners, and loaders, worked 10 hours without intermission. Enginemen and firemen employed above ground at the pumping, ventilating, compressing, and electrical machinery worked 8 hours per day in a number of the mines, but hoisting engineers as a rule worked 8 hours per day. There was no overtime worked at any of the mines in the Ostrau-Karwin district during the year.

COKE.—The data relating to coke workers cover 8 establishments, employing an average of 2,287 persons. The statistical presentation is analogous to that relating to coal-mine workers, and shows in various combinations the number of employees, the number of shifts worked, the wages, and the earnings of employees. The following table shows, by occupations, the actual number of coke workers employed in the entire district during each month, and the average number for the entire period from July 1, 1900, to June 30, 1901:

ACTUAL NUMBER OF COKE WORKERS EMPLOYED IN THE OSTRAU-KARWIN COAL-MINE DISTRICT EACH MONTH DURING THE YEAR ENDING JUNE 30, 1901.

Occupation.	July, 1900.	Aug., 1900.	Sept., 1900.	Oct., 1900.	Nov., 1900.	Dec., 1900.	Jan., 1901.	Feb., 1901.	Mar., 1901.	Apr., 1901.	May, 1901.	June, 1901.	Average for year.
Foremen, etc.....	17	17	17	17	17	17	17	17	16	16	16	16	17
Enginemen	115	117	118	118	119	120	121	121	120	120	124	124	120
Skilled workers	151	154	150	155	161	161	163	169	168	178	180	180	164
Furnace men	978	960	987	981	988	992	993	992	993	977	980	965	984
Laborers, male	618	620	634	678	706	705	713	743	759	778	788	752	707
Laborers, female	287	275	278	272	276	277	308	316	317	317	318	311	295
Total	2,166	2,163	2,179	2,221	2,267	2,272	2,310	2,358	2,373	2,381	2,406	2,348	2,287

the sick benefits of \$1.27, makes the actual total income per employee for the year equal to \$170.02.

A comparison of the foregoing figures with the earnings of coal mine workers shows that the wages, the total gross earnings, the net earnings, and the total actual income were greater in the case of the coke workers than the corresponding items relating to coal workers.

The second table shows for each principal occupation the average number of shifts worked per employee and the number and percentage of night shifts and Sunday and holiday shifts worked during the year.

Of the 2,348 persons employed on June 30, 1901, 1,435 or 61.1 per cent were paid by the shift and 913 or 38.9 per cent were piece or contract workers. The foremen, enginemen, and female laborers were paid exclusively by the shift. Piece or contract workers represented 46.1 per cent of the skilled workers, 61.6 per cent of the furnacemen, and 31.4 per cent of the day laborers.

MANUFACTURES.—The investigation relating to the labor conditions in manufacturing industries covered the period from January 1, 1901, to June 30, 1901, and embraced 101 establishments, with 18,729 employees, including 18 apprentices without pay, grouped according to the classification shown in the following table:

NUMBER OF EMPLOYEES IN 101 MANUFACTURING ESTABLISHMENTS IN THE OSTRUKARWIN COAL-MINE DISTRICT DURING THE SIX MONTHS ENDING JUNE 30, 1901.

[Eighteen apprentices, receiving no pay, were not included in the table.]

Industry.	Number of establishments.	Number of employees.		
		Piece workers.	Time workers.	Total.
Brick	14	296	304	600
Metals and machinery	8	990	765	1,755
Celluloids and roofing paper	3	244	588	832
Chemical industries	13	173	1,882	2,060
Mining and smelting	28	6,599	5,615	12,214
Other industries	35	91	1,159	1,250
Total	101	8,398	10,313	18,711

Of 82 establishments reporting hours of labor, 39 with 11,698 employees operated day and night shifts of equal length; in 2 establishments with 1,177 employees the duration of the day shift, exclusive of periods of rest, was 10½ hours; that of the night shift was in one case 6 hours, and in the other case it was not reported. The hours for watchmen in a mining and smelting company having 28 establishments were uniformly 12 hours per day and 12 hours per night, without special provision for hours of rest. In the remaining 40 establishments reporting hours of labor, the operations were confined to the daytime, the hours ranging from 7½ to 11 per day, the 10-hour day predominating in 25 establishments with 2,759 employees.

The following table, compiled from data given in the report, presents in detail the foregoing facts in tabular form:

HOURS OF LABOR IN 82 MANUFACTURING ESTABLISHMENTS IN THE OSTRAU-KARWIN COAL-MINE DISTRICT DURING THE SIX MONTHS ENDING JUNE 30, 1901.

Number of establishments.	Number of employees.	Hours of labor.	
		Per day.	Pernight.
14.....	4, 375	10	10
23.....	7, 311	{ Over 10 to 11	{ Over 10 to 11
2.....	12	11	11
1.....	879	a 10½	6
1.....	298	a 10½	(b)
1.....	c 76	12	12
1.....	4	7½	.....
1.....	4	8	.....
1.....	4	9	.....
25.....	2, 759	10	.....
7.....	389	{ Over 10 to 11	.....
5.....	209	11	.....

a Not reported.

b Exclusive of periods of rest.

c Watchmen only.

The wage statistics for manufacturing establishments are presented in two series of tables, all employees being classified as superintendents, foremen, male workers, and female workers. The first series shows for each group of industries and for each class of employees separately the number of employees arranged by age groups, their total weekly wages, and the average weekly wages per employee. In the second series the presentation is arranged by wage groups based upon the average weekly wages per employee, showing in the first part the actual figures and in the second part the relative figures. In both series of tables the facts are shown separately for the pieceworkers and the time workers. These tables are supplemented by tabular statements showing the number of employees receiving extra allowances on account of rent, fuel, lighting, etc., either free of charge or at prices below the prevailing rates. Of the total of 18,729 employees, 7,438 or 39.7 per cent received extra allowances of one kind or another, and 11,291 or 60.3 per cent received no such allowances.

In the following table a classification of the employees is made according to wage groups, based upon their average weekly wages:

NUMBER OF EMPLOYEES IN 101 MANUFACTURING ESTABLISHMENTS IN THE OSTRUKARWIN COAL MINE DISTRICT DURING THE SIX MONTHS ENDING JUNE 30, 1901, ACCORDING TO WAGE GROUPS.

[Eighteen apprentices, receiving no pay, were not included in the table.]

Average weekly wages.	Superintendents.			Foremen.			Male workers.			Female workers.		
	Piece work-ers.	Time work-ers.	Total.	Piece work-ers.	Time work-ers.	Total.	Piece work-ers.	Time work-ers.	Total.	Piece work-ers.	Time work-ers.	Total.
\$0.61 or under							1	6	a 7			
\$0.61 to \$0.81							17	58	b 70	2	12	14
\$0.81 to \$1.02							36	35	c 71	24	81	55
\$1.02 to \$1.22							58	81	d 139	65	118	183
\$1.22 to \$1.42							56	108	e 159	54	199	253
\$1.42 to \$1.62					1	1	69	129	f 198	82	135	217
\$1.63 to \$1.83							97	208	g 300	130	66	196
\$1.83 to \$2.03					4	4	85	301	h 386	90	79	169
\$2.03 to \$2.23		1	1				160	438	i 598	75	20	95
\$2.24 to \$2.44					4	4	167	836	j 1,003	19	29	48
\$2.44 to \$2.64					5	5	158	693	k 851	6	15	21
\$2.64 to \$2.84					6	6	199	852	l 1,051	8	1	4
\$2.84 to \$3.05					2	2	224	648	m 872		2	2
\$3.05 to \$3.25					1	6	7	235	n 816	1	2	3
\$3.25 to \$3.45						9	9	251	o 881			
\$3.45 to \$3.65						8	8	278	613		1	1
\$3.66 to \$3.86		2	2			8	8	310	527	m 837		
\$3.86 to \$4.06		2	2	1		16	17	345	490			
\$4.06 to \$4.26					11	11	324	358	682			
\$4.27 to \$4.47					6	6	332	319	701			
\$4.47 to \$4.67		2	2		17	17	418	218	636			
\$4.67 to \$4.87		2	2		23	23	234	179	463			
\$4.87 to \$5.07					16	16	292	120	412			
\$5.08 to \$5.28		1	1		22	22	299	120	419			
\$5.28 to \$5.48					11	11	257	122	379			
\$5.48 to \$5.68		6	6		16	16	259	93	352			
\$5.69 to \$5.89					2	10	12	264	77	341		
\$5.89 to \$6.09		10	10	2	14	16	212	60	272			
\$6.09 to \$8.12	3	41	44	16	65	81	1,423	163	1,591			
\$8.12 to \$10.15	1	35	36	16	34	50	426	23	449			
\$10.15 to \$12.18	2	33	35	8	9	17	139	6	145			
\$12.18 to \$14.21	1	21	22	6	5	11	43	1	44			
\$14.21 to \$16.24	1	11	12				5		5			
\$16.24 to \$18.27	1	7	8				2		2			
\$18.27 to \$20.30		8	8				5		5			
\$20.30 to \$24.36		6	6									
\$24.36 to \$28.42		4	4									
\$28.42 to \$32.48		2	2									
Over \$32.48	1	2	3									
Total	10	196	206	52	329	381	7,785	9,078	216,863	551	710	1,261

a Apprentices.

b Including 67 apprentices.

c Including 55 apprentices.

d Including 77 apprentices.

e Including 52 apprentices.

f Including 46 apprentices.

g Including 37 apprentices.

h Including 33 apprentices.

i Including 23 apprentices.

j Including 16 apprentices.

k Including 11 apprentices.

l Including 9 apprentices.

m Including 1 apprentice.

n Including 2 apprentices.

o Including 4 apprentices.

p Including 441 apprentices.

An examination of the foregoing table shows that of the whole number of employees 4,172, or 22.3 per cent, earn less than \$2.44 per week; 9,674, or 51.7 per cent, earn from \$2.44 to \$4.87 per week; 2,285, or 12.2 per cent, earn from \$4.87 to \$6.09 per week; 2,251, or 12 per cent, earn from \$6.09 to \$10.15 per week; 274, or 1.5 per cent, earn from \$10.15 to \$14.21 per week, and 55, or 0.3 per cent, earn over \$14.21 per week. The largest number of male workers is represented by the group showing earnings from \$6.09 to \$8.12 per week, the largest number of female workers by the group showing earnings from \$1.22 to \$1.42 per week, and the largest number of all employees by the group showing earnings from \$6.09 to \$8.12 per week.

HANDICRAFTS.—This part of the report is based upon 250 returns, collected partly through an agent of the Bureau and partly through the cooperation of the board of trade at Troppau. It treats of the hours of labor and the wages paid in 40 different handicraft trades in 42 localities of the district.

The hours of labor were reported in 243 cases, 215 cases showing either a fixed number of hours or a variation of 1 hour between the minimum and maximum hours, while in the remaining 28 cases the variation between the minimum and maximum hours showed a range of 2 to 3 hours. In 66 establishments the actual number of working hours was 10 per day, in 54 establishments 11 per day, and in 46 establishments 12 per day, while in the remaining 77 establishments the hours ranged from 6 to 15 per day.

The statistics relating to wages show for each particular trade the number of localities for which data have been reported; the class of wageworkers, designated as male adult workers, young persons, and female workers; the lowest and the highest wages per week paid in the localities reporting, and the character of additional allowances in cases where these are granted. The following table, compiled from data given in the report, shows these items for male adults and young persons engaged in 15 selected occupations:

WEEKLY WAGES PAID IN 15 SELECTED OCCUPATIONS IN THE OSTRU-KARWIN COAL-MINE DISTRICT IN 1901.

Occupation.	Male adults.						Young persons.					
	Time workers.			Piece workers.			Time workers.			Piece workers.		
	Lo-calities.	Wages.		Lo-calities.	Wages.		Lo-calities.	Wages.		Lo-calities.	Wages.	
		Low-est.	High-est.		Low-est.	High-est.		Low-est.	High-est.		Low-est.	High-est.
Bakers (a)	22	\$0.61	\$4.06	.....	.....	.....	6	\$0.41	\$1.83	.....	.....	.....
Blacksmiths (a)	21	.61	3.65	.....	.....	.....	6	.32	1.83	.....	.....	.....
Blacksmiths	2	2.44	4.87	.....	.....	.....	2	2.03	2.68	.....	.....	.....
Bookbinders (a)	1	.81	1.62	.....	.....	.....	1	.61	1.02	.....	.....	.....
Bookbinders	2	2.84	5.68	.....	.....	.....	1	2.03	2.44	.....	.....	.....
Cabinetmakers (a)	13	.81	4.06	1	\$1.02	\$1.62	.....	.....	.....	.....	.....	.....
Cabinetmakers (b) .....	.....	.....	.....	2	3.25	3.25	.....	.....	.....	.....	.....	.....
Cabinetmakers	5	2.44	4.38	2	2.84	6.09	5	.61	3.33	1	\$1.71	\$2.44
Carpenters	2	2.84	3.65	.....	.....	.....	1	1.95	2.68	.....	.....	.....
Hatmakers (a)	1	1.62	2.84	.....	.....	.....	1	1.22	2.05	.....	.....	.....
Millers (a)	2	.81	2.03	.....	.....	.....	1	.50	.61	.....	.....	.....
Paper hangers (a)	1	1.22	1.62	.....	.....	.....	1	.81	.81	.....	.....	.....
Roofers	3	3.25	4.06	.....	.....	.....	3	1.95	2.44	.....	.....	.....
Saddlers (a)	8	.61	4.06	.....	.....	.....	4	.41	2.44	.....	.....	.....
Shoemakers (a)	12	.61	2.03	3	1.02	1.62	4	.20	1.62	1	.81	1.22
Shoemakers (b) .....	.....	.....	.....	8	1.22	3.05	.....	.....	.....	.....	.....	.....
Shoemakers .....	.....	.....	.....	1	1.42	2.84	.....	.....	.....	.....	.....	.....
Tailors (a)	14	.61	3.05	.....	.....	.....	6	.41	1.62	.....	.....	.....
Tailors (b) .....	.....	.....	.....	7	1.22	3.25	.....	.....	.....	1	2.03	2.44
Tailors	2	1.71	3.65	3	1.62	4.87	1	1.22	1.22	1	2.03	3.25
Tanners	1	5.68	5.68	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tinners (a)	3	.81	5.08	.....	.....	.....	4	.20	2.64	.....	.....	.....
Tinners	3	2.44	6.09	2	2.68	4.87	3	1.95	3.25	.....	.....	.....
Watchmakers	1	2.44	4.87	.....	.....	.....	1	2.03	2.44	.....	.....	.....

^a Additional allowance of board and lodging.

^b Additional allowance of lodging.

The lowest and highest wages of females employed in handicraft trades, all of whom were time workers, were reported for but three occupations. These were: Bookbinders in one locality, \$1.02 to \$1.62 per week, without extra allowances; shoemakers in one locality, \$1.22 to \$1.62 per week and board and lodging; tailoresses in two localities, \$1.22 to \$1.62 per week and board and lodging.

The value of the additional allowances is variously estimated at 6 to 8 crowns (\$1.22 to \$1.62) per week for board and lodging and at 1 to 2 crowns (\$0.20 to \$0.41) per week for lodging.

AGRICULTURE.—The part of the report relating to the conditions of farm labor is based upon returns received from 56 localities and treats of the hours of work and the wages paid to farm laborers within the district.

The hours of field work in the spring and autumn usually begin at 6 or 7 a. m. and continue until 6 p. m., with 1 to 2 hours intermission for rest, the actual hours of labor for those seasons being from 9½ to 10 per day. During harvest time work begins at 6 a. m. and continues until 7 p. m., with 2 hours intermission, making the actual hours 11 per day. In winter the hours range from a minimum of 7½ to a maximum of 9, usually beginning at 7 a. m. or later and continuing until darkness sets in, the noon intermission varying from 1 to 1½ hours. The hours of actual labor of domestic servants range from 10 to 11 per day, beginning at 4 or 5 a. m. and continuing until 7 p. m., with several intermissions for rest, aggregating from 3 to 4 hours per day.

The statistics on wages are presented in three separate tables. The first table shows the number of localities for which data have been reported, the wages per year, and the additional allowances for overseers, laborers, and domestic servants on large landed estates; the second table shows the same facts for laborers and domestic servants on smaller landed properties, and the third table shows by seasons the daily wages of day laborers, with and without board.

The table following shows the lowest and the highest average daily wages paid to farm laborers employed by the day on large and small landed properties in the western and eastern sections of the district.

AVERAGE DAILY WAGES OF FARM LABORERS IN THE OSTRAU-KARWIN COAL-MINE DISTRICT, 1901.

Season.	Men.				Women.				Young persons.			
	With board.		Without board.		With board.		Without board.		With board.		Without board.	
	Low-est.	High-est.	Low-est.	High-est.	Low-est.	High-est.	Low-est.	High-est.	Low-est.	High-est.	Low-est.	High-est.
Large landed properties, western section: (a)												
Spring and fall.....			\$0.22	\$0.32			\$0.14	\$0.19			\$0.11	\$0.13
Summer.....			.28	.47			.17	.26			.14	.16
Winter.....			.19	.26			.14	.17			.10	.13
For the year (b).....			.14	.61			.10	.37			.08	.20
Large landed properties, eastern section: (c)												
Spring and fall.....			.22	.32			.13	.17			.11	.13
Summer.....			.26	.47			.14	.26			.11	.16
Winter.....			.14	.36			.11	.17			.09	.13
For the year (b).....			.14	.61			.10	.37			.08	.20
Small landed properties, western section: (d)												
Spring and fall.....	\$0.15	\$0.41	.28	.61	\$0.10	\$0.20	.20	.41				
Summer.....	.22	.46	.35	.66	.14	.28	.22	.45	\$0.16	\$0.16	e .32	e .32
Winter.....	.11	.35	.19	.53	.09	.18	.14	.32	e .12	e .12	e .28	e .28
For the year (b).....	.10	.51	.18	.71	.08	.32	.12	.45	e .12	e .20	e .28	e .37
Small landed properties, eastern section: (f)												
Spring and fall.....	.16	.45	.26	.56	.09	.26	.15	.35				
Summer.....	.18	.56	.28	.66	.11	.37	.18	.45				
Winter.....	.12	.36	.18	.46	.07	.18	.10	.22				
For the year (b).....	.12	.61	.16	.71	.06	.41	.10	.49				

a 12 localities.
b Actual wages.

c 21 localities.
d 25 localities.

e 1 locality only.
f 31 localities.

FRANCE..

Bordereaux de Salaires pour Diverses Catégories d'Ouvriers en 1900 et 1901. Office du Travail, Ministère du Commerce, de l'Industrie, des Postes, et des Télégraphes. 1902. xx, 233 pp.

The memoranda on which the major portion of this volume is based were collected in conformity with a law of August 10, 1899, which provides that contracts by the National Government for public works or supplies must contain provisions by which the contractor agrees to conform to the standard of the locality in which the work is done in the matters of rates of wages paid and the hours of labor. Similar provisions may be incorporated in contracts by the departments, communes, and by public charity institutions.

The determination for this purpose of the facts as to rates and hours rests with the branch of service interested, and is effected by referring, where possible, to trade agreements between unions of employers and employees. Where this can not be done, a mixed commission is called upon, representing in equal numbers the employers and the employed. Trade unions, councils of prudhommes, engineers, departmental and communal architects, and other competent persons may also be consulted. An abstract of the memoranda collected in this manner occupies the first 124 pages of the present work.

A second group of tables presents the results of an inquiry addressed to the councils of prudhommes in the various cities, or to the mayors of such chief places of the department as had no council of prudhommes. This inquiry is identical in form with that under which the data were collected in 1896 for the fourth volume of the publication, *Salaires et Durée du Travail dans l'Industrie Française*.

From a similar source was procured a report on the cost of board and lodging for single workmen. The last table presented was compiled from 3,500 returns made by school-teachers in over 3,000 communes. They show for each locality the wages of a day laborer and of a joiner, the price of board and lodging of a single teacher in a hotel and in a private family, and the estimated cost of living of a family of 4 persons, of which the teacher is the head.

Short tables in the introductory chapter also show the cost of board and lodging for single workmen in various industries in 1896 and 1901, by localities, also the rates of wages in the building trades in Paris in 1900. The wages and hours given in the first tables are for the occupations concerning which need of inquiry has arisen, and are more of the nature of estimates than of arithmetical averages. They are taken to represent the current rates and hours for the greater number of workmen in the branch of industry under consideration. The tables are arranged by departments or communes under the various occupations, and show the allowance for overtime, night work, and special services, as well as the normal rates. No summary is presented.

The identity of the schedules of inquiry in 1896 and 1901 enables the presentation of comparative wages in a number of occupations as follows:

COMPARATIVE DAILY WAGES PAID IN VARIOUS OCCUPATIONS IN 1896 AND 1901 IN PARIS AND IN OTHER CITIES OF FRANCE.

Occupation.	Paris.		Other cities.		Occupation.	Paris.		Other cities.	
	1896.	1901.	1896.	1901.		1896.	1901.	1896.	1901.
Brewers.....	\$1.06	.....	\$0.74	\$0.72	Locksmiths.....	\$1.25	\$1.45	\$0.81	\$0.82
Compositors.....	1.35	.....	.84	.87	Metal turners.....	1.35	.....	.90	.95
Bookbinders.....	1.25	.....	.78	.80	Quarrymen.....	.97	1.21	.70	.73
Tannery employees.....	1.25	.....	.72	.73	Stonecutters.....	1.93	1.48	.86	.91
Saddlers and harness makers.....	1.25	\$1.54	.74	.74	Masons.....	1.85	1.39	.80	.82
Shoemakers.....	1.45	.....	.69	.68	Excavators.....	.97	1.04	.61	.63
Tailors.....	1.45	1.54	.72	.79	Slaters.....	1.50	1.54	.85	.87
Dyers and cleaners.....	.....	.....	.72	.75	Painters, house.....	1.08	1.39	.81	.85
Weavers.....	1.25	.....	.61	.61	Ornamental sculptors..	1.91	1.93	1.14	1.18
Rope makers.....	1.08	.....	.65	.63	Brickmakers.....	.97	1.16	.71	.76
Wheelwrights.....	1.35	1.35	.77	.81	Potters.....	1.16	.....	.69	.78
Wood turners.....	1.25	1.35	.82	.86	Glaziers.....	1.16	.....	.76	.78
Coopers.....	1.16	.....	.75	.80	Day laborers.....	.....	.....	.53	.56
Cabinetmakers.....	.....	1.54	.84	.87	Ironers, laundry (f.)...	.63	.....	.22	.37
Tapestry workers.....	1.64	1.74	.87	.94	Seamstresses, on dresses	.77	.82	.38	.38
Sawyers, lumber.....	1.54	1.30	.79	.82	Seamstresses, white goods.....	.48	.63	.34	.34
Carpenters.....	1.48	1.74	.87	1.00	Waistcoat makers (f.)..	.77	.97	.40	.44
Joiners.....	1.30	1.54	.81	.81	Lace makers (f.).....	.77	.97	.39	.42
Coppersmiths.....	1.54	1.50	.88	.91	Embroiderers (f.).....	.87	.97	.42	.44
Tinsmiths.....	1.16	1.50	.79	.82	Dressmakers (f.).....	.....	.77	.40	.41
Plumbers.....	1.40	1.45	.82	.85					
Blacksmiths.....	1.54	1.64	.85	.90	Average.....	1.23	1.34	.74	.76
Stove makers.....	1.28	.....	.82	.85					

The inquiries addressed to the school-teachers adduced the fact that the greater number of families under consideration consisted of 4 persons, and this number was chosen as constituting a typical family and the report based on that computation.

The approximate monthly consumption of food by such a family was considered to be about 50 kilograms (110.23 pounds) of bread, 10 kilograms (22.05 pounds) of beef, 4 kilograms (8.82 pounds) of lard, 6 dozen eggs, 34 liters (35.93 quarts) of milk, and 22 kilograms (48.5 pounds) of potatoes. The drink consumed was reckoned, according to locality, at 44 liters (46.49 quarts) of wine, 80 liters (84.54 quarts) of beer, or 100 liters (105.67 quarts) of cider. This amount being fixed, the varying cost in different localities was reported, from which a classified summary was prepared as follows:

ESTIMATED COST PER MONTH OF FOOD AND DRINK IN VARIOUS COMMUNES, CLASSIFIED ACCORDING TO POPULATION.

Class of population groups.	Number of communes reporting.	Expenses.		
		For food.	For drink.	Total.
Under 1,500 inhabitants	2,860	\$10.04	\$2.39	\$12.98
From 1,500 to 5,000 inhabitants	317	10.71	2.70	13.41
From 5,000 to 50,000 inhabitants	126	10.81	2.80	13.61
Over 50,000 inhabitants	46	11.97	3.45	15.42

L'Industrie du Chiffon à Paris. Office du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. 1903. vi, 110 pp.

Under this head are presented the results of an investigation made into the industry of ragpicking in Paris and its suburbs. The different chapters discuss the conditions of labor, the products of the industry, the economic condition of the ragpickers and of the masters and dealers, the influence of the regulations controlling the cleaning of the streets and the disposition of the paper collected, and the organization and sanitary and moral condition of the persons considered.

The industry is an old one in Paris, having been the object of special police ordinances as early as the seventeenth century. There are two classes of workmen, the collectors who go upon the streets and secure a product from the sale of which they derive their support, and the employees of the masters who purchase and sort the collected material, selling each class of products to the dealers. Subdivisions are made of the former group, as night workers, collectors who have fixed beats or places of resort, wandering ragpickers, workers on the city rubbish carts, etc.

Gathering at night was most common and profitable under the old custom of depositing rubbish on the streets at nightfall, to be gathered

up on the following day, but since the passage of laws requiring the use of receptacles into which sweepings and domestic refuse must be put not more than one hour before the time for the city carts to make their tours of collection but little of this kind of work is possible. This period was fixed for a time at one-fourth of an hour, but the ragpickers demanded and secured the modification that allows one hour for their operations.

Collectors who obtain the favor of the janitor of a house by assisting in the handling of the refuse and the placing of it in boxes secure a sort of local right that is not only respected in behalf of the one securing it, but is also made the object of barter and sale between the collectors. The price of a "place" or beat in a good section of the city may amount to 100 or 150 francs (\$19.30 or \$28.95), or in exceptional cases to as much as 400 francs (\$77.20).

The city allows a fixed compensation amounting to 1.35 francs (26 cents) per day for three hours' service to a class of collectors who assist the drivers of the city carts in their labors. These collectors watch the rubbish as it is emptied and also go upon the carts in their search for such matter as they may be able to make profitable to themselves.

The number of persons occupied in the industry is not easily determined, partly because the business is one in which one may engage as an adjunct to some other employment with which he prefers to be enumerated, and partly because it is difficult to determine how far the members of a ragpicker's family are engaged with him in the prosecution of his work. An industrial census of 1896 gave the number at 4,959 in Paris and its suburbs, including collectors, sorters, and dealers. An estimate based on the work accomplished gives approximately the same number in 1902, while an organization of the masters reports 22,500 and two organizations of the workmen report 19,200 and 27,700, respectively, as the number of persons employed in the collecting and sorting of the various materials handled. An ordinance of 1872 required enrollment and the procuring of a badge. Under this law 5,900 persons presented themselves as ragpickers. This was in the period when practically all collecting was done at night.

The total amount of material collected by all classes of gatherers is estimated at about 117,400 tons. The receipts of the workmen are approximately 3,500,000 francs (\$675,500), besides the value of the articles which they use, while the various manipulations and transportations effect a final contribution of raw material to various industries amounting in value to 8,000,000 or 9,000,000 francs (\$1,544,000 or \$1,737,000). The daily income of the various classes of workers varies from 1.25 to 4 francs (24 to 77 cents).

The necessity of immediately securing cash returns for his day's work and the lack of facilities for sorting compel the gatherer to turn

the results of his labors over to the buyer without the advantage of classification or of choosing his purchaser. Dealers refuse to buy of those who will not bring all their products to them, and they often have claims also for money advanced. Efforts at cooperative selling associations and at the formation of unions have been made with a view to releasing the gatherers from this dependence, but none of these have effected anything more than temporary results. There were in existence, however, at the date of the publication of this report some recently formed associations which are thought to give promise of greater permanence.

Among patron or master ragpickers an organization was formed in 1890, and another in 1900, the latter restricted to Paris, while the former is of wider geographical scope.

The table of materials used by the dealers, found in the collections of the ragpickers, includes rags for paper, woolen rags for raveling, silk, bones, glass, metals, shoes, etc. Profits are reported to be decreasing for various reasons, among others the use of wood pulp for paper making, the prohibition against the use of printed paper for wrapping articles of food, the importation of rags, the diminution in market value of various collected articles, and a form of competition by charitable institutions and dealers in secondhand goods.

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, has been continued in successive issues. All material parts of the decisions are reproduced in the words of the courts, indicated when short by quotation marks, and when long by being printed solid. In order to save space, matter needed simply by way of explanation is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

EMPLOYERS' LIABILITY—INSURANCE—CONSTRUCTION OF POLICY—ACTION BY EMPLOYEE—*Connolly v. Bolster et al.*, *Supreme Judicial Court of Massachusetts*, 72 *Northeastern Reporter*, page 981.—In this case Connolly, who was an employee of one Bell, sought to recover on a judgment against his employer for an injury received while in the latter's service. Bell had disappeared, and the action was against Bolster, as attorney for the company which had issued a policy of insurance in Bell's favor, securing him against loss under his liability as an employer.

In the superior court of Suffolk County the insurance company had demurred to the bill and the demurrer was sustained, whereupon Connolly appealed to the supreme judicial court of the State with the result that the decree of the court below was affirmed. Further facts necessary to an understanding of the case are set forth in the opinion of Judge Loring, speaking for the court, from whose remarks the following is quoted:

The plaintiff claims that he is entitled to maintain this bill to reach and apply the debt due from the insurance company to his employer, Bell, first, on the ground that, on the true construction of the policy, the insurance company is indebted at law to his employer in the amount of the judgment which he has recovered against him; and, secondly, that, if the debt is not due at law, his employer has a right in equity to maintain a bill against him for exoneration, and to compel the company to satisfy the judgment directly. On the first ground the plaintiff relies on the case of *Sanders v. Frankfort Ins. Co.*, 72 N. H. 485, 57 Atl. 655. In that case relief was given under similar circumstances on the ground that, as matter of construction of a policy having the same terms, payment of a judgment by the assured was not a condition precedent to a right of action on the policy where the insurance company had undertaken the defense of the claim. By the policy here under discussion, and construed by the court in *Sanders v. Frankfort Ins. Co.*, the company "agrees to indemnify" the assured "against loss from common-law or statutory liability for damages on account of bodily injuries" to employées, caused by the negligence of the assured, "subject to the following special and general

agreements." The second, third, and eighth clauses of the general agreements are the material ones. The second and third and the material part of the eighth clauses are as follows:

"(2) If thereafter, any suit is brought against the assured to enforce a claim for damages on account of an accident covered by this policy immediate notice thereof shall be given to the company, and the company will defend against such proceeding, in the name and on behalf of the assured, or settle the same at its own cost, unless it shall elect to pay to the assured the indemnity provided for in clause A of special agreements as limited therein.

"(3) The assured shall not settle any claim, except at his own cost, nor incur any expense, nor interfere in any negotiation for settlement or in any legal proceeding without the consent of the company previously given in writing, but he may provide at the time of the accident such immediate surgical relief as is imperative. The assured when requested by the company shall aid in securing information and evidence and in effecting settlement, and in case the company calls for the attendance of any employee or employees as witnesses at inquests and in suits the assured will secure his or their attendance making no charge for his or their loss of time."

"(8) No action shall lie against the company as respects any loss under this policy, unless it shall be brought by the assured himself to reimburse him for loss actually sustained and paid by him in satisfaction of a judgment after trial of the issue."

The conclusion that payment of the judgment recovered by the employee was not a condition precedent to an action on the policy was reached in *Sanders v. Frankfort Ins. Co.* on these grounds: The word "defend," in the second clause, means to protect and secure against attack—"in short, to successfully defend"—and therefore included an obligation on the part of the company to pay the judgment if the case defended resulted in a judgment against the assured. That the second clause of the general agreements, so construed, was not consistent with the eighth clause of the general agreements, which stipulates, in terms, that "No action shall lie against the company as respects any loss under this policy, unless it shall be brought by the assured himself to reimburse him for loss actually sustained and paid by him in satisfaction of a judgment after trial of the issue." That, if the eighth clause is construed to cover cases of which the insurance company has assumed the defense, it is inconsistent with the second clause, so construed, and consequently the eighth clause must be construed not to cover those cases, but to be confined to cases of which the insurance company has not assumed the defense. We are of opinion, however, in the first place, that the word "defend," in the second clause, is to have its natural import; that it means here what it means when counsel are retained to defend an action; and that it is not to be extended beyond that, and to mean to "successfully defend." In the second place, the second clause is an obligation in addition to the obligation to indemnify the assured against loss, and not a clause qualifying the main obligation of the policy to "indemnify" "against loss" from liability for damages on account of bodily injuries to employees caused by negligence of the assured. The object of this second clause is plain, when taken in connection with the third. It is plainly inserted as an additional obligation and privilege for the protection of the insurance company, on the

assumption that it is for the pecuniary interest of the company to be given the conduct of and to defend the action which is to fix its liability, and the amount to be paid when liable, rather than to leave that matter to be dealt with by the several persons insured, respectively. This does not result in the necessity of writing into clause 2 the qualifying words "until final judgment," as the plaintiff contends, for, when final judgment is rendered, ordinarily all defense is at an end. Nothing remains but a writ of review or a writ of error, and, if such a proceeding were necessary, it might well be held to be covered by the obligation to defend. But when the defense is ended, and, in spite of the defense, judgment is rendered against the insured, there is nothing to do but pay. Making payment of a judgment against the defendant is no part of a covenant to defend the action. Whether the insurance company is bound to pay the judgment depends upon the terms of its agreement to indemnify the assured against loss, and the eighth clause, in terms, provides that no action shall lie for "any loss under this policy," unless brought by the assured "to reimburse him for loss actually sustained and paid by him in satisfaction of a judgment after trial of the issue." In the case at bar, Bell has not paid the judgment recovered by the plaintiff, and therefore has no claim against the insurance company.

We add, only because the plaintiff has argued to the contrary, that the policy here in question is not to be construed in the same way as a policy which insures against the liability of the employer, and does not contain clause 2 of the general agreements. For the same reason it is necessary to point out that to pay a judgment under clause 2 is not "to settle any claim," within clause 3, and so there is no inconsistency between the two clauses.

It is proper to point out that, if the plaintiff is right in his construction of the policy, his remedy would have been to attach the debt due by trustee process in an action at law.

No argument has been made in support of the second contention stated in the plaintiff's brief. The contention can not be sustained.

It remains to speak of the plaintiff's prayer to have a receiver appointed to pay the judgment due to the plaintiff, and so complete Bell's right against the defendant. The statute authorizing a plaintiff to reach and apply (Rev. Laws, c. 159, sec. 3, cl. 7) deals with the defendant's property which can not be attached at law. It is not a statute authorizing the court to complete inchoate rights, so as to create property which could then be the subject of trustee process in an action at law.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—CONTRIBUTORY NEGLIGENCE—CONSTITUTIONAL PROVISION—CONSTRUCTION—*Norfolk and Western Railway Company v. Cheatwood's Administratrix*, Supreme Court of Appeals of Virginia, 49 Southeastern Reporter, page 489.—Judgment had been awarded the plaintiff against the company named for negligently causing the death of W. J. Cheatwood, an engine hostler in its employ, the case having been heard in the corporation court of the city of Radford. From this judgment the company appealed, with the result that the judgment of the lower court

was affirmed. No point of particular interest was involved, other than a ruling on the construction of section 162 of the constitution of the State and of section 1294k of the code of 1904 (ch. 322, Acts of 1901-2). These sections provide that "knowledge by any railroad employee injured of the defective or unsafe character or condition of any machinery, ways, appliances, or structures shall be no defense to an action for injury caused thereby."

On the construction to be placed on this language, Judge Cardwell, for the court, said:

This provision of the constitution was taken verbatim from the constitution of the State of Mississippi, and when adopted by our late constitutional convention it had been construed by the supreme court of Mississippi in the case of *Buckner v. R. & D. R. R. Co.*, 72 Miss. 873, 18 South. 449, in which case a servant was injured by defective machinery and his contributory negligence. It was in that case claimed that the constitution of Mississippi abrogated the defense of contributory negligence, but the court held otherwise, and, after quoting the constitutional provision, said: "The effect of this is not to destroy the defense of contributory negligence by a railroad company, but merely to abrogate the previously existing rule that knowledge by an employee of the defective or unsafe character or condition of the machinery, ways, or appliances shall not, of itself, bar a recovery. The law was that knowledge by an employee of defective appliances which he voluntarily used precluded his recovery for an injury thus received. The constitution destroys that rule, and the mere fact that the employee knew of the defect is not a bar to recovery; but knowledge by an employee of defects is still an element or factor, and a very important one, in determining whether, with the knowledge he had, he used that degree of caution required in his situation with reference to the appliances causing his injury. The constitution did not have the effect to free employees of railroad companies from the exercise of ordinary caution and prudence. It does not license recklessness or carelessness by them, and give them a claim to compensation for injuries thus suffered. They, like others not employees, must not be guilty of contributory negligence, if they would secure a right of action for injuries."

Under the rule laid down by this court in *N. & W. Ry. Co. v. Old Dominion Baggage Co.*, 99 Va. 111, 37 S. E. 784, 50 L. R. A. 722, the construction placed on that clause in our constitution by the Mississippi court must be adopted by this court.

We are of opinion that, independently of the rule laid down in *N. & W. Ry. Co. v. Old Dom. Baggage Co.*, supra, the construction put upon the language of the constitutional provision under consideration by the supreme court of Mississippi is a correct construction.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—FELLOW-SERVANT LAW—LOGGING RAILROAD—*McKivergan v. Alexander and Edgar Lumber Company, Supreme Court of Wisconsin, 102 Northwestern Reporter, page 332.*—E. J. McKivergan was injured while in the service of the above-named company, assisting in the operation of a log-

ging road, by the negligence, as he claimed, of the engineer on the train for which he was brakeman. He sued in the superior court of Douglas County, in which court the judgment was for the company, from which judgment he appealed.

The action was brought under section 1816, Rev. Stat., 1898, which provides that, "Every railroad company operating any railroad which is in whole or in part within this State shall be liable for all damages sustained within the same by any of its employees without contributory negligence on his part * * * (2) while any such employee is so engaged in operating, running upon or switching, passenger, freight, or other trains, engines or cars, and while engaged in the performance of his duty as such employee, and which such injury shall have been caused by the carelessness or negligence of any other employee, officer, or agent of such company in the discharge of or for failure to discharge his duties as such."

The lower court ruled that this provision did not apply to private roads, such as the logging road on which the accident causing the injury complained of occurred, in which view the superior court concurred.

The grounds of this concurrence appear in the following extracts from the remarks of Judge Siebecker, who announced the conclusions of the court. After stating the facts in the case, and quoting the statute as given above, he said:

It is contended by plaintiff that in construing this statute the phrase "railroad company," as used in this section, is to be applied as the phrase "railroad corporation" is used in section 1861, Rev. St., 1898, which is as follows: "The phrase 'railroad corporation,' as used in the statutes, may be taken to embrace any company, association, corporation or person, managing, maintaining, operating or in the possession of a railroad, whether as owner, contractor, lessee, mortgagee, trustee, assignee or receiver." Adopting this interpretation leads to the inquiry, upon whom did the legislature intend to impose the liabilities prescribed by the terms of section 1816, Rev. St., 1898? Were its terms only to apply to railroad corporations doing a public service, commonly known as "commercial railroads," or was it intended to impose these liabilities on every person, company, or corporation operating trains, engines, or cars, regardless of whether such business was in the nature of a public service as common carrier, or devoted exclusively to a private enterprise, including no public service. The question is not so clear and plain as to be free from all difficulties. If the statute be held to apply to the character of the employment, then no valid reason is suggested why it should not be held to cover all classes of public and private railroads, regardless of the nature of their business. The contents of this particular section might, in its literal sense, permit of such an application. This, however, would put it out of harmony with the other provisions of chapter 87, Rev. St., 1898, covering legislation "on railroads" in this State. An examination of the provisions of this chapter discloses numerous provisions pointing to the fact that the legislation therein contained

referred exclusively to railroad corporations doing the usual business of a public or commercial railroad. An important and distinguishing characteristic of railroads included within the purview of this chapter is to grant to every corporation organized under it the power of exercising the right of eminent domain in its quasi public character. The difference between such a railroad and one used as an incident to conducting a private business is readily perceived and understood, without elaboration. The objects and uses of the one are far removed from those of the other, though the instruments of operation, such as tracks, cars, and engines, may be common to both. Since the provisions of all these sections of this chapter, aside from section 1816, plainly and unmistakably include commercial railroads only, * * * it necessarily follows that defendant does not come within the terms of the statute.

EMPLOYERS' LIABILITY—STREET RAILWAYS—RAILROADS—CONSTRUCTION OF STATUTE—*Indianapolis and Greenfield Rapid Transit Company v. Andis, Appellate Court of Indiana, 72 Northeastern Reporter, page 145.*—Charles Andis sued in the circuit court of Henry County to recover damages for injuries received while in the employ of the above-named company, and from a judgment in his favor the company appealed. The transit company operated a street or inter-urban railway, using only electricity as a motive power, and the case turned largely on the point whether the employers' liability law of 1893, which enumerates injuries "caused by the negligence of any person in the service of such corporation (any except municipal) who has charge of any signal, telegraph office, switch yard, shop, round-house, locomotive engine, or train upon a railway * * *" was applicable in the case of a road of the nature of the defendant's.

The appellate court held that such is not the case, and a portion of the opinion of Judge Robinson, who delivered the opinion of the court, is here reproduced, as setting forth the grounds for such conclusions:

Each of the cars of appellant, one of which the motorman and conductor had charge of when this accident occurred, "is what is known as an electric car—that is, cars which are operated and run by electricity alone; and each of said cars is so constructed that they can be and are controlled by a motorman, who takes the place of and discharges the duty which corresponds to that of the engineer and fireman of a locomotive used upon steam railways." We do not think the electric car in this case comes within the definition of a "locomotive engine" adopted by the Supreme Court in the case of *Jarvis v. Hitch*, 161 Ind. 217, 67 N. E. 1057. [See Bulletin of the Bureau of Labor No. 49, p. 1366.] In that case it is said that "by the term 'locomotive engine,' used in said clause, the legislature only intended an engine constructed and used for traction purposes on a railroad track." In that case the machine—a pile driver—consisted of a steam engine placed on a flat car at one end and the driver at the other end. The engine was used to lift the hammer and let it drop on the pile. A chain ran

from the engine to a sprocket wheel on the axle under the boiler, and by this means the machine and cars belonging to it were moved from place to place. The same reasoning through which in that case it was held that the machine was not a locomotive engine, within the meaning of that term as used in the employers' liability act, precludes the holding in this case that the electric car is a locomotive engine. Neither can it be said that an electric car, such as that described in the pleading, comes within the meaning of the term "train upon a railway," as used in the act. An examination of the various earlier statutes concerning railroads discloses that in the general provisions concerning the organization, construction, and operation of railroads the legislature has used simply the term "railroad," and that it has used it in the generally accepted sense of "steam railroad." It is no doubt true that if the language used in a statute is sufficiently comprehensive to cover unknown conditions, and the same language would probably have been used to cover certain conditions had those conditions existed at the time of the enactment, it should be held to apply to such conditions arising subsequent to the enactment. That is, if interurban railways and electric railways had been in operation generally at the time the employers' liability act became a law, and the legislature would probably have used the language it did use in that act, the act should be held to apply to such roads, though not in operation generally until after its enactment. But the scope intended to be given the earlier legislation may to an extent, at least, be indicated by subsequent legislation upon the same general subject-matter. Since the earlier statutes were passed the legislature has itself concluded, as indicated by the language used, that the general term "railroad" does not include "interurban street railroad," or "suburban street railroad" (section 5468a, Burns' Ann. St. 1901), or "electric roads" (sections 5158b, 5158d, Burns' Ann. St. 1901), or "street railroads" (section 5450 et seq., Burns' Ann. St. 1901). Thus section 5158b, Burns' Ann. St. 1901, provides that "when in case two or more railroads, or a railroad and an electric road crossing each other at a common grade, or any railroad crossing a stream"—providing for a system of interlocking switches. In that statute the word "railroad" is clearly distinguished from "electric road," and the legislature must have taken it for granted, by not adding any qualifying word, that the word "railroad" would be understood to mean "steam road." Moreover, we must assume that when the legislature passed the employers' liability act of March 4, 1893, it was dealing with and acting upon existing facts within its knowledge. The mischief felt and intended to be remedied was then certainly known. It can not be assumed that the statute was passed before there was an apparent necessity for its enactment. When that act was passed, aside from street railroads in cities, steam railroads were the only railroads in operation generally, and the dangers arising from the operation of railroads were to a very large extent only such dangers as arose from the operation of steam railroads. At that time there were few, if any, electric roads, as now known, in existence in this State. The reasons for changing the law relating to master and servant, as that act changed it, were at that time to be found in the many dangers to which the numerous persons engaged in operating steam railroads were exposed, and the many different departments of labor in which the workmen were employed.

EMPLOYERS' LIABILITY—USE OF UNGUARDED MACHINERY—ASSUMPTION OF RISK—CRIMINAL LAW—CONSTRUCTION OF STATUTE—*Nottage v. Sawmill Phoenix, United States Circuit Court for the Eastern District of Washington, 133 Federal Reporter, page 979.*—The plaintiff, Nottage, was injured while in the employment of the defendant, and brought suit for the recovery of damages. The facts in the case and the statute on which Nottage relied are sufficiently set forth in the remarks of Judge Hanson, who delivered the opinion of the court, which was adverse to the claims of the plaintiff, and from which the following is quoted:

The accident happened on a Sunday, the plaintiff having accepted an offer of employment on that day for extra pay. The defendant failed to comply with the requirements of a statute of this State, which makes it an imperative duty of sawmill owners to provide for the safety of their employees by having substantial safety guards attached to all circular saws of the kind which caused the injury to this plaintiff, and the court finds as a fact, proven by the evidence, that if the protection which the statute requires had been provided the accident by which the plaintiff was injured would not have happened. The defendant is convicted by the evidence of culpable negligence, which the statute makes criminal, and that negligence was the proximate cause of the severe and permanent injury for which this plaintiff claims damages.

So far the court has proceeded without difficulty in finding facts established by the evidence and reaching conclusions favorable to the plaintiff's side of the case; but, on the other hand, it is an undisputed fact in the case that the plaintiff voluntarily accepted an offer of employment as operator of this particular saw, after he had been working continuously at other employment in the same mill for a period of at least six weeks, his station being less than 10 feet distant from this rip saw, so that he had abundant opportunity to have become familiar with it, and necessarily knew that it was unguarded and lacking in the means of safety which the statute prescribes. He was not obliged to work on Sunday, under the terms of his general contract of employment, but accepted an offered opportunity to work as operator of the rip saw on a Sunday for extra compensation, knowing that the saw was unguarded and a dangerous implement.

These facts bring the case clearly within the rule of law which exempts an employer from liability for accidental injuries to employees on the ground that they are held to a degree of responsibility for their voluntary acts, and are deemed to have assumed the risk of accidental injuries happening from exposure to known or obvious dangers.

It is absolutely necessary in the conduct of human affairs for people to have liberty to engage in dangerous employments, and the law takes into consideration the circumstances surrounding each contract of employment, and fixes the relative responsibilities of the parties with reference to what may be fairly assumed to have been their own understanding and agreement. The law does not place upon employees an obligation to investigate conditions and assume the risk of accidents which may happen from dangers which might be revealed by a reasonably thorough inspection of places and appliances, but merely takes for granted that by voluntarily entering into an employment, or con-

tinuing therein, they do thereby assent to the exposure of themselves to all such dangers as they know to exist, and such as are necessarily obvious to them in view of their capacity, knowledge, and experience, each case being judged by its peculiar facts.

The principles of the common law applied to the facts in this case afford no ground for an award of damages to the plaintiff; but in his behalf it is contended that he has a right of action, and is entitled to an award of damages, by virtue of a statute of this State providing for protection of employees in factories and mills, enacted March 6, 1903. (See Laws Wash. 1903, p. 40, c. 37.)

This statute provides in terms "That any person, corporation or association, operating a factory, mill or workshop where machinery is used, shall provide and maintain in use * * * proper safeguards for all vats, pans, trimmers, cut-off, gang edgers and all other saws that can be guarded advantageously. * * * If a machine, or any part thereof, is in a dangerous condition, or is not properly guarded, the use thereof is prohibited and a notice to that effect shall be attached thereto. * * *"

"Section 4: Any person, corporation or association who violates or omits to comply with any of the foregoing requirements or provisions of this act, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than twenty-five nor more than one hundred dollars or by imprisonment for not less than fifteen days nor more than ninety days."

This is a penal statute, enacted by the legislature in the exercise of the police power of the State, and it contains no provision purporting to affect in any way the rules of law applicable to civil actions. It gives no hint of an intention to confer upon injured employees any new right enforceable in an action to recover damages, nor does it express a legislative intent to change the common law by abolishing defenses recognized by the common law, nor does it prescribe an arbitrary rule of evidence, like the provision contained in the act of Congress making the use of automatic couplings on railroad trains compulsory, which prescribes, in effect, that trainmen shall not be deemed to have assumed the risk of injuries from their employment on trains not provided with automatic couplers. (See U. S. Comp. St. 1901, vol. 3, p. 3176.)

The courts have no authority to extend or amplify the provisions of statutes so as to make them comprehend additional rights and remedies which the legislature omitted to provide. A statute which is plain and free from ambiguities is not subject to judicial construction, but must be interpreted by the courts and enforced according to the legislative intention expressed by its words. It is not true that the purpose of the statute will be defeated by a decision of a controversy between individuals involved in a civil action in accordance with the long-established rules of the common law. It may be fairly inferred that the legislature did not intend to encourage this class of litigation, which is already stimulated to abnormal proportions by the solicitations of employment by specialists, but preferred, as a means of protecting employees in factories from the consequences of recklessness in the use of dangerous agencies, to make the unnecessary use of unguarded machinery criminal and punishable. The real intention of the legislature is made apparent by the fact that the law does not discriminate between employers and employees. It is not a law subjecting only the owner or manager of a mill or factory or an employer of labor to the

penalties prescribed, but section 4 applies generally to every "person, corporation or association who violates or omits to comply" with the requirements of the act. Section 1 provides that, if a machine is not properly guarded as required, the use thereof is prohibited; therefore an employee in a mill who operates an unguarded saw commits a prohibited act, and is a violator of the statute, and subjects himself to punishment as provided in section 4.

Another of the arguments found in the dictum of cases relied upon by the plaintiff is a rather far-fetched theory that the statute has by necessary implication abolished the common-law principle of assumption of risk by voluntary employees, because that principle is based upon an implied contract, and since the statute makes the use of unguarded machinery criminal, any such implied contract would be an inconsistency in the law itself, in so far as the law would create a contract to do an act which the law prohibits.

In this there is a misunderstanding of the legal implication in such cases. A contract of employment is not a creation of the law. Nor is the assumption of risk of injury from the employer's wrongful neglect of his duty a burden imposed by the law. It only deals with actual conditions, and it is the actual use of dangerous agencies to which the law attaches the implied agreement on the part of an employee to make no claim against the employer for any injury which may happen, as a consequence of his voluntary exposure to known or obvious dangers. Were a man to stipulate in express terms to operate a dangerously defective machine for a definite period of time, the law would not hold him liable as a violator of a valid contract for refusing to expose himself to such danger, when no peculiar circumstances excused the employer's failure to correct the defect. Such a stipulation in an executory contract would be illegal and void because obnoxious to the natural law of self-preservation and contrary to public policy. There is no substantial difference between an agreement which is unlawful because harmful and an agreement to do an act prohibited by a statute. In either case the unlawfulness of the agreement constitutes a bar to its enforcement by judicial proceedings.

If the violation of the statute by the operation of an unguarded saw places the guilty employer in a position in which he can not be permitted to invoke a well-established rule of law as a defense in a civil action to recover damages for an injury resulting from such violation of the statute, it is so because the law leaves willing wrongdoers to suffer the consequences of their voluntary acts, and the same rule applies with equal force as a bar to the maintenance of an action to recover damages for such an injury resulting from a violation of the statute, in the operation of a dangerous and prohibited machine, by the injured operator.

For the reasons above set forth, it is my opinion that this plaintiff has neither a common-law nor statutory right of action for the injury which he has suffered, and that a judgment must be rendered that he take nothing by this action.

EXAMINATION AND LICENSING OF BARBERS—CERTIFICATES—CONSTRUCTION OF STATUTE—*State v. Chaney, Supreme Court of Washington, 78 Pacific Reporter, page 915.*—Robert L. Chaney was convicted in the superior court of King County of a violation of the

provisions of chapter 172 of the acts of 1901 of the State legislature. This law required the examination of applicants desiring to engage in the occupation of barbering, allowing those who were so engaged at the time of the passage of the law to procure certificates without examination, on proper application. (For the law in full see Bulletin 43 of the Department of Labor, page 1323.)

Chaney was a barber at the time of the passage of the act, and complied with the requirements of the law in procuring a certificate and also a renewal at the expiration of the first year of the existence of the law. Application and deposit of the fee required were made in due course at the end of the second year, but the certificate was withheld on the ground that he was conducting his shop in "an unsanitary and filthy manner," in violation of the law, and his old certificate was on this ground subsequently revoked. Chaney continued to carry on his business, however, claiming that the board of examiners created by the act in question had no power to revoke certificates of registration issued to barbers who were such at the time the act went into effect, and that the law provided no penalty for following the occupation of barbering after a certificate had been revoked.

The lower court ruled against Chaney on these contentions, and on his appeal to the supreme court the judgment against him was confirmed. The grounds on which the court made its ruling appear in the following extracts from the opinion of Judge Fullerton, who spoke for the court:

In support of his first contention, the appellant argues that the act makes a distinction as to the character of the certificates that are issued under the act; that the act provides for two characters of certificates, the first of which is called a "certificate" merely, while the second is called a "certificate of registration;" that the former is issued to barbers who were following the occupation at the time the act went into effect, and that as to them nothing further was provided or intended, but that they can follow their occupation from that time on free from the supervision or control of the board of examiners; that a "certificate of registration" is issued only to those who seek to commence the occupation of barbering since the passage of the act, and it is such barbers only that the board have power to supervise and control, and whose authority to follow the business can be revoked for the causes enumerated. It seems to us, however, that the appellant mistakes the effect of the language employed in the act. The only distinction made, as we view it, is that it was intended by the legislature that those who should be engaged in the occupation of barbering at the time the act went into effect should be permitted to continue to do so without examination as to their qualifications, while those who should come in thereafter should submit to such examination; but all were to stand thereafter on an equal footing—all were required to obtain a certificate in order to engage in the occupation, which certificate could be revoked for crime, drunkenness, if the holder became afflicted with contagious or infectious diseases, or did his work in an unsanitary or filthy manner. This is gathered from the words of the act. By the first section it is

made unlawful for any person to follow the occupation of barber in the designated places without having a certificate of registration. By section 9 those then engaged in the occupation at the time of the passage of the act were entitled to a certificate for one year, on paying certain fees, without examination as to their qualifications. By section 10 those thereafter applying were required to pass an examination before a certificate be issued to them. And in the same section it is provided that "all certificates" shall be renewed each year, and by section 14 the board of examiners is given power to revoke any certificate for the acts therein enumerated. These sections, as we say, clearly imply that the only distinction to be made between the two classes was that those following the business in the designated districts at the time of the passage of the act did not have to pass an examination as to their qualifications in order to obtain a certificate, while those commencing business subsequent thereto were obligated to take such an examination. We conclude, therefore, that the board of examiners had power to revoke the appellant's certificate.

The second contention is founded upon the language of section 15. By that section a penalty is provided for "practicing the occupation of barber * * * without first having obtained a certificate of registration as provided in this act," which, it is said, is a different thing from practicing the occupation of barber after his certificate of registration had been revoked—the offense charged and proven against the appellant. But we think this distinction not well founded. A person who engages in the occupation after his license is revoked, without procuring another one, is following the occupation "without having first obtained a certificate of registration," as much so as is a person who engages in the occupation without having obtained a certificate at all. Both stand on the same plane. Neither have a license, and each engage in the business. The fact that one at some past time held such a license does not make their respective situations different.

The judgment is affirmed.

EXAMINATION AND LICENSING OF HORSESHOERS—POLICE POWERS—CONSTITUTIONALITY OF STATUTE—*In re Aubry, Supreme Court of Washington, 78 Pacific Reporter, page 900.*—This case was before the supreme court on the petition of Ronald Aubry for a writ of habeas corpus. Aubry was a resident of the city of Tacoma, and had followed the vocation of blacksmithing for a number years, and until arrest and commitment under chapter 67 of the laws of Washington of 1901, which requires horseshoers in cities of the first, second, and third classes to pass an examination and obtain a license, the fee for which is fixed at \$10.

The case turned entirely on the question of the constitutionality of the statute named (for law in full see Bulletin of the Department of Labor No. 43, p. 1320), upon which question the court ruled adversely, on grounds presented below:

Article 1, § 3, of our State constitution, provides that "no person shall be deprived of life, liberty, or property without due process of

law." The fourteenth amendment of the Constitution of the United States contains a similar provision, and further prescribes that no State shall deny to any person within its jurisdiction the equal protection of the laws. The following quotation is taken from the brief of the counsel for petitioner, Aubry: "We admit in the outset that the State has power to tax all trades and occupations, and that this power is only limited by the constitutional requirement that its exercise shall fall upon all citizens of like class and similar conditions equally. We deny that the legislature can license for purposes purely of regulation and restraint or prohibition any of the usual, ordinary, and harmless occupations of life."

Respondent's counsel argue that the act under consideration should be upheld as a legitimate and proper exercise of the police power of the State, and not upon the theory that this law was enacted for the purposes of raising revenue. They say: "That it is within the police power of the State to regulate such occupations or business enterprises as may, if unrestricted in their exercise, be injurious to the public health, safety, morals, or general welfare, even though they may be perfectly lawful."

The exercise of the police power by the State within its proper sphere is well calculated to promote and safeguard the public welfare and subserve the best interests of society. But this power, however comprehensive it may be under our fundamental law, has its limitations. In *re Jacobs*, 98 N. Y. 108, 110, 50 Am. Rep. 636, Earl, J., says: "The limit of the power can not be accurately defined, and the courts have not been able or willing definitely to circumscribe it. But the power, however broad and extensive, is not above the constitution. * * * Generally it is for the legislature to determine what laws and regulations are needed to protect the public health and secure the public comfort and safety, and, while its measures are calculated, intended, convenient, and appropriate to accomplish these ends, the exercise of its discretion is not subject to review by the courts. But they must have some relation to these ends. Under the mere guise of police regulations personal rights and private property can not be arbitrarily invaded."

The only cases directly upon the point are from Illinois and New York, in each of which an enactment similar to the one here in question is held unconstitutional, as being an arbitrary interference with personal liberty and private property of the citizen without due process of law. (*Bessette v. People*, 193 Ill. 334, 62 N. E. 215, 56 L. R. A. 558 [see Bulletin of Department of Labor No. 41, p. 842]; *People v. Beattie* (Sup.) 89 N. Y. Supp. 193.) It seems to us that these cases state the correct rule. We conclude, therefore, that the act complained of can not be sustained as a legitimate exercise of the police power under the fundamental law of this State, and that the prayer of the petitioner must be granted.

INJURIES CAUSING DEATH—FOREIGN STATUTES—JURISDICTION—*Whitlow v. Nashville, Chattanooga and St. Louis Railway Company*, Supreme Court of Tennessee, 84 Southwestern Reporter, page 618.—In this case J. Y. Whitlow, as administrator, sued the railroad company to recover for the death of one John Whitlow, who, it was

alleged, was killed through the negligent and wrongful act of the company while the said Whitlow was in its employment on its road in the State of Alabama. The suit was brought in the circuit court of Marion County, Tenn., the decision being in favor of the defendant company on the ground, first, that the statute of Alabama under which the suit was brought was penal, and therefore not enforceable in the courts of Tennessee; and, second, that the statute of Alabama and the statute of Tennessee giving a right of action in case of wrongful death are so dissimilar in their purposes and enforcement that the courts of the latter State will not undertake to enforce the law of the former.

From this ruling of the circuit court this appeal was taken, and a reversal of the judgment was procured, with orders for a new trial, and a recognition of the Alabama statute as a valid ground for suit in Tennessee.

The grounds of this reversal are set forth in the following extracts from the opinion of the court, as delivered by Judge Neil:

The courts of this State have the power to enforce, and constantly do enforce, rights of action granted under foreign statutes. [Cases cited.] But in such cases, where the right of action is one unknown to the common law, the foreign statute must be pleaded, and the remedy prescribed by it must be pursued.

But no State will enforce the penal laws of another State. Penal laws, however, strictly and properly, are those imposing punishment for an offense committed against the State. The test whether a law is penal is whether the wrong sought to be redressed is a wrong to the public or a wrong to the individual. * * *

It is true that in construing this statute, or a prior one of similar purport, the supreme court of Alabama has held that it is not necessary to aver that the intestate left a widow, children, or next of kin; and that evidence of loss of services, or mere pecuniary loss is immaterial and irrelevant; and that evidence as to age, physical and mental condition, and earning capacity, and occupation of plaintiff's testator or intestate, and the amount of money contributed by him from his earnings to the support and maintenance of those dependent upon him is immaterial and incompetent. [Cases cited.] It is also true that the court in several opinions has referred to the damages to be assessed under the statute as "a pecuniary mulct," "a punishment or fine," against the wrongdoer, to be distributed by the administrator as personal property. Yet no one can read the foregoing authorities and other decisions of the supreme court of Alabama on cases arising under this statute as a series, and note the questions that were stated and discussed in them, without being convinced that these cases were ordinary damage suits, brought to recover for a wrongful death inflicted by the defendant upon the intestate or testator of the plaintiff, and for the benefit of the estate of the person so killed; * * *

Numerous cases were cited in support of this view of the law, and a quotation was made from the case of *Railroad Company v. Bush* (122 Ala., 488, 489; 26 South., 173, 174), of which the concluding sentence, as uttered by the supreme court of Alabama, reads: "The statute is

remedial and not penal, and was designed as well to give a right of action where none existed before as to 'prevent homicides,' and the action given is purely civil in its nature for the redress of private, and not public, wrongs."

Continuing, Judge Neil said:

What is here said in the quotation just made is the logical result of all the preceding Alabama cases on the subject, when one goes to the very substance of them, disregarding mere formal expressions; and it is impossible, in the face of this decision, to hold that actions under the statute are penal, in the international sense.

The action is not so repugnant to the public policy of our State as that we should, for that reason, decline to entertain it. The bringing and disposition of suits for damages caused by wrongful death is a matter of everyday occurrence in the courts of this State. And as said by Mr. Justice Brewer in *Stewart v. Baltimore and Ohio Railroad Company* (168 U. S. 445, 448, 449, 18 Sup. Ct. 105, 106, 42 L. Ed. 537): "A negligent act causing death is in itself a tort, and, were it not for the rule founded on the maxim, 'Actio personalis moritur cum persona,' damages therefor could have been recovered in an action at common law. The case differs in this important feature from those in which a penalty is imposed for an act in itself not wrongful, in which a purely statutory delict is created. The purpose of the several statutes passed in the States [providing that an action for injuries shall survive the resultant death of the injured person] in more or less conformity to what is known as 'Lord Campbell's Act,' is to provide the means for recovering the damages caused by that which is essentially and in its nature a tort. Such statutes are not penal, but remedial, for the benefit of the persons injured by the death. An action to recover damages for a tort is not local, but transitory, and can, as a general rule, be maintained wherever the wrongdoer can be found. It may well be that, where a purely statutory right is created, the special remedy provided by the statute for the enforcement of that right must be pursued; but where the statute simply takes away a common-law obstacle to a recovery for an admitted tort it would seem not unreasonable to hold that an action for that tort can be maintained in any State in which that common-law obstacle has been removed."

The court then discussed somewhat the differences between the statutes of Alabama and Tennessee and decided that they did not afford grounds for a refusal by the courts of the latter State to enforce the provisions of the law of the former, and concluded as follows:

We should add that we do not understand that under the Alabama statute the jury are left to unrestrained action in fixing the amount of the recovery, but that they are subject to the overruling discretion of the court, in case it should be of opinion that the amount found is so large as to evince passion, prejudice, or caprice; since it is laid down as a general principle that punitive damages are in the discretion of the jury, but only within "reasonable limits." At all events, the constitution of our own courts is such, and the relation between the court and the jury are of such character, under our laws, that the trial judge has always, and this court on appeal always, the power to set aside verdicts on the ground above stated; and every cause of action

to which the hospitality of our tribunals is extended must be understood as so qualified, inasmuch as we can not alter the constitution of our courts for their entertainment.

INSPECTION OF FACTORIES—FEES—CONSTITUTIONALITY OF STATUTE.—*State v. Vickens, Supreme Court of Missouri, 84 Southwestern Reporter, page 908.*—This case was before the supreme court on an appeal from the St. Louis circuit court of criminal correction, in which J. G. Vickens had been convicted of a violation of the factory inspection law of 1901. The appeal was based on a denial of the constitutionality of the act in question. The court ruled that the law is a valid one, and affirmed the sentence of the lower court.

Following is a portion of the remarks of Judge Gantt, who delivered the opinion of the court:

This prosecution is based upon an alleged violation of the factory inspection law of 1901, approved April 17, 1901 (Laws Mo. 1901, pp. 197, 198). By said act it is provided that the governor shall appoint a State factory inspector, who is authorized to appoint from time to time seven assistants, and to divide the State into districts, and assign one inspector to each district; and each inspector is required to make two inspections each year of all factories, and for each inspection such inspector is required to collect \$1 as an inspection fee, and all such fees are required to be paid into the State treasury. The failure to pay the fee for the inspection made May 6, 1902, is the ground of this prosecution. The objections to the law are that it "violates sections 3 and 4 of article 10 of the Missouri constitution, in that it imposes a burden of taxation for the maintaining of the inspection department upon one class of citizens, and discriminates against said class; second, that they provide for the taking of money and liberty from manufacturers without due process of law, and deny to them the equal protection of the laws; third, that they vest judicial powers in the factory inspector; fourth, that they are a delegation of legislative power to the factory inspector; fifth, that they discriminate against city manufacturers, and place greater burdens upon them than upon country manufacturers; sixth, that they are in violation of the fourteenth amendment to the Constitution of the United States, in that they deprive defendant of his liberty without due process of law, and deny him the equal protection of the law."

The first, second, and sixth objections to the law may be grouped under one head. The answer to each and all of them is that this is a police regulation for the protection of the lives, health, and morals of the employees in factories, and clearly within the power of the legislature to enact. Such being the obvious purpose and scope of the enactment, there can be no doubt of its constitutionality and validity, so far as these objections to it go. [Cases cited.]

The third and fourth objections to the act, to wit, that the act vests judicial and legislative powers in the factory inspector, are clearly without merit. The act provides for the appointment of the inspectors, and makes it their duty to inspect all factories, and requires them to give the proprietors a certificate of the result of such inspection.

Their duties are ministerial, involving only that discretion which every ministerial officer must exercise in the discharge of his duties, and are in no sense judicial or legislative, as those terms are understood in our system of laws.

The fifth assignment is equally groundless. There is no discrimination in the act between the burdens imposed upon manufacturers in cities and those imposed upon those in the country. By its terms, it applies to all factories in the State, without exception or distinction.

As a police regulation, the State has the unquestioned right to exact and demand an inspection fee for the inspection and certificate of inspection required by the act. It has never been ruled that an inspection fee, pure and simple, is a tax upon property. [Cases cited.] The inspection fee of \$1 for the inspection and certificate are so manifestly reasonable that it is clear that it is not objectionable on that ground.

The very mention of an inspection law suggests the exercise of police power by the State, and the requirement that the persons or things inspected shall pay for it. The fact that the manufacturers are required to pay the inspection fee provided by this act in no manner infringes any constitutional right of the defendant. The court of criminal correction committed no error in so holding, and its judgment is affirmed.

INSPECTION OF FACTORIES—SWEAT SHOPS—HEALTH—JUDICIAL NOTICE—POLICE POWER—CONSTITUTIONALITY OF STATUTE—*State v. Hyman, Court of Appeals of Maryland, 57 Atlantic Reporter, page 6.*—An indictment charging Louis Hyman with a violation of chapter 101, Acts of 1902, was quashed in the criminal court of Baltimore city on the ground of the unconstitutionality of the act. From this judgment the State appealed and secured a reversal, the court of appeals supporting the law. The statute forbids the manufacture of garments in any tenement or dwelling by other than the family actually resident therein; requires the procuring of a permit before such manufacture can be carried on; forbids the occupation of any room, apartment, or rear building for the manufacture of garments without a permit stating the maximum number of persons that may be employed therein; and requires a written register to be kept of the names and addresses of all persons to whom work is given out. (For the law in full see Bulletin of the Department of Labor No. 45, p. 399.)

The grounds on which the law was sustained are set forth in the following extracts from the remarks of Judge McSherry, who delivered the opinion of the court:

It is insisted by the appellee, and we presume that it was held by the court below, that these provisions of the statute were unconstitutional, and therefore void, because they were arbitrary and unreasonable. It is obvious that the statute was passed in furtherance of the protection of the health of the community. Its enactment was an exercise by the general assembly of the police power of the State. What is and what is not within the limits of the police power has been

a source of prolific discussion both in the Federal and in the State courts. One of the legitimate and most important functions of civil government is acknowledged to be that of providing for the welfare of the people by making and enforcing laws to preserve and promote the public health, the public morals, and the public safety. The Supreme Court has stated as an "impregnable position" that the States of the Union have the same undeniable and unlimited jurisdiction over all persons and things within their respective territorial limits as any foreign nation has, where that jurisdiction is not surrendered or restrained by the Federal Constitution; and that by virtue of this it is not only the right, but the bounden and solemn duty, of the State to advance the safety, happiness, and prosperity of its people, to provide for their general welfare by any and every act of legislation which may be deemed to be conducive to these ends; and that all these powers which relate to merely judicial legislation, or what may properly be called internal police, are not surrendered or restricted; and that, consequently, in relation to these the authority of a State is complete, unqualified, and exclusive; and, finally, that amongst these powers are inspection laws, quarantine laws, health laws of every description, as well as laws for regulating internal commerce of the State and to prevent the introduction or enforce the removal of prohibited articles of commerce. (*City of New York v. Miln*, 11 Pet. 102, 9 L. Ed. 648.) It is a power that necessarily belongs to the legislative department of the State government. It is for that coordinate branch to determine whether particular things or acts are or are not dangerous to the public health, the public safety, and the public morals; and when that branch of the government has spoken the subject must be considered as closed, unless the judicial department has a revisory jurisdiction; and that brings us to the question whether the courts have such a jurisdiction and if they have what are its legitimate limits? This inquiry presents the pivotal point of the case. It may be said in the language of the Supreme Court in *Mugler v. Kansas*, 123 U. S. 625, 8 Sup. Ct. 297, 31 L. Ed. 205, "if a statute purporting to have been enacted to protect the public health, the public morals, or the public safety has no real or substantial relation to those objects, or is a palpable invasion of rights secured by the fundamental law, it is the duty of the court to so adjudge, and thereby give effect to the Constitution." Running through all the cases, both Federal and State, is the doctrine that if the measure designed for, or purporting to concern, the protection or preservation of the public health, morals, or safety, is one which has a real and substantial relation to the police power, then, no matter how unreasonable or how unwise the measure itself may be, it is not for the judicial tribunals to avoid or vacate it upon those grounds.

If the act has a real and substantial relation to the police power, no inquiry as to its unreasonableness can arise, because it is the judgment of the lawmakers, and not of the courts, which must control; and if, in the judgment of the former, the thing be reasonable, all inquiry upon that ground by the latter is foreclosed.

Tested by the principles hereinbefore announced, we find nothing in the act of 1902 which indicates that its design, its purpose, or its details have not a real and substantial relation to the police power. It may be conceded that some of these provisions, if harshly administered, may be or become oppressive; but it by no means follows that the law

itself is therefore not a legitimate exercise of the police power. It is not to be assumed that the public functionary will act in an oppressive or unlawful manner. Discretion must be reposed somewhere. If an official should transcend the legitimate limits of the authority with which the statute clothes him, the injured party is not without redress.

Taking now in detail the five counts of the indictment, it is clear, we think, that the first count contains an allegation that the appellee was violating the health regulation prescribed by the statute. It alleges that he was using a certain tenement and dwelling house for the manufacture of coats, vests, and other garments by other than immediate members of his family. We suppose that it is a matter of which a court may take judicial notice that the manufacture of wearing apparel in improperly ventilated, unsanitary, and overcrowded apartments will likely promote the spread of, if it does not engender, disease, and it is obviously within the police power of the State to regulate the number of persons who may be employed in any tenement or other establishment where this manufacturing is carried on, so that the public health may be conserved. What has just been said is equally applicable to the second count, and we need not further discuss it. The third count has relation to a provision of the code existing prior to the adoption of the act of 1902. By section 149c of article 27 of the code (section 238), of which the act of 1894 is an amendment, it was required that at least 400 cubic feet of clear space should be allowed in each room for each occupant in manufacturing establishments, and the act of 1902 required that a permit should be secured from the chief of the bureau of industrial statistics, setting forth the number of persons allowed to be employed in each room. The number thus employed was, of course, regulated by the amount of air surface to which, under section 149c (section 238), employees were entitled. The failure to procure such a permit is the charge alleged in the third count. It certainly requires no discussion to show that such a regulation is strictly and essentially a health regulation. The overcrowding of factories and the inhalation of impure air, where there is not sufficient surface afforded to each employee, are obviously calculated to produce or foster disease, and the manufacture of articles of wearing apparel in overcrowded rooms or apartments, under these conditions, is unquestionably liable to spread contamination. The fourth count of the indictment need not be further considered. What has been said in reference to the third is sufficient to support the fourth. The fifth count charges that the appellee did not keep a written register of the names and addresses of all persons to whom work was given to be made. If it is important, as we have said it was, that these overcrowded and unhealthy and unsanitary tenement houses should be subject to the inspection and control of some designated health officer, it goes without saying that the provision would be of little avail if the proprietor could give out the work to others without keeping a register of their names and addresses, because the health officer, without the aid of such register, would be unable to trace the localities where the work was being done. The whole scheme of the act appears to us to be in furtherance of the protection and preservation of the public health, and, whatever criticisms may be made upon the method of its enforcement, no convicting reason has been suggested to show that its terms have not a real and a substantial relation to the subject of the police power of the State.

The statute invades no private right of property, and does not confer upon any official either arbitrary or unrestricted power. It certainly does not in terms expressly do either. It has no relation to homes where manufacturing of the enumerated articles is not carried on. The whole tenor of the enactment distinctly indicates that its provisions are aimed at, and are intended to apply to, tenements and other buildings where the garments specified are manufactured for sale; and that it has no relation to homes or places where apparel not manufactured for sale may be made. Nor does the statute clothe the officers its provisions allude to with arbitrary power. As well might it be said that a police officer who is authorized to summarily seize property which could only be put to an illegal or criminal use acted arbitrarily in making such a seizure before a judicial adjudication condemned the thing seized. An officer who, under pretext of executing the sweat-shop statute, would assume to exert an arbitrary or unwarrantable power, would be answerable for his misconduct, just as would be any other trespasser. Rightly interpreted, we find no imperfections in the statute assailed in this case.

DECISIONS UNDER COMMON LAW.

BOYCOTT—INJUNCTION—EVIDENCE—PRELIMINARY INJUNCTION—*My Maryland Lodge, No. 186, International Association of Machinists et al. v. Adt, Court of Appeals of Maryland, 59 Atlantic Reporter, page 721.*—A preliminary injunction had been granted by the circuit court of Baltimore city against the machinists' organization above named, against certain other labor organizations, and against Henry Vollmer, business agent, Fred. Heuer, individually and as business agent, and C. E. Dotson, business agent. From the order granting the injunction pending the final hearing of the cause this appeal was taken, with the result that the order of the lower court was affirmed.

It was charged in the bill of complaint that the organizations and persons named were engaged in joint and concerted action to injure and destroy the business of the complainant, Adt. A demand for an increase of wages was alleged to have been made at the instance of the Baltimore Federation of Labor, although complainant was then paying 7 per cent more to his workmen than were other employers in the city. Adt stated that he was willing to grant an increase of 3 per cent, thus making his rates 10 per cent more than the usual rates, but an advance of 10 per cent was insisted upon and his employees struck. It was averred that pickets were employed to follow his delivery wagons and thus learn for what firms Adt was doing work, and that such firms were notified that unless they stopped having work done by him their firms would be listed as unfair and they would themselves be boycotted.

Adt stated that he had made a specialty of brewing machinery and supplies, and that his business had fallen from \$18,000 a year to less than \$3,500 in consequence of the wrongful acts of the defendants. Testimony was taken for several days and various circulars were sub-

mitted as setting forth the methods and nature of the attacks by the unions. The charges were denied in detail by the defendants, though it was admitted that Vollmer had distributed circulars individually and not on behalf of the other defendants.

At the close of the preliminary hearing an injunction was granted forbidding the defendant organizations "and each of them, their, and each of their agents, officers, members, representatives, and confederates from in any manner interfering with or hindering, or attempting directly or indirectly to interfere with the said plaintiff, John B. Adt, his agents, servants, and employees in conducting his said business by following his said delivery wagons in the streets for the purpose of finding where work is to be done, or from going to or sending any communication, letters, or circulars to places of business, or breweries, or manufactories where the plaintiff has done work or is now doing work for the purpose of inducing, persuading, or compelling by threats or intimidation in any other manner, the owner or owners of such places of business, breweries, or manufactories, their agents, servants, or employees to withhold or fail to give to the complainant such work as they might otherwise give him, or to compel him to stop any work ordered from or commenced by him; from publishing, printing, writing, or circulating in any manner whatever any matter or thing that would tend to discredit in the eyes of the public or to injure the business of any person for whom the plaintiff has done or is now doing or will hereafter do work, by reason of such work; from in any manner boycotting the said plaintiff or his manufactured goods, or any one for whom the plaintiff has worked, is now working, or shall hereafter work, or manufactured articles of such last-named person by reason of such work, and from in any way menacing or obstructing the plaintiff by interfering with the business or customers in the full enjoyment of such patronage or business as he might possess independent of such interference."

The court of appeals continued this injunction pending the final hearing on the grounds set forth in the following opinion, delivered by Chief Justice McSherry, speaking for the court:

With the exceptions of the affidavits accompanying the petition, the evidence adduced below is not before us on this appeal. The testimony taken in the cause prior to the granting of the injunction is not contained in the record with which we are now dealing. If the averments of the bill are finally sustained by the evidence, it is clear, we think, that the plaintiff is entitled to the relief he seeks.

The plaintiff was engaged in a lawful business, and was carrying it on in a lawful way. There is no pretense that he had done anything to any of the defendants which was either illegal, immoral, or unjust. He was paying wages to his employees at a higher rate than wages paid by other establishments, and was willing to still further increase them, so as to reach the 10 per cent addition which the defendants demanded he should pay. The law protects him in his right to employ

whom he pleases, at prices which he and his employees can agree upon, and he has the further right to discharge them at the expiration of their term of service or for violation of their contract. This right must be conceded, or personal liberty is a delusion. On the other hand, the employees have a perfect legal right to fix a price upon their labor, and to refuse to work unless that price is obtained. They have that right both as individuals and in combination. They may organize to improve their condition and to secure better wages. They may even use persuasion to have others join their organization. They have an unquestionable right to present their cause to the public in newspapers or circulars in a peaceable way, but with no attempt at coercion. If ruin to the employer results from their peaceable assertion of these rights, it is a damage without remedy. But the law does not permit either employer or employee to use force, violence, threats of force or threats of violence, intimidation, or coercion.

It is too late to doubt the jurisdiction of a court of equity to grant relief in such cases as this, if the averments of the bill are sustained by the evidence. The adjudged cases seem to be all one way. [Cases cited.] The jurisdiction of a court of equity to grant the relief prayed for being unquestioned, and the acts complained of in the bill constituting, if true, a conspiracy to ruin the plaintiff's business by methods which the law can neither tolerate nor sanction, the question that is left for determination is whether the preliminary injunction should have been granted, or should be continued until final hearing.

With respect to all the defendants except Vollmer, we are at a loss to perceive how the continuance of the injunction until final hearing can work any serious inconvenience, because they have all disclaimed participating in the acts charged against them; and, if they are restrained from doing that which they have not done and do not intend to do, they have no ground of complaint, at least during the pendency of the proceedings, and until the final hearing is reached. Upon the hearing of a motion for a preliminary injunction, the rules of evidence are applied less strictly than upon the final hearing of the cause, and consequently evidence that would not be competent in support of an application for a perpetual injunction may be admitted. The acts charged do not constitute a lawful competition in trade. They are distinctly unlawful, if true, and the cases we have cited fit with precision the facts alleged in the bill. The things which the order of the court restrained the defendants from doing are wrongful, and under no conditions can be treated as legitimate competition. They were designed to ruin the plaintiff's business, and they have well-nigh succeeded, if the statement contained in the petition is accurate. There is sufficient disclosed in the affidavits accompanying the petition, notwithstanding the denials contained in the answer, to justify the continuance of the injunction until final hearing.

Two affidavits were then reproduced, setting forth the nature of the boycott circulars, a copy of one being attached, and declaring the evident effects of the same, after which Judge McSherry said:

There are other affidavits, which need not be quoted. They are along the same lines as those just transcribed.

It may be that when the final hearing is reached it will be apparent from the evidence that the defendants have been guilty of none of the

acts with which they stand charged by the bill. In that event, of course, the bill will be dismissed as to those who are not implicated. Upon a review of the whole case as presented by the partial record before us, we think that the ends of justice would best be promoted by affirming the order of the court below, and by remanding the case, that it may proceed in due and regular course to a final hearing on the merits.

CONSPIRACY—INDICTABLE ACTS—LABOR ORGANIZATIONS—*State v. Van Pelt et al., Supreme Court of North Carolina, 49 Southeastern Reporter, page 177.*—An indictment against A. Van Pelt and four associates, members of a union of carpenters in Rowan County, was held, together with a bill of particulars filed therewith, not to charge an offense. From this ruling in the superior court of Rowan County, the State appealed, with the result that the finding of the lower court was sustained.

The facts as charged, and they were not disputed, were that three members of the union referred to visited one C. A. Rice, a lumber dealer, and notified him that he could not be considered a friend to union labor if he retained in his employment nonunion men. Rice had such men in his service, being under contract with them for as much as a year in advance, and he declined to discharge them and to agree to employ union men only. Thereupon a card was published in a daily newspaper in the town of Salisbury, stating that at a meeting of the carpenters and joiners' union the said C. A. Rice was declared unfair, and so listed, and that no union carpenter would work any material from his shop after a date named.

The indictment charged the defendants with the purpose "as much as in them lay unlawfully and feloniously to ruin" the said Rice, and to "prevent and hinder him from using, exercising, and carrying on the said trade and business in as full, ample, and beneficial a manner as he was used and accustomed to."

In a lengthy opinion, concurred in in memoranda by the other members of the court, Judge Connor discussed the law of conspiracy, and of the right of workmen to organize for purposes of mutual benefit, and announced the decision of the supreme court as follows:

The proposition is that the defendants conspired for the purpose of injuring the prosecutor in his trade and business, and that it is unlawful for them to do so. It can not be that every conspiracy to injure one in his trade and business, without reference to the means to be employed, is criminal. A carpenter or joiner has, by his apprenticeship, study, and experience, acquired skill and knowledge in his trade. His capital consists in his physical strength and his intellect trained and directed by his skill and experience. It is the use of this which, in a sense, he offers for sale. In what respect, for the purpose of securing the best prices for his labor on the best terms, do his rights

differ from the man who has cotton for sale, the product of his capital—land and labor—or the man who has money to invest in mercantile or manufacturing enterprise? Each of them enters into the field of competition. Each finds that organization with others engaged in the same field of labor or investment will secure better results and fairer treatment from those with whom he deals. There is no evil or harm in organization per se. Every copartnership, corporation, joint-stock company, and other association of labor or capital is a recognition of this truth.

Judge Caldwell, in *Ames v. U. Pac. Ry. Co.* (C. C.) 62 Fed. 14, says: "Organized labor is organized capital. It is capital consisting of brains and muscle. * * * If it is lawful for the stockholders and officers of a corporation to associate and confer together for the purpose of reducing the wages of its employees, or for devising other means for making their investment more profitable, it is equally lawful for organized labor to associate, consult, and confer with a view to maintain or increase wages." (*Thomas v. Cin., N. O. & T. P. Ry. Co.* (C. C.) 62 Fed. 803; *People v. Radt* (Gen. Sess.) 71 N. Y. Supp. 846.) It is said: "One may refuse to deal with a firm because of a belief that it does not give honest compensation for labor, and may ask his friends or the public to do the same thing, and the conduct may do injury to the public without thereby becoming illegal." *Id.*

There is no complaint that the conduct of the defendants was intended to injure nonunion men. This case has no such element in it, and we do not wish to be understood as expressing any opinion in regard to it. The question has been before other courts. There is a painful absence of harmony in the decisions. Suppose, however, that it be conceded that the defendants did notify the prosecutor that, unless he discharged nonunion men with whom he had contracted, etc., what was to be the result to him if he refused? He was to be considered as unsympathetic with union labor. This falls far short of intimidation or coercion. It will be noted that there is no charge that these defendants were members of any secret or other organization, or that they had the power or threatened to control the conduct of large numbers of men. This alleged conspiracy is confined to the five defendants. The counsel for the prosecutor in their brief say: "It is perfectly true that defendants had a right to refuse to work material from Rice's shop; that they had a right to put him on their unfair list." The criminality, they say, consists in the intent or purpose with which these things are done. This, they say, is a question for the jury. It is not easy to see how it is a question for the jury when the defendants admit the purpose, etc. If that which they did is lawful—if they had a perfect legal right to do it—we are unable to perceive how the publication renders it unlawful. It being properly conceded that it was not unlawful—that is, for the purpose of this discussion, criminal—for the defendants to declare Mr. Rice "unfair," and to refuse to work his material, we can find nothing criminal in the publication made of their opinion or purpose.

Does the fact that the defendants intended to induce persons who might otherwise purchase material from Mr. Rice to refrain from doing so make their conduct unlawful? This brings us back to the original question. Persons who might wish to buy material from Mr. Rice had no legal claim on the services of the defendants. They were under no obligation to work the material purchased from him. There-

fore in saying that they would not do so they deprived such persons of no legal right. They could not have maintained an action for damages against the defendants for refusing to work such material or for saying so. How, then, in a legal sense, can he be said to be injured? It is said that the purpose of the defendants in making the publication was to induce persons to refrain from purchasing material for fear of incurring the ill will of the defendants. This certainly is not unlawful. (*Bowen v. Matheson*, 14 Allen, 499.) If courts were to maintain actions upon such grounds, society would soon be converted into an array of hostile litigants. As is well said by Judge Black in *Jenkins v. Fowler*, 24 Pa., 308: "Malicious motives make a bad act worse, but they can not make that wrong which in its own essence is lawful. * * * Any transaction which would be lawful and proper if the parties are friends can not be made the foundation of an action merely because they happen to be enemies. As long as a man keeps himself within the law by doing no act which violates it, we must leave his motive to Him who searches the heart."

It is very doubtful whether industrial conditions, or relations between employer and employees, have been improved by prosecutions for criminal conspiracy. As we have seen, in England the subject has received the most careful attention of enlightened statesmen, resulting in the passage of wise statutes. It is asked, May not a man conduct his business in his own way? And undoubtedly he may. For any unlawful interference with this right he has a remedy, either civil or criminal, as such interference may justify. The question is asked, May not men organize to promote their common interests, and, when such interests conflict with other interests, resort to lawful and peaceful means to secure the best results? It is clear that they may. Where, then, is the line which separates conduct which is lawful from that which is unlawful? The answer comes from Chief Justice Shaw, one of the wisest and most learned of American jurists: "If it is to be carried into effect by fair or honorable or lawful means, it is, to say the least, innocent: if by falsehood or force, it may be stamped with the character of a criminal conspiracy." We would not be misunderstood. Capital, either in the form of money or other property, or in the form of skill, experience, intelligence, and strength, may combine for lawful purpose. When, in either form, or under whatever guise it seeks or conspires to effectuate its purpose, however lawful, by means of violence to person or property, or by fraud, or other criminal means, or when, by such means, it conspires to prevent any person from conducting his own business in his own way, or from employing such persons as he may prefer, or by preventing any person from being employed at such wages or upon such terms as he may prefer, the courts will be prompt to declare and firm to administer the law to punish the guilty and protect the injured. What acts will constitute such unlawful means it is impossible to define. As all other questions arising out of the struggle of political, social, or industrial forces, they must be decided as they are presented.

EMPLOYERS' LIABILITY — ASSUMPTION OF RISK — COOPERATING CAUSE—*Sirois v. J. E. Henry & Sons*, Supreme Court of New Hampshire, 59 Atlantic Reporter, page 936.—J. B. Sirois sued the firm above named to recover damages for injuries received while employed by the

defendants in repairing a bucket elevator in their mill. To perform his duty Sirois was required to have his head and arms inside the casing of the elevator. When he wished the elevator shifted so as to get access to the different buckets he signaled to an assistant who repeated the signal to a man in charge of the operating clutch.

While Sirois was thus engaged two steam fitters came into the same room to make other repairs, the two sets of workmen being mutually ignorant of each others' presence and of the danger that might ensue from a confusion of signals. In the course of their work one of the steam fitters signaled to the other in such a way that Sirois's assistant mistook the signal as being addressed to him, and directed the man at the clutch to move the elevator, with the result that Sirois received the injuries for which the suit was brought. Damages were allowed in the superior court of the State, from which an appeal was taken to the supreme court, where the judgment of the court below was affirmed.

In announcing the opinion of the court Judge Bingham, speaking for the court, said in part:

Notwithstanding the plaintiff admitted that he knew other men besides those associated with him in repairing the carrier were at work making repairs in the mill on the day of the accident, his evidence tended to prove that he did not know any of them were at work in the digester room, or that their work was of a nature calling for the use of signals which might be mistaken for his. Hence it can not be said as a matter of law that the plaintiff assumed the risk of injury from such a cause. It was for the jury to say whether he knew, or in the exercise of ordinary care should have known, and appreciated the danger, and assumed the risk of injury therefrom.

That the work in which the plaintiff was engaged at the time he received his injuries was dangerous, and of such a nature as to require reasonable rules and instructions for the guidance of the plaintiff and his associates in the performance of their duties, can not be doubted. The defendants did not contest this question at the trial. Their contention there was that adequate instructions were given the men, and, had they been followed, that the accident would not have happened. The plaintiff, on the other hand, contended and introduced evidence tending to prove that no instructions were given.

The judge then reviewed the evidence as set forth in the statement of facts given above, and concluded:

From this evidence the jury could find that the defendants were negligent in not informing the plaintiff of this new and unknown danger, and in failing to make some reasonable provision for the conduct of the work in view of this added peril. If the evidence warranted a finding that the middleman was negligent in not first ascertaining whether the plaintiff was out of the carrier before giving the signal to start, so that the defendants' negligence was not the sole cause of the accident, nevertheless the jury would be warranted in finding that their negligence was a cooperating cause, for which they would be responsible, the plaintiff being in the exercise of due care.

LABOR ORGANIZATIONS—POWERS—BY-LAWS—RIGHTS OF MEMBERS—*Flaherty v. Portland Longshoremen's Benevolent Society et al.*, Supreme Judicial Court of Maine, 59 Atlantic Reporter, page 58.—Jeremiah H. Flaherty sued the above-named society, an incorporated body of which he was a member, to prevent the employment of a physician by the organization. The supreme judicial court of Cumberland County dismissed the bill brought by Flaherty, who thereupon appealed to the supreme judicial court of the State, by which the decision of the court below was reversed, and an injunction issued to prevent the employment of the physician under a salary payable from association funds.

The facts of the case appear in the opinion of the court, which was delivered by Judge Savage, and which is reproduced herewith:

The Portland Longshoremen's Benevolent Society is a corporation created under the laws of Maine. Its business is conducted under a code of by-laws somewhat inartificially drawn. Its charter is not made a part of the record, but its object, as disclosed by the by-laws, is to "bind its members together as one man that we may be better able to protect our interests, regulate our wages, and attend to such other business as may from time to time come before us." Membership is limited to a single class of laborers. Sick benefits are provided for. It is, in short, a corporation benevolent and protective. One of its by-laws provides that "the funds of this society shall be appropriated for no other purpose than that necessarily incurred for the maintenance of wages, burying the dead, and other incidental expenses;" and another, that "resolutions adopted at any general or special meeting of this society for any special purpose shall be as binding on its members as if they were embodied in its by-laws." No provision is made in the by-laws for a physician of the society, but for some years before this controversy arose a physician had been employed by vote of the society, and paid a stipulated annual salary.

At a meeting of the society held October 6, 1903, a committee was appointed "to bring in the lowest terms that a competent physician will serve the society for one year." At a meeting a week later the committee reported the sealed proposals of three physicians, which being opened, it was found that the proposal of Doctor Conneen was the lowest. Discussion ensued, some claiming that the physician should be elected by ballot, and not appointed; but the president ruled that the lowest bidder was entitled to the position, and accordingly appointed Doctor Conneen. Afterwards the society, by vote, instructed the recording secretary to notify the previous physician that his services would end October 15, 1903, and to notify Doctor Conneen of his appointment as physician. At the next meeting of the society "the minutes of the last meeting were read and approved."

The plaintiff [Flaherty], a member of the society in good standing, brought this bill, in behalf of himself and of all other members who might desire to become plaintiffs, to restrain the society and its officers from paying any of the moneys of the corporation to Doctor Conneen as a salary under the foregoing appointment as physician. A temporary injunction was issued. After hearing, the sitting justice below dissolved the injunction and dismissed the bill. The plaintiff appealed.

The plaintiff contends, first, that the election or appointment of any physician by the society was ultra vires; and, secondly, that the appointment of Doctor Conneen was irregular, unauthorized, and void. No other questions have been raised or discussed by counsel.

To determine whether the acts of a corporation are ultra vires or not, recourse must be had primarily to its charter. To be ultra vires, an act of a corporation must be shown to be not within the scope of its charter, nor within its express or implied powers. In this case the charter is not before us. Both parties are content with such assumptions as may be made from the by-laws. Therefore the court will be content. There appears to be no specific or express warrant for the appointment of a physician by this society. But the society, though incorporated, partakes largely of the character of a mutual association for mutual aid and protection. It has no stockholders nor stock. Its object is to protect the interests of its members. It pays sick benefits to its members, and we must assume that it has the right to do so. Affording relief to its members by furnishing them the care of a physician in time of sickness is closely allied to the payment of sick benefits, and we think its corporate power to do so might be fairly implied from the general scope of the corporate purposes. The implied powers of a corporation are not limited to such as are indispensably necessary to carry into effect those which are expressly granted, but comprise all that are necessary, in the sense of being appropriate, convenient, and suitable for such purposes, including the right of a reasonable choice of means to be employed. (*Cyclopedia of Law*, vol. 10, p. 1097; 1 *Cook on Corporations*, sec. 3.)

But notwithstanding the appointment of a physician may be within the scope of the corporate powers of the society, the plaintiff further contends that the payment of a salary to Doctor Conneen would be in express violation of the by-law which declares that the funds of the society shall be appropriated for no other purpose than that necessary "for the maintenance of wages, burying the dead, and other incidental expenses." The payment of a salary to a physician is certainly not within any of these purposes. But it is argued for the defendants that the binding force of this and all other by-laws is much modified and weakened by that one which provides that resolutions adopted by the society "for any special purpose shall be as binding on its members as if they were embodied in the by-laws." That by-law gives to a mere resolution the effect of a by-law. By-laws are simply the rules of corporate government. While they aid in the orderly transaction of the corporate business, they also serve sometimes as a protection of the corporation itself, or of minority members, against ill-advised or illegal acts of the majority. It is within the power of the corporation to modify, limit, or abrogate them. And one legally adopted may, in effect, limit or repeal an old one, though not expressly so stated. As we have already pointed out, these by-laws themselves provide for the payment of sick benefits. And as this is outside of and inconsistent with, the by-law in question, the latter must be regarded as so far modified, at least.

Assuming, then, but not deciding, that the appointment of Doctor Conneen, with a salary, ratified as it was by the action of the society, was in effect a resolution adopted by the society for the special purpose, what was its effect in view of the by-law limiting the right to expend money to specific purposes, of which a physician's salary was not

one? Was it valid? If it was valid, it had the effect of so far amending the by-law. Practically it abrogated the by-law. For, if a simple resolution could amend the by-law in one particular or one instance, it could do so in all particulars and in all instances. Money could be voted for any purpose within the chartered powers of the society, the by-law to the contrary notwithstanding. The by-law would thus become of no effect. It would cease to be a protection to the members which it was evidently intended to be. We do not think such is the proper construction to be placed upon the by-law which provides that resolutions adopted by the society shall be as binding as if embodied in the by-laws. That by-law, as we construe it, gives to resolutions the effect of by-laws only when the resolutions are not inconsistent with the by-laws—in other words, only when they would not, if operative, have the effect of amending or repealing the by-laws. But the society can not override and abrogate a by-law, by a simple resolution, in favor of some object which is forbidden by the by-law. The action of the society in providing for the payment of a salary to a physician was clearly inconsistent with the by-law which provides that “the funds of the society shall be appropriated for no other purpose than that necessarily incurred for the maintenance of wages, burying the dead, and other incidental expenses,” and hence was inoperative and void.

The plaintiff, a member of the society, has an interest in the society's funds, and is entitled to the protection of the by-law, and he may call upon the court for its enforcement.

LAWS OF VARIOUS STATES RELATING TO LABOR ENACTED SINCE JANUARY 1, 1904.

[The Tenth Special Report of this Bureau contains all laws of the various States and Territories and of the United States relating to labor in force January 1, 1904. Later enactments are reproduced in successive issues of the Bulletin from time to time as published.]

NEW JERSEY.

ACTS OF 1904.

CHAPTER 64.—*Inspection of factories—Employment of labor—Department of labor.*

1. No child under the age of fourteen years shall be employed, allowed or permitted to work in any factory, workshop, mill or place where the manufacture of goods of any kind is carried on; any corporation, firm, individual, parent, parents or custodian of any child who shall violate any of the provisions of this section, shall be liable to a penalty of fifty dollars for each offense.

2. The word custodian as used in this act shall include any person, organization or society having the legal custody of a child.

3. If at the time of the employment of a child, the proofs of age specified in subdivisions I. and II. of this section, are filed with the corporation, firm or person employing the child, such proofs shall be conclusive evidence of the age of child in a suit against such employer for a violation of section one: *Provided, however,* That correct copies of all papers, certificates, passports and affidavits relating to such employment shall be mailed, postage prepaid, to the department having charge of the enforcement of this act, at Trenton, New Jersey, within twenty-four hours after the same are filed, together with a statement of the legal name of the person, firm or corporation employing such child.

I. NATIVE BORN CHILDREN.

The parent, parents or custodian shall make and swear to an affidavit before some officer authorized by the law of this State to take affidavits, setting forth the following facts: The name of the child in full; his or her residence, giving street and number; place where and year, month and day when born; name of father; maiden name of mother; church attended, if any; school last attended and time when, if any, and where the church and school are situated; if child was baptized, name and location of church or parish in which such baptism took place; there must accompany such affidavit a transcript of the record of the child's birth; duly attested by an officer having by law the authority to keep records of birth in the State, county, town or city in which the child was born; if no such birth record can be obtained and the child was baptized, then a certified copy of the baptismal record of the church or parish in which such baptism took place, duly certified as a true copy, under the hand of the person having the custody of such church or parish records, shall accompany the affidavit, and the affidavit shall set forth the age of child at time of baptism.

II. FOREIGN BORN CHILDREN.

An affidavit to be made by the same persons and containing the same statement of facts as in the case of native born children, with an additional statement that the child named in the affidavit is the same mentioned and described in the passport under which the child was admitted to this country; a true copy of said passport must in all cases be attached to the affidavit.

III. OTHER CHILDREN.

The commissioner shall have power to issue permits of employment to children upon the production of evidence of the child's age satisfactory to him: *Provided,* That he shall first be satisfied that the child can not obtain a transcript of birth record, a baptismal certificate or passport, as provided in either subdivision I. or II.

4. In any suit brought to recover a penalty for violation of section one of this act, a copy of the baptismal record, certified to be a true copy under the hand of the person having the custody of such records for the church or parish in which such child was baptized, shall be prima facie evidence of the child's age (provided, that in case the age of the child is not set forth in the baptismal record, that there shall be other proof showing the age of the child at the time he or she was baptized).

5. The commissioner, assistant or any inspector is hereby empowered to demand of any parent, parents or custodian, proof of the age of a child satisfactory to the commissioner, and such parent, parents or custodian shall, within five days after such demand is made, furnish to such officer proofs of such child's age; and in event of the failure to procure and furnish such proof of age, such child shall be discharged by his or her employer upon notice in writing signed by the commissioner, and shall not be reemployed until such proof of age shall have been furnished to the commissioner; any person violating the provisions of this section shall be liable to a penalty of fifty dollars for each offense.

6. Any one who shall swear falsely to any affidavit or present any certificate or passport which he or she knows to be false, and any person or persons who shall aid, assist or advise the making of a false affidavit or the obtaining of a false certificate or passport, shall be liable to a penalty of fifty dollars for each offense.

7. The commissioner, assistant or the inspectors shall have power to demand a certificate of physical fitness from some regular practicing physician in the case of minors under the age of sixteen years, who, in the judgment of such officer, shall be physically unable to do the work in which such minor is employed, and shall have the power to prohibit the employment of such minor until he or she shall produce a certificate of physical fitness; and any manufacturer or employer who shall retain in his employ a minor after such certificate shall be demanded, shall be liable to a penalty of twenty-five dollars.

8. A corporation, firm or person, owning or operating a place coming under the provisions of this act and employing, allowing or permitting minors under the age of sixteen years to work therein, shall keep or cause to be kept in the main office of such place, in the town or city where such place is located, a register in which shall be recorded the names, places of residence and time of employment of all such minors working under certificates, transcripts, passports or affidavits; such registers and certificates, transcripts and affidavits shall be produced for inspection upon demand of the commissioner, assistant or any of the inspectors; truant officers shall have the same right as inspectors to examine such registers and the certificates, transcripts, passports or affidavits, when authorized in writing so to do by the commissioner; any corporation, firm or person failing to keep such register or refusing to permit the persons herein authorized to inspect the same or the certificates, transcripts, passports or affidavits, shall be liable to a penalty of fifty dollars for each offense.

9. No minor under the age of sixteen years shall be employed, permitted or allowed to work in places coming under the provisions of this act, more than ten hours in a day or fifty-five hours in a week; any corporation, firm or person permitting or allowing any violation of the provisions of this section, shall be liable to a penalty of fifty dollars for each offense.

10. Affidavits of the age of children made and filed with the manufacturer before this act takes effect, shall have the same force and effect as the proofs required under subdivisions I. and II. of section three, of this act.

11. The openings of all hoistways, hatchways, elevators and well-holes upon every floor of any place coming under the provisions of this act, shall be protected by good and sufficient trapdoors or self-closing hatches and safety catches, or strong guard-rails at least three feet high, and shall be kept closed and protected at all times except when in actual use by the occupant of the building having the use and control of the same.

12. All the main doors, both inside and outside of places coming under the provisions of this act, shall open outwardly or be sliding doors, and shall be kept unbolted and unlocked during the hours of employment.

13. The owner or person in charge of any of the places coming under the provisions of this act, where machinery is used, shall provide, in the discretion of the commissioner, belt shifters or other mechanical contrivances for the purpose of throwing on or off belts or pulleys; whenever practicable, all machinery shall be provided with loose pulleys, all vats, pans, saws, planers, cogs, gearing, belting, shafting, set-screws, drums and machinery of every description shall be properly guarded; no person shall remove or make ineffective any safeguard around or attached to such machinery, vats or pans while the same are in use, unless for the purpose of immediately making repairs thereto, and all such safeguards so removed shall be promptly replaced; if

the machinery, or any part thereof, or any vat, pan or vessel containing molten metal or hot liquid is in a dangerous condition or is not properly guarded, the use thereof may be prohibited by the commissioner, and a notice to that effect shall be attached thereto; such notice shall not be removed until the machinery is made safe and the required safeguards are provided; and in the meantime such unsafe or dangerous machinery, vats, pans, or vessels containing molten metal or hot liquid shall not be used; when, in the opinion of the commissioner, it is necessary, the halls leading to work-rooms shall be provided with proper lighting facilities.

14. All corporations, firms or persons conducting a manufacturing business in any of the places coming under the provisions of this act, where emery wheels or emery belts of any description are used, either solid emery, leather, leather covered, felt, canvas, linen, paper, cotton, or wheels, or belts rolled or coated with emery or corundum, or cotton wheels used as buffs, shall provide the same with blowers or similar apparatus, which shall be placed over, beside or under wheels or belts in such a manner as to protect the person or persons using the same from the particles of the dust produced and caused thereby, and to carry away the dust arising from or thrown off by such wheels or belts while in operation, directly to the outside of the building, or to some receptacle placed so as to receive and confine such dust: *Provided*, That grinding machines upon which water is used at the point of the grinding contact and small emery wheels that are used temporarily for tool grinding in small shops employing not more than three persons at such work, shall be exempt from the provisions of this section if so ordered by the commissioner.

15. It shall be the duty of any person, firm or corporation conducting such manufacturing business, to provide or construct such appliances, apparatus, machinery or other things necessary to carry out the purpose of this act, as set forth above, as follows: Each and every such wheel shall be fitted with a sheet or cast-iron hood or hopper of such form and so applied to such wheel or wheels that the dust or refuse therefrom will fall from such wheels or will be thrown into such hood or hopper by centrifugal force and be carried off by a current of air into a suction pipe attached to some hood or hopper.

16. Each and every such wheel six inches or less in diameter shall be provided with a round suction pipe three inches in diameter; wheels six inches to twenty-four inches in diameter, with round suction pipe five inches in diameter; and all wheels larger in diameter than those stated above shall be provided each with a round suction pipe not less than six inches in diameter; the suction pipe for each wheel so specified must be full size to the main trunk suction pipe, and the main suction pipe to which smaller pipes are attached shall in its diameter and capacity be equal to the combined area of such smaller pipes attached to the same, and the discharge pipe from the exhaust fan connected with such suction pipe or pipes shall be as large or larger than the suction pipe.

17. It shall be the duty of any person, firm or corporation operating any such place to provide the necessary fans or blowers to be connected with such pipe or pipes, as set forth in this act, which shall be run at the rate of speed such as will produce a pressure of air in such suction or discharge pipes sufficient to raise a column of water not less than five inches in a U-shaped tube; all branch pipes must enter the main trunk pipe at an angle of forty-five degrees or less; the main suction or trunk pipe shall be below the emery or buffing wheels and as close to the same as possible, and shall be either upon or beneath the floor on which the machines are placed to which such wheels are attached; all bends, turns or elbows in such pipes must be made with easy, smooth surfaces, having a radius in the throat of not less than two diameters of the pipe on which they are connected.

18. It shall be the duty of the commissioner to make orders in writing for the carrying into effect the provisions of sections fourteen, fifteen, sixteen and seventeen.

19. Not less than two hundred and fifty cubic feet of air space shall be provided for each employee or operative at work in a room in a place within the meaning of this act between the hours of six o'clock in the morning and six o'clock in the evening, and not less than four hundred cubic feet of air space for each employee so employed between the hours of six o'clock in the evening and six o'clock in the morning: *Provided*, In all cases where the amount of air space provided does not exceed the amount above fixed, that such room is lighted by electricity during all hours that artificial lights are necessary and persons are employed therein, unless a written permit shall be obtained from the commissioner.

20. The owner, agent or lessee of a place coming under the provisions of this act, or employer, shall provide in each workroom thereof proper and sufficient means of ventilation; in case of failure the commissioner shall order such ventilation to be provided; such owner, agent, lessee or employer shall provide such ventilation within twenty days after the service upon him of such order in writing, and in case

of failure shall be liable to a fine of ten dollars for each day after the expiration of the time given by such order to make the change.

21. No minor under sixteen years of age shall be required, allowed or permitted to clean any part of the gearing or machinery in any place coming under the provisions of this act, while the same is in motion, or to work between the fixed or traversing parts of any machinery while it is in motion by the action of steam, water or other mechanical power.

22. Every corporation, firm or person having or keeping in his or its place or manufactory coming under the provisions of this act, any explosive or inflammable compound, shall keep or store such explosive or inflammable compound in such factory, mill, workshop or place in such way as not to obstruct or render hazardous the egress of employees or operatives in case of fire.

23. Every factory, workshop or mill shall contain sufficient, suitable, convenient and separate water-closets for each sex, which shall be properly screened, ventilated and kept clean; and also a suitable and convenient washroom; the water-closets used by women shall have separate approaches; if women or girls are employed, a dressing room shall be provided for them when ordered by the commissioner.

24. Factories and workshops in which women and children are employed, and where dusty work is carried on, shall be lime-washed or painted at least once in every twelve months.

25. An abstract of this law shall be prepared and furnished upon request by the commissioner to every corporation, firm or person in this State who is affected thereby, and every manufacturer to whom a copy of such abstract is sent or delivered shall post such abstract of this law and keep it posted in plain view in such place that it can be easily read by the employees or operatives in coming in or going out from said factory, workshop or mill.

26. No person shall interfere with, delay, obstruct or hinder by force or otherwise, the commissioner, the assistant commissioner or inspectors, while in the performance of their duties, or refuse to answer in writing or otherwise, questions asked by such officers relating to the matters coming under the provisions of this act; no person shall impersonate an officer of the department or forge his certificate of authority.

27. Any person, firm or corporation engaged in manufacturing which requires from persons in his or its employ, under penalty of forfeiture of a part of the wages earned by them, a notice of intention to leave such employ, shall be liable to the payment of a like forfeiture if he or it discharges without similar notice a person in such employ, unless in case of a general suspension of labor in his or its factory, mill or place where the manufacture of goods of any kind is carried on.

28. All accidents that prevent the injured person or persons from returning to work within two weeks, or which result in death, shall be reported in writing to the department, at Trenton, New Jersey, within twenty-four hours after the expiration of four weeks or after the death of such person injured, as the same may be; such notice shall be sent by mail, postage prepaid.

29. Every corporation, firm or person shall within one month after he, they or it shall begin to occupy a factory, workshop, mill or place where the manufacture of goods of any kind is carried on, notify in writing the department, at Trenton, New Jersey, of such occupancy, giving the legal title of such corporation and name of agent upon whom service of a summons can be made, and in case of a firm, the individual names of the members of the firm or the legal title of the concern so occupying such factory or workshop.

30. For the purpose of carrying into effect the provisions of sections eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, nineteen, twenty-one, twenty-two, twenty-three, twenty-four, twenty-six, twenty-seven and twenty-eight, the commissioner shall be and he is hereby authorized to make such orders in writing for the protection and safety of employees and operatives and the enforcement of this act in places coming under the provisions of this act, as in his judgment shall seem necessary to carry into effect the provisions of such sections; such order shall be in writing, signed by the commissioner, and shall specify what shall be necessary to be done and within what time; any corporation, firm or person violating any of the provisions of sections eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, nineteen, twenty-one, twenty-two, twenty-three, twenty-four, twenty-six, twenty-seven and twenty-eight, shall, for each offense, be liable to a penalty of fifty dollars.

31. No room or rooms, apartment or apartments, in any tenement or dwelling house, shall be used for the manufacture of coats, vests, trousers, knee pants, overalls, cloaks, furs, fur trimmings, fur garments, shirts, purses, feathers, artificial flowers or cigars, except by the immediate members of the family living therein; no person, firm or corporation shall hire or employ any person to work in any room or

rooms, apartment or apartments, in any tenement or dwelling house, at making, in whole or in part, any coats, vests, trousers, knee pants, overalls, cloaks, furs, artificial flowers or cigars, unless such person, firm or corporation first shall have obtained a written permit from the commissioner; which permit may be revoked by the commissioner at any time that the health of the community or of those employed as aforesaid may, in his judgment, require it, and that such permit shall not be granted until due and satisfactory inspection of the premises affected shall have been made by the said commissioner, assistant, or an inspector; such permit shall be framed and posted in a conspicuous place in the main room of the place to which it relates, shall be duly numbered and shall state the number of persons allowed to be employed therein.

32. Any person, firm or corporation being the owner, lessee or occupant of the place to which the preceding section relates, shall, for the violation of any of the provisions therein, be liable to a penalty of one hundred dollars for each offense.

33. This act shall not apply to a private house or private room used for manufacturing purposes by the family dwelling therein.

34. Every factory, workshop, mill or place where the manufacture of goods of any kind is carried on, now or hereafter erected, which is three or more stories in height and in which twenty-five or more operatives or employees shall be at work on or above the third floor, shall be provided with outside iron fire escapes as hereinafter provided; the fire escapes shall be located at such places on the said buildings as may be best suited for the purpose intended or as the commissioner may designate in writing, and shall take in one or more windows on each floor above the first floor; fire escapes may project into the public highway to a distance not greater than four feet beyond the building line.

35. The fire escapes shall consist of outside iron balconies, and stairways at each floor above the first connecting said balconies to the ground, except in the case of the fire escape being over a public highway, when a drop ladder shall connect the lowest balcony to the ground in a manner hereinafter specified; the stairways shall be placed at a slope no steeper than a ratio of one horizontal to one and one-quarter vertical; the balcony on the top floor shall be provided with a goose-neck ladder leading from said balcony to and above the roof.

36. *Balconies.*—The balconies shall not be less than three feet in width, taking in at each story above the ground floor at least one window of each part of building separated by inside walls in which twenty-five or more operatives or employees shall be at work; they shall be below and not more than one foot below the window sills, and extend in front of and not less than nine inches beyond each window; there shall be a landing not less than twenty-four inches square at the head and foot of each stairway; the stairway opening on each platform shall be of a size sufficient to provide clear headway; the windows or openings upon each balcony shall be of easy access and sufficiently large to permit easy passage through them, and shall be kept unobstructed; where the top of window sill is more than two feet above the floor of building, inside steps shall be provided.

37. *Floors of balconies.*—The floors of balconies shall be of wrought-iron or steel slats not less than one and a half inches by three-eighths of an inch, placed not more than one and one-quarter inches apart and well secured and riveted to iron battens not less than one and a half inches by three-eighths of an inch, not over two feet apart, and which battens shall rest on and be riveted to frame of balcony; said frame to consist of angle-iron not less than two and one-half inches by two and one-half inches by three-sixteenths of an inch thick, and to extend around the four sides of balcony floor, to rest upon brackets and be secured to same by rivets or bolts and to be riveted at corners; the openings for stairways in all balconies shall not be less than twenty-one inches wide and forty-two inches long, and such openings shall have no covers of any kind; the platforms of balconies shall be constructed and erected to safely sustain in all their parts a safe load of not less than eighty pounds per square foot, utilizing a ratio of four to one between the safe working load and the ultimate strength of all parts.

38. *Railings.*—The outside top rail shall in no case be less than three feet above the floor of balcony, and shall extend around the entire platform and in all cases shall go through the wall at each end, be worked out to three-quarter inch bolt size, and be properly secured by nuts with washers at least four inches square and three-eighths of an inch thick, and no top rail shall be connected at angles by cast-iron; the top rail of balconies shall be one and three-quarter inches by one-half inch of wrought-iron or one and a half inch angle-iron at least three-sixteenths of an inch thick, or such size and shape as shall be approved by the commissioner; the bottom rails shall in no case be more than eight inches above the floor of balcony and shall

be of one and one-half inches by three-eighths of an inch wrought iron, or of one and a half inch angle iron at least three-sixteenths of an inch thick, well leaded or cemented into the wall; the standards or filling-in bars shall not be less than one-half inch round or square wrought iron, well riveted to the top and bottom rails and to platform frame immediately where adjacent to brackets and shall be placed not more than six inches apart.

39. *Stairways.*—The stairways shall be constructed and erected to fully sustain in all their parts a safe load of not less than one hundred pounds per step, utilizing a ratio of four to one between the safe working load and the ultimate strength of all parts, with the exception of the tread, which must safely sustain at said ratio a concentrated load of two hundred pounds; the threads shall be not less than seven inches wide and the rise of each step not more than nine inches; the threads shall be flat open threads of cast-iron not less than five-eighths of an inch thick, or of flat bars not over one and one-quarter inches wide or less than three-eighths of an inch thick, with spaces between not more than one inch or less than one-half of an inch; such bars to be riveted to angle irons of not less than one and one-half inches in size, secured to strings, with double rivets or bolts; the stairs shall be not less than twenty inches wide between inside of strings, and there shall remain a clear passage between stairway and wall of building of not less than fourteen inches; the strings shall be not less than three-inch channels of iron or steel, or other shape equally strong, and shall, at both top and bottom, rest upon and be fastened to a bracket, which shall be fastened through the wall as hereinafter provided; the stairs shall have a hand-rail of not less than three-quarters inch round wrought-iron rod or pipe, on each side not less than thirty inches or more than forty-two inches above steps at any point, and same shall be secured and well braced.

40. *Brackets.*—The brackets shall be placed not more than four feet apart and not be less than three-quarters of an inch by one and one-half inches wrought iron placed edgewise, or one and three-quarter inch angle iron, one-quarter inch thick, to extend across full width of balcony and be well braced at a point not less than two-thirds of the distance from wall to end of bracket, by means of not less than three-quarters of an inch square wrought iron or one and three-quarters inch angle iron; the ends of brackets and braces shall go through the wall and be turned down three inches, or be properly secured by nuts and washers four inches square and at least three-eighths of an inch thick; on new buildings the brackets shall be set as the walls are being built; when brackets are put on factories already erected, the part going through the wall shall not be less than one inch in diameter with screw nuts and washers not less than five inches square and one-half an inch thick.

41. *Ladders.*—A proper drop ladder to reach to a safe landing place below shall be required from the lower balcony of any fire escape over a public highway in place of a stairway, and when the floor of such balcony is more than sixteen feet above the sidewalk or ground, a suitable landing platform shall be provided; such platform shall be located not more than ten feet above the ground and shall be connected with the balcony above by means of a stairway constructed as this act requires for stairways between balconies; such platform shall not be less than three feet in width and four feet long and provided with proper railings; the drop ladder to ground shall be not less than fifteen inches in width with springs not less than one-half inch by two-inch iron, and rungs not less than five-eighths of an inch in diameter, placed not more than twelve inches apart and securely riveted through the strings; strings to be made of one piece and not connected in parts by rivets or bolts; the upper end of each string to be formed into a hook by which the ladder may be secured to the frame of the balcony when in use; the goose-neck ladder shall be securely fastened to the wall of the building and the strings shall extend at least thirty inches above the roof and return down and be secured to same; there shall be a space of not less than fourteen inches between such ladder and the outer rail of balcony.

42. *Painting.*—All the parts of such fire escapes shall receive not less than two coats of paint, one in the shop and one after erection, and shall be painted thereafter whenever the same may be needed.

43. The commissioner shall have the power to make and have served an order in writing upon any owner or owners of any building coming under the provisions of this act, ordering that a fire escape shall be erected either on a new building or on a building already erected, or ordering that a fire escape already erected shall be changed and altered in such manner as he shall in such order designate; such fire escapes must conform to the provisions of this act; any corporation, firm or person failing or neglecting to obey such order within the time therein limited, shall be liable to a penalty of one hundred dollars for such failure, and to a further penalty of ten dollars for each day that shall elapse after the expiration of the time limited

in said order, until a fire escape shall be erected on such building in compliance with the terms of such order: *Provided*, That fire towers, when approved by the commissioner, shall be legal protection the same as iron fire escapes as hereinbefore provided.

44. All proceedings brought under the provisions of this act shall be by action of debt, in the name of the commissioner, to be instituted in any district court of a city, recorders' court of cities, or before any justice of the peace having due jurisdiction, and the first process shall be by summons returnable in not less than five nor more than ten days, which process shall be served on the owner or owners, person or persons or any of them, owning the place or operating the business wherein the alleged violation of law has taken place; if such owner or owners, person or persons, reside in the county where the offense was committed, or if the owner or owners, person or persons as aforesaid, do not so reside in the county where the offense was committed, then said process shall be served on the superintendent, foreman or person in charge of the business or place; service upon a corporation shall be made upon the president, vice-president, secretary or any director, and if none of them reside in the county where the offense was committed, then service may be made upon the superintendent, foreman or person in charge of the business or place; in case the owner or owners of a building reside without the limits of the county, then service of the process may be made upon the agent in charge of said building, and if there be no such agent, then service of the process may be made by affixing a copy thereof to the main outer door of such building at least ten days before the return day thereof; all proceedings thereafter shall be the same as in an action of debt in said court; the finding of the court shall be that the defendant has or has not, as the case may be, incurred the penalty claimed in the demand of the plaintiff, and judgment shall be given accordingly; in case an execution shall issue and be returned unsatisfied, the court, on application, after notice to the defendant, may award an execution to take the body of the defendant, if an individual, and in case such a defendant is committed under such an execution, he shall not be discharged under the insolvent laws of the State, but shall only be discharged by the court making the order for the body execution, or one of the justices of the supreme court, when such court or justice shall be satisfied that further confinement will not result in the payment of the judgment and costs; all moneys collected under the provisions of this act shall be paid into the treasury of the State of New Jersey.

45. For the purpose of carrying into effect and enforcing the provisions of this act, there shall be and hereby is established a department to be known as the department of labor; the department shall have its main office in Trenton, and shall consist of a commissioner, an assistant commissioner and eleven inspectors; the governor shall, immediately after the passage of this act, with the advice and consent of the senate, appoint some suitable person who shall be a resident and citizen of this State, as head of the said department, at a salary of twenty-five hundred dollars per year, to be paid monthly, whose term of office shall be three years and until his successor is appointed, and whose title shall be commissioner of labor; the commissioner shall, with the approval of the governor, appoint the assistant commissioner, who shall be an experienced machinist; he shall receive a salary of fifteen hundred dollars per year, to be paid monthly; the governor shall appoint eleven suitable persons as inspectors, two of whom shall be women, whose salary shall be one thousand dollars per year each, to be paid monthly; the terms of office of the assistant and the inspectors shall be three years unless sooner removed by the commissioner; the assistant and the inspectors shall each be furnished with certificates of authority by the secretary of state, and they shall produce the same if so required by any manufacturer; the commissioner shall have the power out of the appropriation made for the purpose of carrying on the work of the department, to purchase badges for the assistant, the inspectors and himself; the commissioner may divide the State into districts, assign inspectors to such districts, and may, in his discretion, transfer them from one district to another; the commissioner, assistant and inspectors may administer oaths and take affidavits in matters relating to the enforcement of this act; the commissioner shall have the right to employ such department clerks for carrying on the work of the department as may, in his judgment, be necessary; such clerks shall receive such salaries as the commissioner, with the approval of the governor, shall fix, to be paid by the treasurer on warrant of the comptroller in equal monthly installments; when the work of the department shall necessitate the employment of additional inspectors, the commissioner shall have the power to employ such inspectors at such compensation and for such length of time as he may deem necessary, and such extra inspectors shall have the same rights, powers and privileges as the inspectors appointed by the governor; all salaries and expenses incurred by the commissioner, assistant and all inspectors, in the discharge of their duties, and all salaries

and expenses necessary to carry out the provisions of this act shall be paid from the funds of the State out of the moneys appropriated for that purpose, by the treasurer upon the warrant of the comptroller, upon presentation of proper vouchers for the same, approved by the commissioner; it shall be the duty of the commissioner to enforce the provisions of this act and to exercise supervision and control over the assistant and the inspectors, and to cause inspections to be made of the factories, mills, workshops and places where the manufacture of goods of any kind is carried on, by the assistant and the inspectors, as often as practicable, and to make a report of the work of the department to the governor of the State on or before the thirty-first day of October in each year; to prosecute violations of the provisions of this act in any district court, recorders' courts of cities and before any justice of the peace having due jurisdiction or in any other court of competent jurisdiction in this State; the commissioner, the assistant commissioner and the inspectors shall have the right at all reasonable hours to enter and inspect factories, mills, workshops and places where the manufacture of goods of any kind is carried on, and each inspector shall make a report in writing of such inspections to the commissioner at least once in each week; inspectors shall make out a list of minors discharged, with the name of child in full, residence, street and number, name of place from which such minor was discharged and date of discharge; he shall send or deliver within twenty-four hours, such list to the principal of the public school in the district where the minor resides or to the truant officer having such school district in charge; every deputy inspector shall devote at least eight hours of every working day except public holidays, and four hours on Saturdays, to the discharge of his or her duties as such deputy inspector, unless prevented by illness or other disability, and no deputy inspector shall engage in any business, occupation or employment during his or her term of office that will in any way interfere with or prevent the full and faithful performance of such duties.

46. This act shall be a public act and shall take effect on the first day of September, one thousand nine hundred and four.

Approved March 24, 1904.

CHAPTER 195.—*Payment of wages—Biweekly pay day.*

SECTION 1. Amend section three of an act entitled "An act to provide for the payment of wages in lawful money of the United States every two weeks," approved March sixteenth, one thousand eight hundred and ninety-nine, so that the same shall read as follows:

Sec. 3. The department of labor of this State shall be and hereby is authorized and directed to enforce the provisions of this act and the commissioner of labor shall make complaint against any employer or employers who neglect to comply with the provisions of this act for a period of two weeks after having been notified in writing by said commissioner of labor of the violation of this act; and it is hereby made the duty of county prosecutors of the pleas of the various counties in this State, to appear in behalf of the department of labor in all proceedings brought herein by the commissioner of labor.

SEC. 2. This act shall take effect September first, one thousand nine hundred and four.

Approved March 29, 1904.

INDEX.

	Page.
Accident insurance fund, State cooperative, of Maryland	645-648
Agreements between employers and employees:	
Coal mining	244-257
Australia, labor conditions in	9-243
Coal-mine district of Ostrau-Karwin, Austria, labor conditions in	968-978
Cost of food in France	980
Course of wholesale prices in the United States, 1890-1904	389-549
Decisions of courts affecting labor:	
Assignment of future earnings—consideration—uncertain assignments	311-313
Blacklisting—agreements among employers—rules	314-317
Boycotts—injunction—evidence	1002-1005
“Closed shop” contracts—conspiracy—strikes—evidence	681-684
Combinations—malicious injury to business—constitutionality of statute	678-680
Conspiracy—“closed shop” contracts	681-684
Conspiracy—indictable acts—labor organizations	1005-1007
Contracts of employment—enforcement—constitutionality of statute	684, 685
Discharge of employees—procurement—malice	313, 314
Eight hour law—	
city ordinance—constitutionality	685-687
public contracts—constitutionality of statute	687, 688
Emigrant agents—taxation—licenses—constitutionality of statute	688
Employers' liability—	
assumption of risk—cooperating cause	1007, 1008
cooperative insurance—constitutionality of statute	689, 690
insurance—construction of policy	983-985
insurance—notice	701, 702
railroad companies—contributory negligence—constitutional provision	985, 986
railroad companies—fellow-servant law—constitutionality	297-299, 690-693
railroad companies—fellow-servant law—logging railroads	986-988
railroad companies—safety appliance law—assumption of risk—contributory negligence	299, 300
railroad companies—safety appliance law—locomotives	303-309
railroad companies—safety couplers—defective appliances—custom—assumption of risk	300-303
railroad companies—safety couplers—sufficient equipment—locomotives—inter-state traffic	303-309
railroads—street railways—construction of statute	988, 989
use of unguarded machinery—assumption of risk—criminal law	990-992
Employment of labor—agreements among employers—blacklisting	314-317
Employment offices—limiting charges—constitutionality of statute	693-696
Examination, etc., of barbers—barbers' schools—delegated powers—constitutionality of statute	696-698
Examination, etc., of barbers—certificates—construction of statute	992-994
Examination, etc., of horseshoers—police power—constitutionality of statute	994, 995
Foreign statute—jurisdiction—injuries causing death—penal law	995-998
Hours of labor—bakeries—police power—constitutionality of statute	698-700
Injunction—	
boycotts—evidence	1002-1005
parties not defendants to original bill—contempts—process	700, 701
Injuries causing death—foreign statute—jurisdiction—penal law	995-998
Injuring business—combinations—constitutionality of statute	678-680
Inspection of factories—fees—constitutionality of statute	998, 999
Inspection of factories—sweating system—health—judicial notice—police power	999-1002
Insurance, cooperative—constitutionality of statute	689, 690
Insurance of employers—action by employee—construction of policy	983-985
Insurance of employers—defending action—notice	701, 702
Interstate traffic	303-309
Labor organizations—	
conspiracy—indictable acts	1005-1007
powers—by-laws—rights of members	1009-1011
Payment of wages—redemption of scrip—constitutionality of statute	308-311
Procurement of discharge of employee—malice	313, 314
Protection of employees as members of labor organizations—constitutionality of statute	311
Strikes—conspiracy—unlawful means—evidence	681-684
Sweating system—constitutionality of statute	999-1002
Digest of recent foreign statistical publications:	
Austria—	
Arbeiterverhältnisse im Ostrau-Karwiner Steinkohlenreviere	968-978
Die Arbeitseinstellungen und Aussperrungen in Osterreich während des Jahres 1902	261-266
Die Wohlfahrts-Einrichtungen der Arbeitgeber zu Gunsten ihrer Angestellten und Arbeiter in Osterreich	664-677

Digest of recent foreign statistical publications—Concluded.	Page.
France—	
Bordereaux de Salaires pour Diverses Catégories d'Ouvriers en 1900 et 1901.....	978-980
L'Industrie du Chiffon à Paris.....	980-982
Statistique des Grèves et des Recours à la Conciliation et à l'Arbitrage Survenus Pendant l'Année 1903.....	266-271
Germany—	
Streiks und Aussperrungen im Jahre 1903.....	272-277
Great Britain—	
Report on Strikes and Lockouts in the United Kingdom in 1903, and on Conciliation and Arbitration Boards.....	278-283
Italy—	
Statistica degli Scioperi avvenuti nell'Industria e nell'Agricoltura durante l'anno 1901.....	284-290
Netherlands—	
Werkstakingen en Uitsluitingen in Nederland gedurende 1901, 1902, 1903.....	290-296
Digest of recent reports of State bureaus of labor statistics:	
Connecticut.....	960-962
Maine.....	963-965
Massachusetts.....	258-260
New York.....	649-655
Ohio.....	656-658
Virginia.....	965-967
Immigrants, influence of trade unions on.....	1-8
Java, labor conditions in.....	906-954
Labor conditions in—	
Australia.....	9-243
Java.....	906-954
Ostrau-Karwin coal-mine district, Austria.....	968-978
Philippines.....	721-905
Laws relating to labor:	
Accidents in factories—	
New Jersey.....	1015
Accidents in mines—	
Tennessee.....	363, 364
Antitrust law—	
Texas.....	368, 369
Arbitration of labor disputes—	
Maryland.....	707, 708
Massachusetts.....	708-710
Washington.....	374
Assignments of wages. (See Wages, assignment of.)	
Bakeries, inspection of. (See Inspection, etc.)	
Barbers, examination, etc., of. (See Examination.)	
Benefit societies—	
Philippine Islands.....	347, 348
Blacklisting—	
Oregon.....	333
Texas.....	368
Boycotting—	
Texas.....	368, 369
Bribery, etc., of employees—	
Massachusetts.....	710
Bribery of representatives of labor organizations—	
New York.....	718
Bureau of labor—	
New Jersey.....	1018, 1019
Oregon.....	335, 336
Wisconsin.....	381
United States.....	719
Bureau of printing—	
Philippine Islands.....	346, 347
Bureau of statistics—	
Utah.....	370, 371
Children and women, employment of, in mines—	
Pennsylvania.....	346
Children and women, hours of labor of—	
Massachusetts.....	711
New York.....	323, 324
Children, employment of, age limit for—	
New Jersey.....	1012
New York.....	322, 324
Oregon.....	332, 333
Texas.....	367
Washington.....	376
Wisconsin.....	379-381
Children, employment of, general provisions—	
Massachusetts.....	711
New Jersey.....	1012, 1013
New York.....	322-326
Oregon.....	332, 333
Texas.....	367
Wisconsin.....	379-381
Children, employment of, in street trades—	
New York.....	321, 322
Children, hiring out, to support parents in idleness—	
Mississippi.....	712
Children, hours of labor of—	
New Jersey.....	1013
Oregon.....	332, 333
Wisconsin.....	380

Laws relating to labor—Continued.	Page.
Children, night work by—	
New York	323, 324
Oregon	332, 333
Washington	375
Wisconsin	380
Chinese, exclusion, etc., of—	
Philippine Islands	348, 349
United States	719, 720
Citizens preferred for employment on public works—	
Massachusetts	708
Coercion of employees in trading—	
Nevada	320
Texas	368
Combinations to fix wages—	
Louisiana	704
Contractors' bonds for protection of wages. (<i>See Protection.</i>)	
Contributions, forced, from employees—	
Nevada	319
Department of mines—	
Pennsylvania	340-342
Eight-hour day—	
Nevada	318, 319
Utah	371
Washington	373, 374
Employees, bribery, etc., of—	
Massachusetts	710
Employers' liability. (<i>See Liability, etc.</i>)	
Employment of children. (<i>See Children.</i>)	
Employment of labor, deception in—	
Oregon	335
Employment of women. (<i>See Children and women; Women, etc.</i>)	
Employment offices—	
New York	713-715
Wisconsin	382, 383
Examination, etc., of barbers—	
Mary and	705-707
New York	326-328
North Dakota	323, 329
Oregon	329-332
Rhode Island	352-354
Utah	371-373
Wisconsin	376, 377
Examination, etc., of mine foremen, etc.—	
Pennsylvania	342
Tennessee	360-362
Examination, etc., of plumbers—	
Oregon	334
Examination, etc., of steam engineers—	
Pennsylvania	339, 344
Philippine Islands	350-352
Exemption of wages from execution—	
Louisiana	704
Tennessee	367
Wyoming	386
Factories, inspection of. (<i>See Inspection.</i>)	
Fire escapes on factories—	
New Jersey	1016-1018
Forced contributions from employees—	
Nevada	319
Free public employment offices—	
Wisconsin	382, 383
Girls, employment of, as messengers—	
Wisconsin	381
Hours of labor of employees in mines, smelters, etc.—	
Nevada	318
Hours of labor of employees on railroads—	
Texas	267, 368
Hours of labor of women and children. (<i>See Children; Women.</i>)	
Hours of labor on public works—	
Nevada	319
Utah	371
Washington	373, 374
Immigration, regulation, etc., of—	
United States	720
Injuries causing death, right of action for—	
Tennessee	367
Injuries to employees. (<i>See Liability of employers.</i>)	
Inspection, etc., of bakeries—	
Washington	375
Wisconsin	378, 379
Inspection of factories—	
Massachusetts	711
Nevada	318, 319
New Jersey	1013-1019
New York	712, 713, 715-718
Washington	373
Wisconsin	379
Inspection of steam vessels—	
Pennsylvania	342-345

Laws relating to labor—Continued.	Page.
Inspectors, factory—	
New Jersey	1018, 1019
Oregon	335, 336
Pennsylvania	339
Inspectors, mine—	
Tennessee	356-367
Wyoming	384-387
Labor Day—	
Mississippi	712
Labor organizations, bribery of representatives of—	
New York	718
Labor organizations excluding members of National Guard—	
New York	325, 326
Labor organizations, incorporation, regulation, etc., of—	
Massachusetts	710
Labor organizations, unauthorized wearing of badges of—	
Pennsylvania	339, 340
Labor organizations. (<i>See also</i> Protection of employees as members, etc.; Trade-marks of trade unions.)	
Liability of employers for injuries to employees—	
North Dakota	329
Oregon	329
Wisconsin	383
License tax, exemption of mechanics, etc., from—	
Louisiana	703
Liquor traffic, investigation of—	
Wisconsin	381
Lodging houses, sailors'—	
Oregon	337, 338
United States	719
Messengers, employment of girls as—	
Wisconsin	381
Mine foremen, etc., examination of. (<i>See</i> Examination.)	
Mine regulations—	
South Dakota	355
Tennessee	356-367
Texas	368
Utah	370
Wyoming	384-387
Miners' home—	
Pennsylvania	345, 346
Miners' hospital—	
New Mexico	321
Mines, department of—	
Pennsylvania	340-342
Mines, etc., hours of labor in. (<i>See</i> Hours of labor.)	
National guard, members of, not to be excluded from labor organizations—	
New York	325, 326
Payment of wages, modes and times of—	
Maryland	704, 705
New Jersey	1019
Wyoming	387, 388
Plumbers, examination of. (<i>See</i> Examination.)	
Protection of employees as members of labor organizations—	
Nevada	320
Oregon	333
Protection of employees as members of National Guard—	
New York	325, 326
Protection of employees as voters—	
Nevada	320
Protection of employees on street railways—	
Louisiana	703, 704
New York	325
Texas	370
Protection of wages—	
Massachusetts	711
Oregon	338, 339
Public works, preference of resident laborers on—	
Massachusetts	708
Railroad employees, hours of labor of—	
Texas	367, 368
Railroads, safety appliances on—	
Philippine Islands	350
Rates of wages of employees of public printing office—	
Philippine Islands	346, 347
Rates of wages of employees on public works—	
Nebraska	318
Rules for railroad employees—	
Philippine Islands	350
Safety appliances. (<i>See</i> Inspection of factories; Railroads, safety appliances on.)	
Seamen—	
United States	719
Seamen. (<i>See also</i> Lodging houses, sailors'.)	
Seats for female employees—	
Maryland	707
Oregon	333, 334
Statistics, bureau of—	
Utah	370, 371

Laws relating to labor—Concluded.	Page.
Statistics, collection of—	
Hawaii.....	703
Steam engineers, examination of. (<i>See Examination.</i>)	
Steam vessels, inspection of—	
Pennsylvania.....	342-345
Street railways, protection of employees on. (<i>See Protection.</i>)	
Sunday labor—	
Massachusetts.....	711
North Dakota.....	328, 329
Washington.....	374
Sweating system—	
New Jersey.....	1015, 1016
New York.....	715-718
Time for meals to be allowed employees—	
Louisiana.....	704
Time to vote to be allowed employees—	
Massachusetts.....	710
Trade-marks of trade unions—	
New York.....	715
Pennsylvania.....	340
Trading, coercion of employees in. (<i>See Coercion.</i>)	
Union labor to be employed on public works—	
Nebraska.....	318
Voting, time for. (<i>See Time to vote.</i>)	
Wages as preferred claims—	
Nevada.....	319
Washington.....	375
Wages, assignment of—	
New York.....	712
Tennessee.....	355, 356
Wages, combinations to fix—	
Louisiana.....	704
Wages, exemption of. (<i>See Exemption.</i>)	
Wages, payment of. (<i>See Payment.</i>)	
Wages, protection of. (<i>See Protection of wages.</i>)	
Women and children. (<i>See Children and women.</i>)	
Women, employment of, general provisions—	
Oregon.....	333, 334
Women, employment of, in barrooms—	
New Hampshire.....	320
Women, hours of labor of—	
Oregon.....	333, 334
Manufactures in Massachusetts, statistics of, 1902.....	659-663
Ostrau-Karwin coal-mine district, Austria, labor conditions in.....	968-978
Philippines, labor conditions in the.....	721-905
Prices, wholesale. (<i>See Wholesale prices.</i>)	
Ragpicking industry in Paris.....	980-982
Russian workmen's compensation act, the new.....	955-959
State Cooperative Accident Insurance Fund of Maryland.....	645-648
Statistics of manufactures in Massachusetts, 1902.....	659-663
Street railway employment in the United States.....	550-644
Strikes and lockouts—	
Austria, 1902.....	261-266
France, 1903.....	266-271
Germany, 1903.....	272-277
Great Britain, 1903.....	278-283
Italy, 1901.....	284-290
Netherlands, 1901, 1902, 1903.....	290-296
Trade unions, influence of, on immigrants.....	1-8
Wages, rates of, in France, 1900 and 1901.....	978-980
Wholesale prices, course of, in the United States, 1890-1904.....	389-549
Workingmen's compensation act, the new Russian.....	955-959