

Dhananjayrao Gadgil Library



GIPE-PUNE-051354



View from the Author's Window of Central Tokyo - the World's Third Largest City. Continued at back of book.

JAPAN'S ADVANCE



JAPAN IN TRANSITION

**Terraced rice-fields in foreground; electric railway
in middle distance; and beyond, high-
tension transmission lines.**

JAPAN'S ADVANCE

BY

JAMES A. B. SCHERER, Ph. D., LL.D.

*Author of "The Romance of Japan Through the Ages"
and "Cotton as a World Power"*



Tokyo

THE HOKUSEIDO PRESS

1935

**COPYRIGHT, 1934,
BY JAMES A. B. SCHERER AND THE HOKUSEIDO PRESS**

X9.42.N3

G-1

51354

**JAPAN'S ADVANCE
PRINTED IN JAPAN**

PREFACE

If the average American cannot be reached with up-to-date information about Japan some day there may be trouble between the two countries. At present his ignorance of his next-door neighbor is colossal. The Japanese know us and our history vastly better than we know them and theirs. "There is no darkness but ignorance" Shakespeare said, and war is a thing of darkness. Not only so. If the Yankee doesn't look out these so-called Yankees of the East are going to beat him at his own game. For his own sake he ought to know what they are doing. Perhaps they can teach him some things, who knows? Perhaps even it would be to his advantage to make up his mind to sit down at the same table with them and try to reach an economic understanding, a working agreement.

There is a new Japan. This is what it says to the Man in the Street across the Pacific:

The United States possesses a vast territory, rich in natural resources and in the number and energy of its people. In these respects Japan cannot compare with America, but, the greatness of a nation should not be judged by material elements only. The Japanese do not consider themselves inferior in any way to the Americans, in talents, culture, or morality. What Americans have done, the Japanese believe they also can do. Japan has made great progress in recent decades, and the Japan of today is not the Japan of yesterday. Estimates of Japan which may have been accurate enough twenty years ago are no longer adequate. The world is on the move, and the nations which compose it are growing or decaying. Japan must be measured as she is today, not as she was before.

Asia is different from the West, and it may be the plan of nature that the difference should persist. Asia is becoming self-conscious, and is passing through the agony of re-birth. Whatever errors Japan may make, whatever may be her limitations, it is beyond question that Japan alone among Asiatic nations has the power and the will which make her the stable element in this turbulent and changing continent. The hope of stability in Eastern Asia depends upon Japan. If America chooses to cooperate with Japan, that hope, though dim at present, will gradually grow brighter. Any policy which disregards the one strong and stable nation in Asia can only perpetuate the weakness and the insecurity which are the source of Asia's troubles now.*

Mr. Tokichi Tanaka is speaking—formerly ambassador to Moscow and now president of a leading financial journal in Tokyo. He speaks with authentic voice; no words could be more true or more timely. To persuade Americans to heed them is one of the aims of this book.

Another is to array certain facts for the Japanese themselves to consider. This industrial revolution of theirs gives them an important problem to be dealt with in the new national policies that have to be formulated at this turning-point in their history; this "crisis" they are talking about. So many big things have happened to them in the last two or three years that they must formulate new policies to handle the changed conditions. Their best-known foreign correspondent, Mr. K. K. Kawakami, writes from Washington: "Japan's crisis does not come from other countries, but is within herself."* The present writer can only array a single set of facts, and that imperfectly, that have to be taken into account, including the rest of the world's attitude toward this set of facts comprising the

* *Contemporary Japan*, December, 1933.

* Translated from *Hochi Shimbun* in *The Japan Times* of December 30, 1933.

PREFACE

vii

Japanese industrial revolution. If he did not endeavor to perform his task frankly and fearlessly he would no longer merit the confidence reposed in him through so many years, for which he is profoundly grateful.

While the industrial revolution in Japan stems from the inflow of applied science that began a good many years ago, the speeding-up period has covered only twenty years. Until the beginning of the Great War Japan's industrial advance was sufficiently impressive, but since then it has gathered such impetus as to become positively startling. In 1914 Japan was an agricultural country; in 1934 it ranks among the leading industrial nations of the world. To bring the speeding-up process into relief it has seemed to the writer that a certain amount of background is necessary; nor has he hesitated to turn on a few side-lights and even to invoke "human interest" to lighten the inevitable statistics.

Just before completing his manuscript the author was privileged to discuss its general plan with a large gathering of men of affairs and representative scholars. One of the latter, a physician, said that he was "not one hundred per cent satisfied," since no account has been given of the notable advances in medical science. Of course the obvious reply is that if Japan's advances in every respect are to be written up—as they will be, in time—an encyclopædia will result, whereas this is only one short book, confining itself to industry. Next morning a letter came from Dr. Yogoro Kato, of the Tokyo University of Engineering, saying:

I felt very interested in your lecture yesterday evening and thank you for it. Really you spoke what I had been feeling. But I would like to have you take into consideration what the Universities or other institutions of Japan are doing (or preparing to do). I think that

we are doing what American or German Universities have been doing for developing the industries of their countries.

Dr. Kato is undoubtedly right. This book deals with results. If it went into causes Japan's institutions of learning would have to be named first, and I thank Dr. Kato for giving me occasion to say so.

Dr. Kato himself is director of a research institute for building materials, and is also in charge of the electrochemical department of the Tokyo University of Engineering.

In addition to the five Imperial Universities in as many different sections of Japan, there are forty-one universities with graduate schools in engineering and industry or allied subjects, besides such special institutions as the Institute of Industrial Research and the Institute of Physical and Chemical Research, in Tokyo.

Japan has 111 colleges giving a three-year course, fourteen of these colleges being devoted to training in industry, agriculture, commerce, economics, and law. In addition there are 51 "Higher Trade and Industrial Colleges," of which 19 are technical, 18 commercial, 12 agricultural, and 2 teaching navigation.

Technical education extends down into the pre-college grades. Of technical high-schools there are 975 with nearly 300,000 students, and of technical continuation schools there are 15,248, with a million and a quarter students. As a bulletin of the Department of Education says, "the need for technical schools has been recognized by the public in the light of the development of industries, and the progress achieved in this line of education has been specially marked in recent years in consequence of improvements both in system and in substance and of the encouragement given to

PREFACE

ix

it by the government."

Some idea of the practical character of the training given by this grade of school may be gathered from the illustration at page 18.

Japan's entire school system comprises 46,000 educational institutions, or three to every ten square miles, with an enrolment of some 13,000,000, or twenty to every hundred of the population.

Such being the case (says the bulletin just cited), there is no village or hamlet in Japan where we do not find people reading, and there are very few even among the poorest class, who cannot express their thoughts in writing. This fact is clearly proved by the proficiency tests given at the annual examinations for conscription. In these examinations it is found that few of the youths of conscription age lack the knowledge of the three R's. The percentage in 1930 was 0.48.

A casual observer may be surprised that Japan should have made such progress in education, while it is only a little over half a century since she came in contact with Europe and America. We must remember, however, that Japan is an old country and when Western civilization was introduced she was fully in a position to receive and digest it.

In view of such basic facts the following pages should not overstrain the reader's credulity.



NOTE.—Author and publisher are alike grateful to the many firms and individuals by whose kindness the numerous photographs and diagrams have been supplied.

CONTENTS

PART I

AN INDUSTRIAL REVOLUTION

THE PREFACE v

CHAPTER PAGE

I: JUST A GLANCE 3

Theodore Roosevelt's prophecy — Its fulfilment — Railways — Japan from a car window — Steam and motor ships — Factories — Cotton and silk — Japan and America

II: THE HEAVY INDUSTRIES 13

Classification — Ship-building — A floating cannery — Rolling-stock — Motor-cars — Bicycles — Airplanes — Roads — Tokyo sets an example — Cement and steel — Inventions in steel — Alloys — Wood — Factory equipment — Japanese looms — Machinery making — The Takuma boiler — Emergency, or war material — Depreciated currency — A prosperous outlook — Iron — Coal — Fish — Petroleum — The first trust

III: THE LIGHTER INDUSTRIES 45

Electric light and power — The radio — Motion-pictures — A trans-Pacific telephone connection — The electro-chemical industry — Fertilizers — Rubber goods — Celluloid — Glassware — Paints and dyes — Matches — Novelties — Paper — Books and newspapers — The wide use of English

IV: INVENTIONS AND INVENTORS 69

Greece and Japan — An invention exposition with 700 exhibits — An ultra high-speed camera — A new method of microscopy

— Have we been fair to Japan?— A pearl nursery— Ten inventors

V: COTTON AND WOOL... .. 91

The four key industries— Japan's economic ambition— Spindleage and looms— Cotton competition with America and England— Lancashire loses, and one reason why— Japan's modern methods— India, the home of the cotton plant— Old England— Japan's raw supplies— Conferences and the League— Manchoukuo as a source of cotton and wool— Japan's predisposition to textiles

VI: SILK AND RAYON 111

Aristotle and Marco Polo— A Chinese mystery discovered— How the silkworm spins— Japan and America— An unorganized industry— A romance of the rails— The American depression and silk— Paterson, N. J.— Can silk ever "come back?"— The problem of the Japanese farmer— Canned comestibles?— Density of population— Urbanization— Rayon: man learns from the worm— The struggle with silk— Italy sounds an alarm— The domestic use of rayon— Manufacturing costs

VII: FROM PROFITEERS TO THE LABOR
MOVEMENT 131

The *narikin*— Rice riots— The first labor unions— Serious strikes— The great earthquake as a safety valve— The suffrage act as a tonic— Growth of labor unions— Social justice also grows— Welfare work— Three philanthropists— The Mitsui foundation— The family system

VIII: THE NATIONAL BACKBONE 149

Four mistakes about Japan— The peasant's sense of humor— His "horse sense"— His industry— His idealism— The woes of the Japanese farmer— Canned comestibles?— Urbanization— Decentralized industry and its advocates— Past promises and the present programme of farm relief— Japan needs a strong backbone

CONTENTS

xiii

IX: WOMEN, ESPECIALLY IN INDUSTRY 169

The main driving force—Ancient Japan and woman—Confucianism and oppression—The great Emperor Meiji—The “little embassy” to America—The reforms of 1898—Growth of the women’s movement—Present status of women—Amazing changes—The modern girl—Courtship yesterday and today—Factory laws—Wages—A big mill examined

X: FACTORS IN JAPAN’S INDUSTRIAL SUCCESS 189

Germany, the Great War, and Japan—Japan holds her advantage—“Dumping” and its false charge—Sweating—Pickles vs. cheese—“Convinced determination”—Rationalization—Hostile testimony—Summary

PART II

ORIENTATION

XI: JAPAN AND ENGLAND 205

Nara and the Shoso-in, a repository of Japanese classical arts and crafts—A plebeian art movement—A present-day revival: Kanebo “service stations”—How England’s industrial revolution was promoted by invention—“A coincidence of exceptional circumstances” not found today—A comparison of textile efficiencies—The British-Japanese economic conference—British journals on Lancashire—A great industrialist speaks out—Coal, iron, and steel

XII: THE U. S. A. AND THE U. S. S. R. 229

Theodore Roosevelt’s Japanese policy—Five principles—Saving the South Manchuria Railway—Two ambassadors speak out—F. D. Roosevelt’s recognition of Russia—Will Russia fight Japan?—Will the United States recognize Manchoukuo?

XIII: THE SANCTION OF THE BOYCOTT 249

Suppressed desires find a vent—John Bassett Moore, Captain Boycott, and Elihu Root—China, habitat of the boycott—

CONTENTS

W. H. Taft at Shanghai — What caused the battle of Shanghai?
 A Geneva debate — The great boycott is effective: for war —
 Mr. G. Ward Price to Lancashire

XIV: HIROTA LOOKS AT HIS WORLD 263

The Kyushu spirit — Liberal contacts — Korea, Peking, London,
 Washington, The Hague, and Moscow — Thoughts on coming
 home — Colleagues

XV: CHINA AND MANCHOUKUO 275

Flying over the new State — The soy-bean and other crops —
 Current travelers — Independence — Amazing progress — The
 Emperor and his Premier — "The Collapse of a Civilization"
 — China's strong man and Japan — William R. Castle's views —
 Japan serves notice

XVI: CONCLUSIONS 301

Japan and Rudyard Kipling — Japan's unique advantages —
 Owen Young's forecast — Japan and America — Condescension
 and ignorance — Nerve when pluralized

 APPENDIX

A: THE TREND OF THE FOREIGN TRADE OF JAPAN 317

B: SOME CONSIDERATIONS OF FACTORS WHICH DE-
 TERMINE THE CONDITIONS OF LABOR IN JAPAN 324

C: EXPORTS AND FOREIGN EXCHANGE OF JAPAN ... 327

D: FUTURE OF JAPAN'S FOREIGN TRADE 333

E: LAW CONCERNING ADJUSTMENT OF TRADE
 AND SAFEGUARDING OF COMMERCE 336

INDEX 339

ILLUSTRATIONS

Japan in Transition	<i>Frontispiece</i>
	FACING PAGE
The Fuji Express	8
In the Dining Car	8
Mt. Fuji from the Fuji Express	9
World's Engineering Congress at Tokyo	18
Young engineers in training at Nagoya	18
Ship-building at Yokohama	19
Ship-building at Nagasaki	19
World-Production of Bicycles (Diagram)	20
A traveling lunch-counter	22
Motor-cars and bicycles	22
"All aboard!"	23
First woman to make parachute descent	23
One of the new streets of Tokyo	26
The Tokyo "L"	26
Looking out from the Tokyo Station	27
The heart of Tokyo	27
A ship-yard interior	38
Japan Steel Co.'s smelting furnace	38
Fukiai Plate and sheet Mills at Kobe	39
"Ready for the rails"	39
Where the power comes from	47
"The thrill of a lifetime"	47
Generation of Electricity (Diagram)	49
Broadcasting a <i>geisha</i> orchestra	54
Filming a "talkie"	54
Tokyo Operators for the Trans-Pacific Service	55
Making Dolls for Export	59

The Book and Magazine Business	66
Love of art still dominates Japanese life	71
A Pearl Farm	82
Surgical Operation for Pearls	82
A Group of Inventors	83
Typical Mills	94
Efficiency	94
Cotton consumption (Diagram)	97
Imports into India (Diagram)	103
Sorting Cocoons	116
Gathering Mulberry Leaves	116
Reeling Silk from Cocoons	116
Silkworms on their Feeding-Shelves	117
Section of a living egg	117
Imports of raw silk into U. S. A. (Diagram)	119
Examining Silk for Shipment at Kobe	128
Silk Conditioning House at Yokohama	128
Arable Land and Population (Colored Plate)	150
Old Farm Village	160
Not Rice, but Strawberries	160
Transplanting Rice	161
The Tea Harvest	161
Factories and Workers (Colored Plate)	170
The "little embassy" to America	174
Women physicians	174
Telephone operators keeping fit	175
Ray-baths in a primary school	175
Foreign Trade (Colored Plate)	190
Making Chemical Tests of Cotton-Mill Food	194
In a Modern Mill	194
The old Shoso-in at Nara	208
Weave of ancient Textile	208
"New styles to suit every taste!"	214
British and Japanese cotton exports (Diagram)	216
Mr. Wm. R. Castle at American Embassy	242
Young Farmers of Manchoukuo	278

ILLUSTRATIONS

xvii

Mileage of Manchurian railways (Map)	283
The Anshan Iron Mines in Manchoukuo	286
Sakurajima Iron Works at Osaka	286
The Emperor Kang Teh	288
The New Emperor just after his Enthronement	289
Making Cloisonné	304
New and perfect Lacquer-ware	304

PART ONE

AN INDUSTRIAL REVOLUTION

I

JUST A GLANCE

¶ Theodore Roosevelt's prophecy—Its fulfilment—Railways—Japan from a car window—Steam and motor ships—Factories—Cotton and silk—Japan and America

CHAPTER I

JUST A GLANCE

THEODORE ROOSEVELT foresaw the rise of Japan as an industrial power. "As for Japan," he said so long ago as 1905, "she has risen with simply marvelous rapidity, and she is as formidable from the industrial as from the military standpoint. She is a great civilized nation; though her civilization is in some important respects not like ours. There are some things she can teach us, and some things she can learn from us. She will be as formidable an industrial competitor as, for instance, Germany, and in a dozen years I think she will be the leading industrial nation of the Pacific."

Even Colonel Roosevelt would be surprised by Japan's industrial growth since he spoke. During the preceding ten years her output had risen from an index figure of 100 to 226, which was enough to impress him. Ten years after he spoke it was 426. The Great War had just broken out. In 1924 the figure had become 963, and now it is above 1500, with no signs of abatement.

The first thing one does on disembarking at Yokohama or Kobe is to get into a train. When the author first visited Japan its railway mileage was about five hundred. Today it is ten thousand, to say nothing of Karafuto (Saghalien), Taiwan (Formosa), Chosen (Korea), and Manchoukuo, where long railways are Japanese owned and managed.

Private railways in Japan proper have half as much mileage as those of the government, with a capital investment of ¥ 4,280,000,000* as against ¥ 3,285,000,000 on the part of the State. Of electrified railways there are already several hundred miles, and these are being rapidly extended. In fact, the electrification of all lines is planned. Subways, or tubes, of the most modern type, either operate or are under construction in the two largest cities, Osaka and Tokyo. Elevated trains bisect and encircle Tokyo, more than a thousand passing a given point daily. Almost all cities have tramways, which aggregate twelve hundred miles in length and a capital investment of ¥ 2,205,831,510.

The first impressions of a traveler as he gets into an ordinary Japanese train today are vividly reported by Dean Allen, of the University of Oregon's school of journalism:

"Trains are frequent and fast, and invariably on time. If one were late it would probably be as much a source of shame to the engineer as for a Japanese farmer to have it known that a full-grown weed had been seen on his farm—a great calamity and disgrace.

"In the dining-car, dinner—four or five excellent courses—costs forty-two cents. This is done by efficient management. At five o'clock the steward comes through the train to find out exactly how many want dinner. Then just that many dinners are cooked, and there is no waste. At breakfast there is a choice of three menus of three courses each, for twenty-one cents. For instance, fruit, then oatmeal or fried fish and potatoes, then ham and eggs (two), with excellent coffee and toast, all for the price of a package of cigarettes.

"It is partly the small size of the cars, but partly also the efficient (or economical) management, that makes the

* Before the gold embargo the dollar-yen parity was 49½. When this is written a yen is worth about thirty cents, U. S. A.

American feel a bit cramped. Every little berth, both upper and lower, is taken. It would be unpleasant to travel in such close proximity to so many people were it not for the extraordinary personal cleanness of everybody. Even the porter, when he starts to make up the berths, gets himself up like an American surgeon at an operation, with a surgical gauze bandage over his mouth and nose. One knows he hasn't even breathed on one's pillow or bedding.

"The Japanese were justified in planning for small, light cars when they began railroad building. Not only is their stature shorter than ours by about the same percentage by which their cars are smaller, but their country is very mountainous. Also, they import their coal. Wide, heavy trains seemed inadvisable. Informed Japanese on the train said that in Korea and Manchuria, and in all the new area, the Japanese had adopted a wide gauge, four feet eight and a half inches, instead of three feet six inches. There is plenty of coal in Manchuria.

"Out of the window, the scenery of Japan is of unflinching interest. The background is of lovely mountains, with signs of intelligent and large-scale reforestation. No land must stand idle on these small islands with their immense population. In the valleys the main crop is rice, but even the uninformed eye detects pears, apples, tea, taro, mulberry leaves for silk culture, and other crops. The most familiar ones are the most interesting, because they are handled so differently. If this writer were truthfully to describe a Japanese pear orchard, *The Journal's* readers in Medford would lose faith in the paper.

"Most interesting is what the Japanese have done to their canyons. They have diverted the spring torrents to culverts, often stone lined or cement, along the side hills,

filled the old canyon beds with earth in terraces, and now use them as farms—so every canyon the train passes appears as a giant green stairway leading to the mountain top. It is wonderfully beautiful as well as useful. The Japanese succeed in adding a beautifying touch to everything they do, no matter how practical. They have even made the galvanized corrugated iron roof, in America and Europe the ugliest thing man ever created, into a thing of beauty. In the farm villages—farmers live in villages and not in the open fields—corrugated iron blends most artistically with roofs of thatch and tile. Add a quaintly-fashioned ridge-pole, cut off the corners, and decorate the eaves a little, and the trick is done. The habit of living in picturesque villages among hedges and flowers, and leaving the land unfenced—fences waste acreage and there is none to spare—helps make the farm scenery so like a fairyland. The cultivated stretches are large, but the individual farm averages only an acre or two for each farm family. It hasn't room to spare for a single dandelion."

That is Japan from a car window.

Three special express trains, the Tsubame ("Swallow"), the Sakura ("Cherry"), and the Fuji connect the six largest cities of Japan: Tokyo, Yokohama, Nagoya, Kyoto, Osaka, and Kobe. They run at high speed. The Tsubame makes an average of sixty-seven kilometers an hour between Tokyo and Kobe, covering the distance of 601.2 kilometers in nine hours, and frequently reaching a speed of ninety-nine kilometers an hour. The average speed of all express trains below the special class is sixty kilometers.

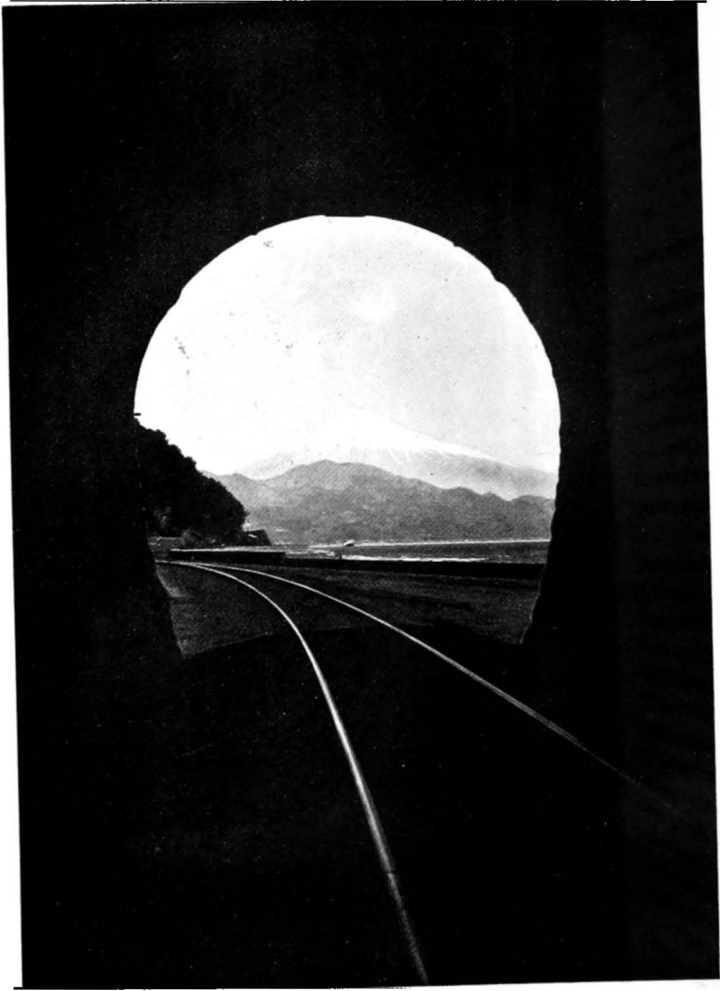
The number of passengers has increased at an extraordinary rate, namely, forty million a year for the last fifteen years. This helps to explain the unusual fact that Japanese railways derive a larger revenue from passenger than from



The Fuji Express.



In the Dining Car.



Mt. Fuji from the Fuji Express.

freight service. For a recent typical year the revenues were as follows :

From passenger service	¥ 279,025,754
From freight service	217,828,954
Excess of former	61,196,800

Americans take six railway rides *per capita* annually, the Japanese sixteen.

Even more spectacular than the growth of their railways has been the Japanese increase in shipping. Lloyd's Register Book shows that when Theodore Roosevelt made his prediction in 1905 Japan launched thirty-two thousand tons, and that she now launches annually more than a hundred thousand. In other words, her shipbuilding has increased more than two hundred per cent, while that of the United Kingdom and the United States has remained just about stationary.

The largest Japanese steamship company is the Nippon Yusen Kwaisha, or Japan Mail. Less than forty years ago it owned and operated fifty-four steamers, aggregating 100,000 gross tons, and had a capital of ¥ 22,000,000. Today it owns a fleet of 149 vessels, of 880,000 gross tons, with a capital of ¥ 106,250,000. Its closest rival, the Osaka Shosen Kwaisha (Osaka Mercantile Steamship Company), operates 113 vessels, of a little more than 510,000 gross tons. There are sixteen other ship-owners with more than 30,000 gross tons each, operating 267 vessels with a total of 863,182 tons. These lines encircle the globe.

Still smaller owners operate altogether more than a thousand vessels with an aggregate tonnage of 3,859,173, plying to all parts of the world.

In equipment, comfort, service, and speed the great motor ships of the two leading Japanese companies compare

favorably with the best Atlantic ships, but not in size. Those plying between Yokohama and San Francisco have a displacement of some 22,000 tons, a gross tonnage of about 17,000, a length of six hundred feet, and a beam of seventy. They make the crossing in fourteen days, including a day in Honolulu. After a recent trip *de luxe* round the world, using fourteen different vessels, the present writer ranks them at par.

Few factory chimneys punctuated the Japanese landscape thirty years ago. Today a British resident of long standing complains that "almost every town has its sheaf of smoke-stacks, five thousand breaking the sky-line in Osaka and its suburbs alone. Not a month passes without seeing new manufactories of cement, carpets, soap, glass, umbrellas, hats, matches, watches, bicycles, smelting-works, electrical works, steel foundries, machine-shops of every sort. The silk industry, once confined to certain narrow districts, is fast spreading over the entire center and south. Formerly the Nakasendo was an old-world trail among the mountains. The last time we travelled along the new, finely graded carriage road, we were wakened every morning by the scream of the factory whistle. Journeying on and reaching the town of Kofu, we found its silk filatures to be now its most noteworthy sight."

Not content with silk filatures, Japan rates high in the cotton industry. Taking hold of modern textiles in earnest with the dawn of the century, she managed by the beginning of the Great War to double her imports of raw cotton and almost to treble her spindles. The war speeded up the new industry enormously, and now the whole world is aware of it.

During the first six months of 1933 manufactured cotton replaced raw silk as Japan's chief export. The raw silk amounted to ¥ 167,498,000, cotton goods to ¥ 182,-

880,000, an increase for cotton goods of ¥ 75,737,932 over the first half of the year before. *Japan cannot produce cotton.* About one quarter of her raw material she takes from India and other Eastern countries, and the other three-quarters from the United States,—which grows nearly 60% of the entire world's cotton supply. Of Japan's second export, raw silk, the United States takes 90%; a hundred thousand Americans engaging in manufacturing it to an annual value of \$ 300,000,000. *America cannot produce silk.* Japan produces nearly 70% of the world's silk supply.

It is fundamental facts like these that explain the amazing economic interdependence of the two countries. One-third of Japan's foreign trade (exports and imports combined) is with the United States. On the other hand, next to the huge British Commonwealth—misnamed Empire—Japan is America's best patron. She outbuys any nation in Europe. As for Asia, the United States sells more goods to Japan than to all the rest of the Far East combined, including the Philippines. And Japan pays! After the catastrophic earthquake of 1923 a British columnist wrote that Japan's credit could thenceforward be appraised better by the geologists than by the economists. But this bitter jest has been utterly belied by the facts. Without default, without even any delay in interest or principal payments on Japanese bond issues sold abroad, Japan today has a credit excelled by no other country. And this notwithstanding the fact that circumstances have notoriously lined up against her. Before she had fairly recovered from the earthquake drain, the Manchurian expenses began. While these were at their height the yen fell; at one time almost to twenty cents, where it stuck for months. This fall of the yen to less than one-half the par of exchange meant that Japan had to double her rate on coupon payments abroad, a 6½%

coupon becoming in effect a 13% coupon. Besides, Japan had extended vast loans to China, many of which were defaulted. Thus, while getting no interest on money it had lent, Japan had to pay double interest on the money it had borrowed. But Japan paid.

The writer is an American, with extensive experience of Japan. All humanitarian considerations aside—and of course they loom the largest—it seems to him that two countries that do such an enormous and satisfactory business with each other, largely in raw materials for which they must depend on each other, should seek to avoid dangerous and unnecessary rivalry.

After all, this is a humanitarian consideration. The causes of most modern wars are economic. If, by an economic *modus vivendi*, Japan and America succeed in keeping the peace, "the Pacific era" will indeed be "the greatest of all," as Theodore Roosevelt prophesied.

NOTE: Statistics issued by the United States Department of Commerce on March 15, 1934 reveal Japan as outranked only by Great Britain and Canada as an export market and as second only to Canada as a source of United States imports. For the six months ending December 31, 1933, exports to Japan amounted to \$92,941,000 as against \$57,880,000 for the same period one year previously. Exports to China were \$32,343,000, during the second half of 1933. Imports from Japan for this same period were \$79,279,000 as against \$65,340,000 one year previously. Total exports to Asia were \$180,470,000 as against \$127,948,000; total imports, \$252,109,000 as against \$163,070,000.

In thousands of yen, Japan's trade with the United States for the decades 1897 to 1927 has been tabulated as follows:

	<i>Exports</i>	<i>Imports</i>
1897	52,436	27,030
1907	131,102	80,697
1917	478,536	359,707
1927	833,804	673,685
(1933)	492,237	620,778)

(The interpolated figures for 1933 testify eloquently to Japan's prosperity as contrasted with the depression in America. Raw silk is a big factor in the decline of America's purchases. As will be shown in Chapter VI, this decline has had disastrous effects on the Japanese farmer).

II

THE HEAVY INDUSTRIES

Classification — Ship-building — A floating cannery — Rolling-stock — Motor-cars — Bicycles — Airplanes — Roads — Tokyo sets an example — Cement and steel — Inventions in steel — Alloys — Wood — Factory equipment — Japanese looms — Machinery making — The Takuma boiler — Emergency or war material — Depreciated currency — A prosperous outlook — Iron — Coal — Fish — Petroleum — The first trust?

CHAPTER II

THE HEAVY INDUSTRIES

In their 1933 issues, the annuals of Japan's two great rival newspapers agreed on the importance of the Heavy Industries. "These are the barometer of all the industries of a nation," asserted one, while the other declared that "Japan as one of the world's advanced countries is interested in heavy industries, because the leading nations are actively engaged in heavy industries, leaving light industries to the second-grade countries."

For the convenience of readers "Heavy Industries" may be classified as follows: (1) Transportation: Ship-building, Rolling-stock, Airplanes, Roads; (2) Structural Supplies: Building material, Factory equipment; (3) Emergency: War material; (4) Basic Supplies: Iron, Coal, Food.

TRANSPORTATION

SHIP-BUILDING

Japan's shipping business, now outranked only by that of Great Britain and the United States, has benefited by three widely separated and impressive accelerations, due to three wars.

Prior to the war with China in 1894-'5, Japan's shipping was almost wholly coastwise, her foreign trade being done in foreign bottoms. But war transports and other

ships had to be purchased abroad, and when the war was over all the ships were put to some service, with the result that Japan took over her own foreign trade. Ten years later the war with Russia repeated this process on a much larger scale, with the result that the shipping center of the Far East shifted from Hongkong and Shanghai to Kobe. But the World War dwarfed the other two in its effect on Japanese shipping, and especially ship-building. Europe, too busy to build ships but needing them sorely, called on Japan. The result has no parallel: Japanese ship-yards increased ten-fold in ten years. Naturally, a reaction followed this boom, and for a while many ship-yards lay idle. But at last the depreciation of the yen stimulated exports, calling for fresh ships, and the Manchurian upheaval added a further stimulus. A third was furnished by a government subsidy. This act provided that old ships to the amount of 400,000 tons should be scrapped, and superior new ships totaling 200,000 tons built to supersede them during three years, the subsidy amounting to ¥ 10,000,000. How greatly this dismantling and building programme helped the shipping business may be gathered from the following table, showing the tonnage of ships launched in Japan during the last three years:

1930	58,785
1931	75,195
1932	153,998

At present there are twenty-two private Japanese ship-yards able to build merchant vessels of a thousand gross tons and upwards. Of these the twelve listed below operate twenty-nine dry docks 350 feet or more in length. But there are forty-six other, shorter docks, besides 180 slip-ways for merchant-ship repairing.

THE HEAVY INDUSTRIES 17

<i>Firm</i>	<i>Location</i>	<i>Dock Length</i>
Mitsubishi Ship-building Co., Ltd.	Nagasaki	{ 728 feet
		{ 523 "
		{ 375 "
	Kobe	{ 16,000 ton floating dock
{ 12,000 " " "		
{ 7,000 " " "		
	Hikoshima, near Moji	{ 460 feet 369 "
Kawasaki Dock-yard, Ltd.	Kobe	428 "
Osaka Iron Works, Ltd.	Osaka	{ 476 "
		{ 438 "
	Innoshima	{ 469 "
		{ 407 "
		{ 355 "
Kasadojima, near Hiroshima	{ 470 "	
	{ 365 "	
Yokohama Dock Co., Ltd.	Yokohama	{ 640 "
		{ 495 "
		{ 400 "
Asano Ship-yard, Ltd.	Yokohama	{ 659 "
		{ 497 "
Uraga Dock Co., Ltd.	Uraga, near Yokohama	{ 497 "
		{ 456 "
Harima Ship-yard of Kobe Steel Works Ltd.	Aioi, near Kobe	420 "
Mitsui Ship-yard of Mitsui Bussan Kaisha, Ltd.	Tama, near Okayama	{ 485 "
		{ 350 "
Fujinagata Ship-yard, Ltd.	Osaka	483 "
Ishikawa-jima Ship-yard, Ltd.	Tokyo	
Hakodate Dock Co., Ltd.	Hakodate	531 "
Mukai-jima Dock Co., Ltd. (repair wks. only)	Mukai-jima, near Onomichi	410 "

The finest passenger ships built in Japanese yards have already been suggested—the three on the Yokohama-San Francisco run of the Nippon Yusen Kwaisha. Of these the

Asama and *Tatsuta Maru* were built at Nagasaki, and the *Chichibu Maru* in Yokohama.

These ships illustrate the growth of the Diesel engine business in Japan. The *Chichibu* has two propellers driven by four-stroke cycle double-acting Diesel engines of the Burmeister & Wain type. The engines of the other two are of Sulzer type, designed for a sea speed of $17\frac{1}{2}$ knots with normal brake horse-power of 16,000, operating quadruple screws. But the Osaka Shosen Kwaisha was the first Japanese shipping company to fit Diesel engines to passenger ships. Just ten years ago they launched the first Japanese motor-ship for passengers, the *Ondo Maru*, built by the Kobe works of the Mitsubishi Company. This and subsequent experiments proved so successful that O. S. K. decided to apply Diesels to their South American round-the-world service, and in doing so the Nagasaki ship-yard of the Mitsubishi Company, operating under license, produced home-made engines quite on a par with the best built abroad. Motor-vessels have now become the rule in Japan's oceanic service rather than the exception. Diesel engine makers in the country at present include the Niigata Engineering Works, the Ikegai Engineering Works, the Kobe Steel Works, the Mitsubishi Ship-building and Engineering Company, the Kawasaki Dockyard Company Limited, and Mitsui & Company Limited, in addition to the Imperial Naval Dockyards. As Mr. Hyo Hamada writes, "it is most gratifying to know that all the manufactures of Diesels in Japan have given the utmost satisfaction, and now the home-made product, be it for main or auxiliary machinery, for men-of-war or merchant-vessels, enjoys a high reputation for its reliability and for the workmanship put into it."

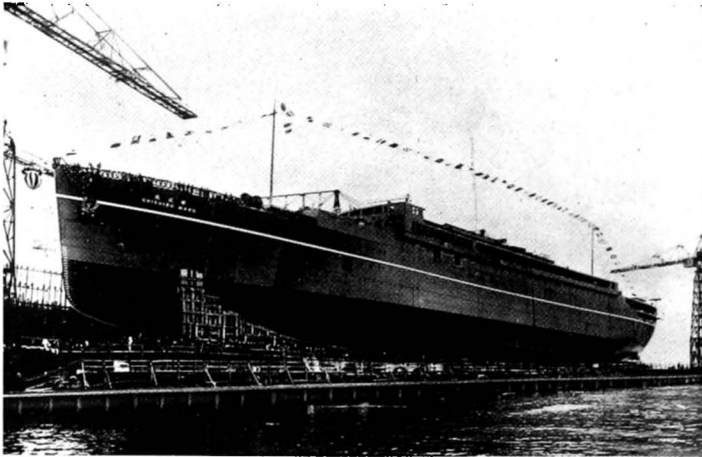
The paper from which this quotation is taken was read by Mr. Hamada before the World's Engineering Congress



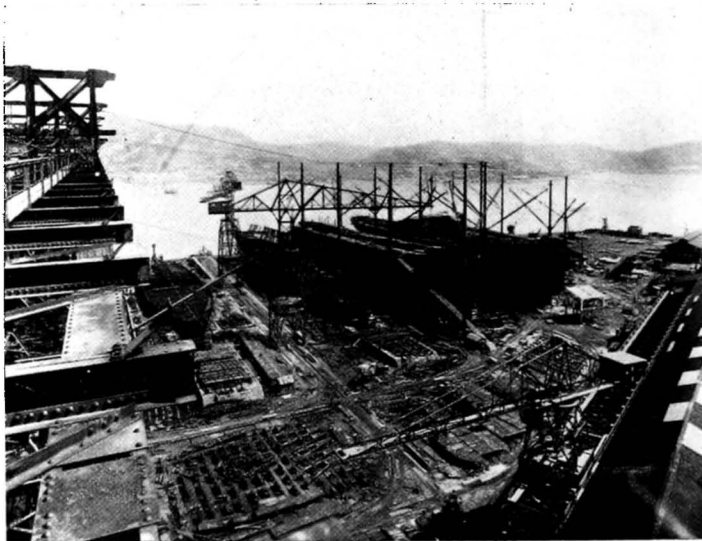
Japan's most distinguished engineers assembled at the
World's Engineering Congress in Tokyo.



Young engineers in training—in a Technical School
at Nagoya, learning the Cotton Mill business.



Ship-building at Yokohama.



Ship-building at Nagasaki.

THE HEAVY INDUSTRIES 19

recently held in Tokyo, and the table of Japanese ship-yards already given is taken from a paper prepared for the same occasion by Messrs. Y. Yamamoto and K. Inouye. A third paper, by Mr. S. Kato, on fishing boats recently developed in Japan, contains the following interesting account of a floating cannery for crab fishing.

Let us take a steamer of three thousand tons for example. Her holds are loaded with about 2,000 tons of coal, 20,000 empty cans, and about 800 tons of fresh water. Besides the crew, some 450 fishermen and other workmen are quartered in the aft 'tween-decks. On both sides, eight motor-junks are carried in davits. These are about forty feet in length and ten feet in breadth, and are fitted with 10 h. p. petroleum motors. They are used chiefly for hauling nets and transporting catches to the mother-ship. Besides these motor-junks, the floating cannery is accompanied by one or two self-navigable larger motor-boats of from thirty to eighty tons. These are used for casting nets and for communication between the junks and the mother-ship. They cast nets within a circle of about five miles' radius, with the mother-ship as the center. At proper intervals of time, the mother-ship changes her anchorage. The catches, together with their nets, are hauled up on the aft upper deck of the mother-ship by the derricks of the after mast, from the junks coming alongside. The crabs are taken from the nets and boiled in steam kettles on deck. By means of derrick-booms and tackles, net bags containing boiled crabs are once dipped into the sea outboards from the after deck, and hauled up to the forward upper deck. Here they are cut in pieces and classified. They are carried down in baskets to the fore 'tween-decks, where they are canned, weighed, sealed, and steamed, by machinery. The finished cans are boxed, and stored in the holds. A floating cannery of this size can produce about 350 boxes a day, each containing eight dozen half-pound cans. Some floating canneries are equipped with crushing, pressing, and drying machines, so as to get fish-oil and fish-meal from crab waste.

ROLLING-STOCK

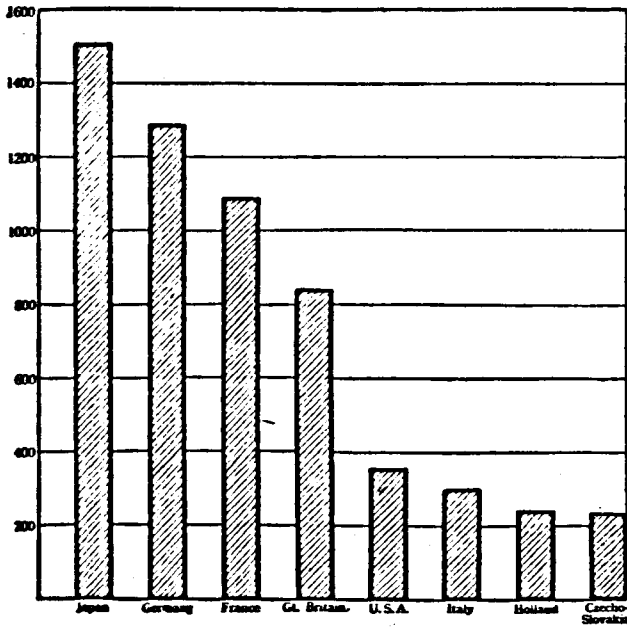
In the quality of her locomotive output, both steam and electric, Japan stands abreast of the most advanced countries. In quantity, results are less impressive. Her works have a combined annual capacity of about 700 steam locomotives, 100 electric locomotives, and 7,000 passenger coaches and freight-cars; sufficient to supply her own needs. As Manchoukuo develops, production will have to be speeded up. Proximity to China suggests immense possibilities there, contingent on the maintenance of friendly relations. Principal electric locomotive works include the Shibaura Seisakusho, the Kawasaki Sharyo, the Mitsubishi Denki, and the Hitachi Seisakusho. These also manufacture cars. Works supplying the demands of the steam railways for locomotives and carriages include the Nippon Sharyo, the Kisha Kwaisha, the Tanaka Sharyo, the Umabachi Tekko, the Osaka Tekko, the Niigata Tekko, the Kawasaki Zosen, the Hitachi Zosen, and the Fujinagata Zosen.

Motor-car production has been relatively negligible. About 25,000 gas-driven vehicles have represented the average annual output, with such a low value as to suggest cheap types of cars, or even motor-cycles. Although automobile imports, mainly from the United States, run to some ¥ 10,000,000 yearly, the number of registered vehicles is only 1 to about 1,500 inhabitants, whereas in Germany it is 1 to 139, in France 1 to 46, in Great Britain 1 to 44, and in the United States 1 to 5.

Perhaps it is superfluous to point out that the number of motor-cars *per capita* is no index to a country's civilization—unless indeed one accepts the view of that cynic who once defined civilization as the process of making life more complicated. However, motor-cars are demanded in the

development of Manchoukuo, and Japan is preparing to meet that demand, as will appear in Chapter XV.

WORLD-PRODUCTION OF BICYCLES
(in thousands)
as compiled by the Kansai Gakuin



Courtesy of *Nippon-Kokusei-Zue*
(1929 edition) by Messrs. Yano and Shirasaki

As the bicycle was the progenitor of the motor-car, and as bicycles are one of the main forms of Japanese transportation they may be considered here, although hardly a heavy industry. The writer takes a personal interest in them, as he brought the first pneumatic-tired "safety" to Japan

as a boy. As he rode it through the countryside he used to get mischievous amusement out of the "*Bikkuri!*" of startled pedestrians as it slid noiselessly past them. Now he is sufficiently punished for his sins as he daily plays artful dodger on the Tokyo streets, where it has displaced the jinrikisha. That pneumatic-tired "safety" has out-multiplied the guinea-pig. Japan boasts about 770 factories that specialize in bicycles: 200 in Tokyo, 240 in Osaka, 150 in Sakai, 150 in Nagoya, and the others distributed. More than 400 factories employ more than five men each. The Dai Nippon Bicycle Company and the Miyata Works, in Tokyo, do a big-scale business, besides the Okayamoto Bicycle Company of Nagoya.

During 1933 the Japanese bicycle became world news. From exports valued at ¥ 168,000 sixteen years ago, the exports for the first ten months of '33 reached ¥ 7,200,000, with a probable total for the year of ten millions. This has brought outcries from the British traders in India, where the value of Japanese bicycle imports had already advanced from ¥ 920,000 in 1931 to ¥ 1,716,000 in 1932, threatening the British supremacy. This has already been overthrown in China and the Nederland Indies. Notwithstanding the boycott, the Chinese importation of Japanese bicycles and bicycle parts during 1932 amounted to 1,202,000 *yuan*, the Germans coming next with 615,000, and the British trailing with 170,000. In the Nederland Indies, Germany still leads, with Japan a good second. Low production costs and the yen's depreciation explain Japan's advance.

AIRPLANES

When the engine of the motor-car had been mounted on pneumatic-tired wheels, and wings attached, man sped



Common Street Scene: a Traveling Lunch Counter.
The Japanese are born acrobats.



"If the *jidosha* don't get you the *jitensha* will!"
—these being the Japanese words for
motor-cars and bicycles.



"All aboard!"



First Japanese woman to make parachute descent.

up into the air. From the first Japan has been air-minded. In the very year—1910—that an airplane was first used for military purposes, she sent up her own airmen. Officers were dispatched at once to France to watch developments, and on their return in 1911 they assisted in the supervision of the new aviation field at Tokorozawa. Here a school was subsequently opened, to be followed by others. Japan took advantage of the World War to send an aviation mission to the front, and after the armistice engaged sixty French aviators to assist her own instructors. In 1925 the aviation corps became an independent arm of her defences, on a par with the artillery, etc., each air battalion being reorganized into an air regiment. There are now eight flying regiments, comprising 3,500 officers and men, with 500 machines. No arm rendered more effective service in the recent Manchurian campaign.

This campaign heightened general interest in aviation to such a degree that sixty-four "patriotic planes" were built from popular subscriptions.

Naval aviation is at least equal to that of the army. There are 700 officers and 5,800 petty officers and privates, with 500 machines, according to "Modern Japan." The battle-cruiser *Akagi* and the battleship *Kaga*, 26,900 tons each, have been converted into highly efficient carriers.

Civil aviation was initiated by the War Department in 1919, and turned over to the Communications Department in 1923. During the decade it has made remarkable progress.

All the principal Japanese cities are connected by airplane service, and there is also regular service to Chosen, or Korea, the Kwantung Peninsula, and Manchoukuo. In this new State Japanese advisers are rapidly extending the local air-lines, so as to connect with other parts of the Asiatic mainland and with Europe.

For ten years the Osaka *Asahi* has pioneered in Japanese aviation, its most notable feat being a flight between Tokyo and Rome. The Students' League, organized in 1930, has also done noteworthy work, especially in research.

In 1930 S. Yoshihara, a civilian aviator, flew between Berlin and Tokyo *via* Siberia, in eleven days, and Z. Asuma, a Japanese-American, flew from Los Angeles to Tokyo *via* New York, London, Berlin, and Siberia.

Civilian air transportation in Japan during 1932 is exhibited in the following table:

<i>Operator</i>	<i>Flying kilometers</i>	<i>No. of Passengers</i>	<i>Freight kilograms</i>	<i>Mail kilograms</i>
Nippon Air Transportation Co.	1,766,560	9,379	28,547	77,724
Nippon Koku-yuso Kenkyujo	166,750	597	19,339	3,738
Tokyo Koku-yuso-sha	15,530	107	701	54
Asahi Regular Air-line Society	38,000	—	11	28
TOTALS	1,986,840	10,083	48,598	81,544
<i>Increase over 1931</i>	24,835	2,768	18,608	44,408

The Imperial Aero Association, endowed in 1913 by a gift of ¥ 500,000 from the Imperial Household, and maintained by popular memberships, shows high intelligence in promoting its object. The president is H. H. Prince Nashimoto, the vice-president Baron Sakatani. The Aerial Council, responsible to the Minister of Education, directs and encourages research. The Aerial Research Works at the Imperial University of Tokyo, under the presidency of Baron Shiba, has one of the best equipped laboratories in the world. An International Aviation Committee keeps in touch with world currents.

To foreigners the progress in aviation seems remarkable. But Japan is not satisfied. "Japan Illustrated" says: "Japanese aviation industry is far behind those of

THE HEAVY INDUSTRIES 25

other countries of Europe and America. Today, most of aeroplane motors and bodies are still imported from foreign countries. The Government is encouraging the development of this industry."

ROADS

A few decades ago Japan as a whole had no roads, but only trails. Built for the feet of men, who pulled heavy freight carts as well as the light jinrikishas, they were admirable for the bicycle, but too narrow for modern traffic. Even the grand trunk routes between Tokyo and Kyoto, known as the Tokaido and the Nakasendo, had sunk into disrepair. The writer knows, for he bicycled the full length of both of them. With the new century an improvement set in, three times as much public money being spent on roads during the first fifteen years as during the twenty years just preceding. It was not until 1919, however, that development began in earnest; by means of a Highway Law establishing regulations as to width, gradient, curvature, and bridge construction for various kinds of roads. In the following year the sum of ¥ 282,800,000 was appropriated for the improvement of five thousand miles of national roads, "about 170 miles of military roads, and 890 miles of prefectural roads, as well as for the improvement of streets in the six largest municipalities of the country," during a thirty-year period. But "despite the efforts that have been put forth, the road system of Japan is still primitive in character and inadequate for the nation's requirements."

This is the judgment of Mr. H. G. Moulton and Mr. J. Ko in "Japan, an Economic and Financial Appraisal," published by the Brookings Institution of Washington.

These gentlemen point out that the time is propitious for planning a unified highway system correlated with the railways. They then say :

A number of economic advantages, other than the employment afforded, would result from the development of an efficient system of public roads. In the first place, it would directly increase economic efficiency in general. Next to the reduction of interest rates, no other single accomplishment would in the long run exert so universal an influence in the direction of lowering production costs.

The development of a good highway system would, in the second place, do more than anything else to increase the tourist trade. Because of the widespread interest in Japanese life and culture, as well as because of the surprising beauty of the country, Japan is particularly fascinating to the tourist. With Tokyo only twelve days distant from New York a trip from the United States to the Orient has become as quick and as easy as was a journey to Europe two decades ago. Good roads, and improved hotel accommodations, would make Japan a Mecca for the travelers.*

The Great Earthquake of 1923, which demolished a large part of Tokyo, gave opportunity for the capital city to set an object lesson to the whole country in respect of good roads. How effectively this opportunity was embraced may be gathered from the fact that prior to the earthquake the space devoted to streets and roads was 11.6 % of the area of the city, but it is now 27 %. Doubtless this largely accounts for the concentration of so many of the registered motor vehicles of Japan in the precincts of Tokyo. Certainly it has done more than any other one thing to transform Tokyo into one of the most attractive capital cities of the world.

* *Op. cit.*, p. 444.



One of the new streets of Tokyo—
New Diet Building in the distance.



The Tokyo "L"



Looking out from the Tokyo Station.



The heart of Tokyo.

THE HEAVY INDUSTRIES 27

STRUCTURAL SUPPLIES

BUILDING MATERIALS

Tokyo took further advantage of its catastrophe of a decade ago to rebuild its broadly dispersed business sections with fireproof and earthquake-proof materials. Towering structures of reinforced concrete now dominate huge areas as widely separated as Shinbashi and Ueno, Marunouchi and Shinjuku. Even San Francisco was not so completely transformed in ten years. And building activity continues. The rapid fire of the riveter and the blast guns of the welder are incessant.

What is true of Tokyo applies to Yokohama on a somewhat smaller scale.

Without the spur of an earthquake such industrial centers as Osaka, Nagoya, Kyoto and Kobe have forged ahead as if engaged in a building contest.

Such zest has called for all kinds of building material, but especially cement and steel.

Clay and limestone being the essentials in cement manufacture, Japan is fortunate in a practically inexhaustible supply. She first learned the full value of her earths in relation to modern building when suddenly called on to erect hydro-electric plants to meet the demands for all sorts of manufactures occasioned by the Great War. Thus she was ready when the earthquake came. Cement manufacturers replaced their vertical kilns with rotary kilns to speed up production, which in 1924 reached the unexampled output of thirteen million barrels, valued at ¥ 80,000,000. The latest available statistics show a further increase to more than twenty million barrels, valued at ¥ 120,000,000.

So successful is the new cement industry that it now figures in exports to the Philippines, the Nederland Indies,

the Asiatic mainland, and even British India. These countries, combined, take about ten per cent of the annual output. Rivalry is negligible, Germany shipping only a small quantity to the Nederland Indies, and the United States still smaller quantities to the several places named.

Steel, in spite of the high cost of coking, is now produced in Japan in sufficient quantity to supply sixty per cent of her needs. In fact, she exports tubes and pipes, in which her manufacturers excel, not only to Asia, but to North America. A merger between governmental and privately owned steel works, recently achieved, is expected to benefit the industry. Of greater effect is Japan's alliance with Manchoukuo, which will permit the South Manchuria Railway, controlled by Japan, to function without further embarrassment from bandits or Chinese soldiers.

It is notable that the Trading Department of the South Manchuria Railway Company has contracted for the export to Germany of pig-iron produced at the Anshan Mine, which is the home of heavy industries. Some time ago cast-iron water mains were exported to the Netherlands despite the fact that Holland can purchase them from Germany easily. Sulphate of ammonia, which is a by-product of the steel industry, has been shipped to the United States by the South Manchuria Railway Company.

Special steels of extraordinary quality have been developed in Japan by Dr. S. Watanabe, Dr. K. Honda, and Dr. T. Mishima, while Mr. T. Nakajima has improved tube casting by his centrifugal casting process.

Dr. Mishima's "M. K. Magnet Steel" is a new alloy of aluminum and nickel with steel. As the Japan Year Book says, "it came as a surprise to the scientific world that Dr. Mishima succeeded (in December, 1920) in the invention of a strong magnet steel, with magnetic power

several times as great as that of existing magnet steels, by alloying these two non-magnetic substances, aluminum and nickel, with steel. — Its cost is much lower than that of cobalt steel, the best magnet steel existing, and to get the same volume of magnet power a much smaller amount of material will suffice, making the weight correspondingly lighter, or, for the same amount, making the durability of magnetism much longer. Consequently, the scope of its use is wide and great. M. K. Magnet Steel is now utilized for aero-motors, auto-motors, precise electric meters and testers, for telegraph, telephone and radio apparatus, or as needles for ships' compasses and the pick-up of phonographs. Its usefulness in implements of war is ever increasing. Applications have come from Western countries for the right of manufacture of this magnet steel."

Chief among such applications is one from the German firm of Bosch, famed as inventors and manufacturers of the best magneto for internal combustion engines. Their technicians came to Japan late in 1933 and remained for two months doing research work on the new alloy under Dr. Mishima's direction. As a result Bosch will soon set to work—in rivalry with Mitsubishi in Japan—manufacturing M. K. Steel on a very large scale, having obtained the rights for Europe.

Dr. Kotaro Honda, Director of the Imperial Steel and Iron Institute at Sendai, has been honored by such renowned metallurgists as Sir Arthur Hadfield, of England, Guillet of France, and Merica and Rabbitt of the United States, for his famed "K. S. Steel," evoked from his laboratories by the exigencies of the Great War. Mr. Rabbitt, lecturing before the Institute recently, affirmed that industrial civilization, having passed through an iron age and a steel age, has now entered the alloy age. "What salt is to

food," he agrees with Dr. Honda in believing, "alloy is to industry."

All the efforts of Japanese statesmen, industrialists, exporters, and bankers to develop the exports of Japan will avail nothing if the alloys used in the products exported, and in the processes of their manufacture, are inferior to the alloys used in western countries—countries with which Japan must compete. It is therefore apparent that Japanese industrialists must become "alloy-minded" if true rationalization of industry is to succeed in Japan.

Earlier in this instructive lecture Mr. Rabbitt said:

Aviation, which is the child of the automotive industry, has adopted nickel steels almost exclusively, such steels being used in the construction of over ninety-five per cent of aircraft motors. Such vital parts as crankshafts, connecting-rods and piston-pins, valve push-rods and rocker-arms are made from heat-treated nickel steels and, in addition, the cylinder heads and pistons are often of an aluminum-nickel alloy possessing strength combined with light weight and rapid heat transference. No use so emphasizes the reliability of nickel alloy steel as does its adoption in aviation.—Also, in the rayon industry in Japan, ordinary filter cloths are used for filtering the viscose. This requires three operations in filtration, with a consequent quick destruction of the cloths, while in Western countries this process is accomplished in one operation by the use of nickel alloy gauze, which, moreover, is non-destructible. This is a concrete instance of an increase in the cost of production by failing to use the proper alloy.

In developing modern industries Japan is fortunate in possessing such advanced technicians as Watanabe and Nakajima, Mishima and Honda.

The consideration of steel has led us far afield from its use as building material. Before leaving that heading it

THE HEAVY INDUSTRIES 31

seems proper to remember that wood, after all, is Japan's chief building material, and has been so from time immemorial. Earthquakes were largely the cause of this in the first place. Travelers from Korea, when passing over into Japan, are almost sure to be struck by the complete change in building material, from stone to wood. Stone is just as plentiful as in Korea, earthquakes having led the early Japanese to choose the beautiful native woods for their resiliency, lightness, and strength, as best suited to earthquake resistance. Ralph Adams Cram, in his brilliant "Impressions of Japanese Architecture," crowns the Japanese as masters of "the most perfect mode in wood the world has known." They treat it, like anything possessing beauty, as almost sacred; handling it "with a fineness of feeling that at best we only reveal when we are dealing with precious marbles."

The same respectful regard is shown towards plaster. With us of the West plaster is simply a cheap means of obtaining a flat surface that afterwards may be covered up in many different ways; with the Japanese plaster is an end in itself, and well it may be! We ourselves know nothing of the possibilities of this material. In Japan it has the solidity of stone, the colour of smoke and mist and ethereal vapours, and the texture of velvet.

Wood and plaster: these are two of the four components of a Japanese interior. The third is woven straw of a pale, neutral green. This is for the inevitable mats that carpet all the floors. The fourth is rice paper; creamy white, thin and tough, stretched over the light latticework that forms the windows and the outer range of sliding screens (shoji) or covering the thicker screens (fusuma) that form the dividing partitions of the rooms. Now and then these fusuma are covered with dull gold and faintly traced with dim landscapes or decorative drawings of birds and flowers, or else they are wrought with great black ideographs; sometimes the paper is

faintly tinted, or varied by an admixture of delicate seaweed, but as a general thing, and except in a noble's "yashiki" or in some house of entertainment, the four materials remain: natural wood, tinted plaster, pleated straw, and rice paper.

Perhaps no other country consumes timber in such large quantities as Japan, yet until 1920 she was able to export. This was due to her abundant forests, which cover about 59% of her area, when Korea, Formosa, and Saghalien (Karafuto) are included. But the Great War, followed by the earthquake of 1923, caused such a demand for lumber that she had to begin importation, chiefly from America and Asiatic Russia. She is now beginning to utilize Manchurian resources, especially from the forests near Kirin, connected with her ships by the new railway. The annual export of Kirin lumber is now about a hundred thousand tons, nothing like the potential supply.

The modern paper industry, which will be considered in the next chapter, created a demand for wood pulp, leading to the exploitation of the forests of Yezo and Karafuto. This latter province now yields nearly half of the total Japanese output of pulp. In 1914, when the War broke out, this was only ninety thousand tons, but by 1929 it had grown to 618,000. Pulp is still imported from Canada, Sweden, and the United States to the value of some twelve million yen annually. In his book on "Japan's Economic Position" John E. Orchard points out that "Japan is in a distinctly advantageous position for the importation of timber. Not only is there cheap water transport from the forests of the Pacific Slope of the United States and Canada, but near at hand is the great coniferous forest of eastern Siberia, probably the world's largest remaining forest reserve."

FACTORY EQUIPMENT

In the book just cited Professor Orchard says:

It is no reflection upon the Japanese as a people to state that they are not good mechanics. It is a shortcoming that is due to the absence of a mechanical background. During the centuries of isolation, the Japanese were skilled workers in wood. They were artists in the making of weapons and armor of iron and steel, but they knew nothing of the use of the metals in machinery. In three-quarters of a century, they have attempted to make an advance in mechanical knowledge that in England required several centuries.

The Japanese themselves seem to think they have succeeded, and the present writer inclines to agree with them. Mr. Shun-ichi Ono, Director of the Industrial Museum in Tokyo, says: "The future of mechanical engineering in Japan, especially in the manufacture of delicate machines, is very promising, for our people are endowed with sharp eyes and nimble fingers." To say nothing of brains!

Mr. Ono attributes the astounding increase in the recent exports of Japanese textiles chiefly to the invention and use of superior looms and the extensive mechanization of various processes.

For example, the automatic looms for the cotton industry invented by Mr. S. Toyoda and improved by his son permit one woman to handle thirty, fifty, or even sixty units of the machine, while the conventional British type requires an operative for every four or six units. Platt Brothers, of Oldham, England, recently paid a million yen for the license rights for the British Empire. They may be able to sell them in India, but how about the conservative trade unions of Lancashire? Japanese spindles and looms are now exported to the annual value of some five

million yen. So efficient are the new home-made looms that Japanese cotton manufacturers have been obliged to curtail production, "usually by sealing the looms of yesterday."

The late William Elliot Griffis once wrote that one of the most noteworthy traits of the Japanese character is an instant ability to discard the old when confronted by something new that is also better.

Prior to the Great War Japan imported almost all of her machinery, but the cessation of sea-borne traffic compelled her to make it at home. Professor Orchard should take a second look at the country. Twenty years ago even a spanner or a screw-driver may have been unfamiliar to Japanese households, but today, as Messrs. Sansom and Kermode say in a report to the British government on Japanese economic conditions, "small boys make wireless sets and are interested in any kind of mechanism," while machinery to make machines has been set up in considerable quantity.

How completely the manufacture of machinery was a war-begot industry may be gathered from figures collected by Messrs. Yamasaki and Ogawa for the "Economic and Social History of the World War" published by the Carnegie Endowment for International Peace. During the four years and four months of the war the manufacture of power machinery, pumps, cranes, and the like, rose from a value of seven-and-a-half million yen to sixty-two-and-a-half, horse-power from six hundred to 8,260, paid-up capital from ¥1,600,000 to ¥15,170,000, and machinery exports from four million to twenty-three million yen. These writers say: "The increase in the number of officers, clerks, and hand-workers, as well as the growth in the capacity of the power plants, is satisfactory proof that the machine industry of Japan made wonderful progress during the War."

THE HEAVY INDUSTRIES 35

That the advantage then gained has not been lost is evinced by the facts that since the war closed the number of Japanese mills manufacturing machinery has grown from 590 to 5,604, and the number of their operatives from 195,227 to 205,308, these figures being for the years 1919 and 1930 respectively. Home-made engines (steam, steam turbine, internal combustion, oil, Pelton and turbine water-wheel) have increased from a turn-out value of some fifteen million to thirty-six million yen during the same period; boilers from about four million to ¥ 5,169,731.

Many of the factories of Japan are driven by steam generated in the Takuma boiler. Like the Toyoda loom, this is an important Japanese invention that is rapidly making its way into foreign markets. It is very simple in construction, comprising a lower and an upper drum connected by water tubes placed at an angle of forty-five degrees. The feed-water is first introduced into the water-receiver in the upper drum through the downtake tubes, which are sheathed in tubes of a larger caliber in the very center of the tube nest. After depositing most of its sediment in the lower drum, the water ascends again to the upper drum; disengaging steam most effectively, and then running back into the receiver and mingling with the fresh feed-water. While the descending water is free of steam bubbles, the ascending column carries much steam with it. Head is produced through the varying specific gravity of the two columns, thus insuring rapid and steady circulation of the boiler water, neither counter-currents nor eddy-currents being created.

Some of the notable characteristics of this Takuma boiler are quick steaming, perfect combustion, free expansion and contraction, and freedom from over-heating.

The ability of the Japanese to invent new and better

things for themselves will be considered more fully in Chapter IV, including further reference to the Takuma boiler.

EMERGENCY

A Japanese authority writes:

It goes without saying that the Manchurian upheaval and the consequent Shanghai incident directly stimulated the heavy industries of Japan, especially the iron and steel industries, and indirectly promoted the merger movement of the principal iron works of Japan. Since the beginning of the disturbances in Manchuria in the autumn of 1931, the progress of the Japanese heavy industries has been remarkable. The prosperity of the steel industry and its allied industries has been the most noteworthy. Military activities in the Far East since the autumn of 1931 stimulated the so-called war boom among the industries connected with army supplies. For example, the manufacturing of aeroplanes, tanks, bullets, projectiles, arms parts, motor-cars, internal combustion engines, ships, communication apparatus, delicate measurement instruments, engineering apparatus, etc., was stimulated by the so-called emergency. Thus the iron and mechanical engineering industries again enjoyed the boom that had abated after the World War.

Now that this emergency stimulus is over, it will be interesting to see whether Japanese industry will decline as it did after the World War.

Early in 1934 there are no signs of any decline. On the contrary, the nation seems radiant with hope.

The devaluation of the yen seems to have been a blessing in disguise. It is now more than two years since Japan went off the gold standard, and none of the dire predictions regarding that departure have been fulfilled. Quite the contrary. On the one hand, a cheaper yen made the manufacturer and exporter rich. His labor cost him

THE HEAVY INDUSTRIES 37

less, and with his good but inexpensive products he was able to climb over tariff walls and capture foreign markets by the score. On the other hand, the Japanese laboring man and the consumer in general buys just as much with his twenty cent or thirty cent yen as he bought when it was worth fifty cents. Why this is so the present writer cannot undertake to explain; he merely reports the fact. As the *Japan Advertiser* said on December 23, 1933 :

Notwithstanding depreciation in the gold value of the yen, the cost of living has not risen appreciably since Japan went off the gold standard. Wages are practically the same. Rents, if anything, are lower, and the cost of living necessities is about the same. Rice, the staple article of food, is about the same; the fluctuations in value in the price of rice have been and are dependent on internal crop conditons. The cost of marine products is about the same, if anything, somewhat lower. The same may be said of fruit, poultry, dairy products and other necessities of life. Coal is appreciably higher, but this is not due to the depreciation in the value of the yen but is determined by the law of supply and demand as applied internally, and demand has been stimulated because industries are more prosperous. Hotel rates, a fair index, are no higher; and the same of transportation and so on throughout the list. The only commodities which have risen in value are those which are imported, or those which are regulated through foreign trade, and these are not part of what may be termed the necessities of life; and as a matter of fact, many articles which were formerly imported are now being produced in Japan at low valuations. — In its simplest terms, the unparalleled prosperity of Japan at a time of world-wide depression is largely due to the fact that a yen which is only worth 38 sen of its previous gold value is fully serving, internally, the purposes of a 100 sen yen.

This editorial was written apropos of a statement by Mr. C. Kadono on returning from the World Economic

Conference. He had circled the globe, and found no country enjoying prosperity comparable with that in Japan.

Now that a new year has opened the outlook seems even brighter. The perceptible increase in cheerfulness and in the will to progress is largely psychological, and derives from the birth of an heir to the Throne. Only those foreigners with insight into Japanese character and with the good luck to be in the country at the time of the imperial birth can fully appreciate its effect. One realizes as never before the fundamental fact that Japan is a *family*, the Emperor the revered father of his people. Rejoicing was profound, overwhelming, universal. Every Japanese heart seemed to be singing. Never before in all the long history of the people have they been more completely unified or more buoyant with hope.

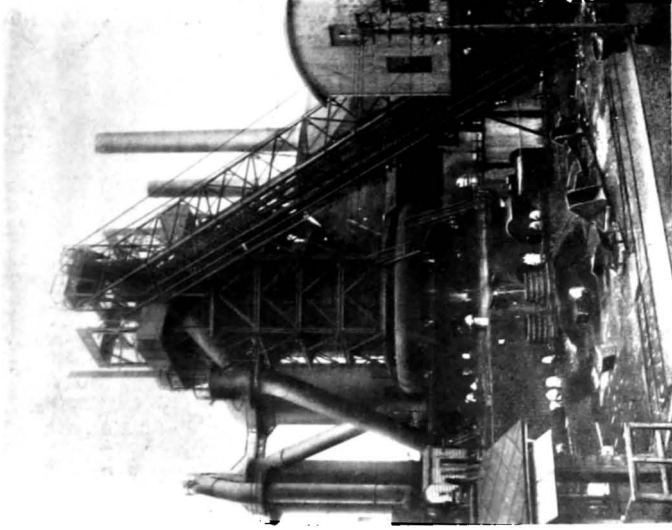
To return from this slight digression, it is now in order to consider Japan's basic supplies of the raw materials essential to Heavy Industries.

BASIC SUPPLIES

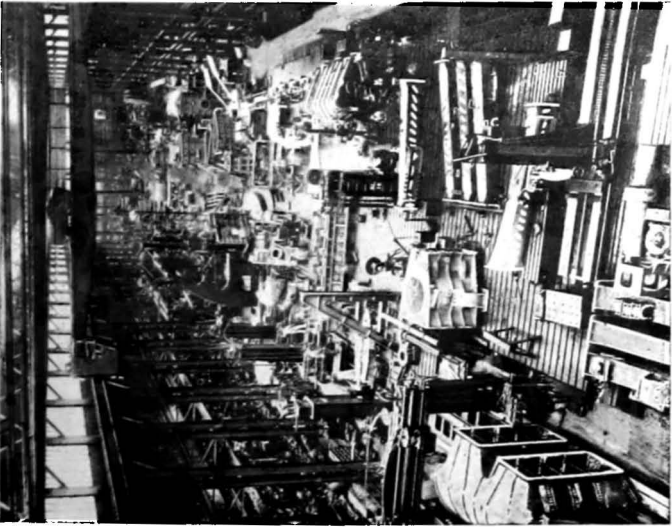
IRON

Japan proper has deposits of iron ore estimated all the way from forty to eighty million tons. Her largest iron mill, government owned, is at Yawata, Kyushu. It was established by imperial edict in 1896. Iron production, thus encouraged, increased in ten years thereafter from negligible figures to 85,000 tons, and in thirty years to almost 500,000 tons. By that time Japan had annexed Korea, thus adding from twenty to thirty million tons to her iron reserves.

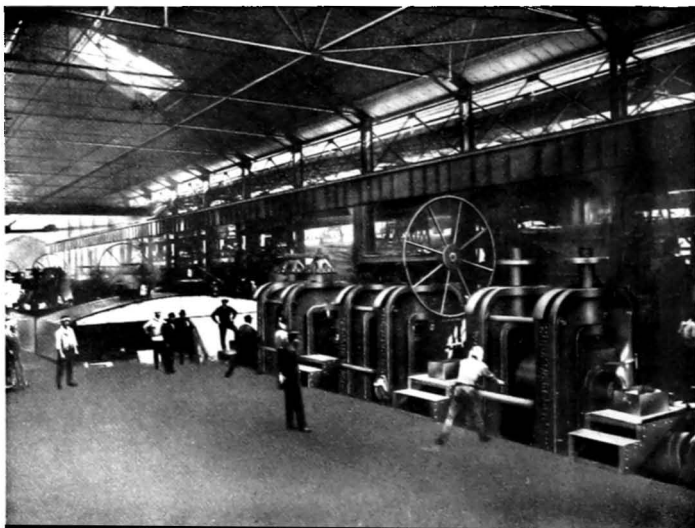
All these deposits have been so effectively utilized that production of pig-iron increased 225% in the decade be-



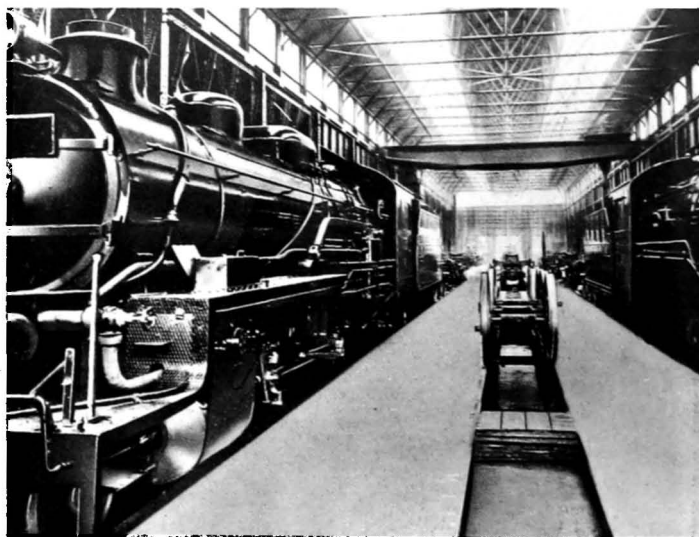
A Japanese Steel Co.'s Smelting Furnace.



A Ship-yard Interior.



Fukiai Plate and Sheet Mills at Kobe.



"Ready for the rails."

THE HEAVY INDUSTRIES 39

tween 1920 and 1930, and steel 400%. In 1930 steel production aggregated 2,225,900 metric tons. Imports of steel, which in 1924 amounted to 1,154,402 tons, were cut to 371,706 tons by 1930. In addition, about 100,000 tons were exported.

The Japanese government's production of pig-iron and steel now approximates one-third of the total production of the country.

With the recent completion of railway lines in central Manchoukuo running due eastward to the sea, Japan has quicker and cheaper access to the Anshan Iron Mine, which she controls through the South Manchuria Railway. For the purpose of utilizing the Anshan output to the best advantage it has been planned to set up on the Asiatic mainland a plant with a capacity of 500,000 tons of pig-iron, 570,000 tons of steel, 500,000 tons of sheet-iron, and 200,000 tons of sulphate of ammonia. Capital to the amount of ¥ 25,000,000 has been paid in, and the necessary machinery purchased. But the plan for some reason hangs fire.

The big trouble with the Japanese iron situation is the inferior quality of all the ores, in Manchoukuo as well as in Japan. For better ore to feed into the Imperial Steel Works at Yawata, Japan sends all the way to Singapore, whence she brings a million metric tons a year. She even goes as far afield as Australia. Naturally, freight charges increase the costs of production, whether of pig-iron or steel. Mr. Rabbitt points out in *Steel* that the high cost of coke, added to the lack of a suitable iron ore, results in an average cost of \$29.71 (U. S.) a ton for pig-iron as against \$20.01 in the United States. Even when costs are reduced by the import of scrap-iron the average cost of Japanese pig-iron remains \$2.16 higher than the average American price. This is a very serious difference.

COAL

Japan proper has considerable quantities of coal in all four of her main islands. In ten years she increased production from thirteen million tons to thirty-one million. From Korea she brings over about 315,000 tons, or 80% of her imports from her colonies. The South Manchuria Railway gives her access to the coal fields of Manchoukuo, sometimes estimated at as high a content as 8,000,000,000 tons. From the Fushun and the Tentai mines the Railway takes out seven million tons a year. The former has the largest open-cut mine in the world, besides shaft mines. The product, however, is bituminous, best suited to the manufacture of gas. Only a little of the Manchurian coal is adapted to coking. A survey of all the facts would seem to justify the conclusion of Moulton and Ko, in the work already cited:

The comparatively high cost of coking coal and iron ore has placed the Japanese iron and steel industry at a very distinct disadvantage as compared with that of the leading western countries. In order to develop the industry, it has been necessary to grant tax exemptions and give much more than the usual amount of subsidy and tariff protection. Rather than demonstrating ability to stand on its own feet, and even to undersell foreign competitors in oriental markets, as has been the case with the cotton textile industry, the development of the heavily protected metallurgical industry has chiefly resulted in increasing the cost of iron and steel to Japanese consumers, thereby handicapping manufactures of fabricated iron and steel products.

FOOD: FISH

As everybody knows, Japan was isolated from the Elizabethan Age until the mid-Victorian, and yet managed

THE HEAVY INDUSTRIES 41

to feed itself. In spite of a greatly increased population some economists think that it still might do so at a pinch, due to three facts: intensive farming, "the simple life," and a gargantuan fish supply. The rice culture has always been intensive, and now agricultural education increases production so as to keep fairly well up with the demand of "more mouths to feed." And the Japanese appetite, on the whole, is just what it used to be. Notwithstanding modernization in almost every other respect, the great masses of the people remain well content with the old-fashioned diet: of rice and fish, with bean-curd and eggs, and now and then a bit of chicken for variety. With the exception of a few thousand foreign-bred epicures, these simple foods take care of the entire population. In fact, a peep into the homes of the epicures is likely to discover them, too, reverting in private to the diet of their sires. Probably no country in the world shows a slighter divergence in the fundamental larder supplies of the great middle classes and the wealthy. The rich man has his motor-car and his club and possibly his *geisha* party now and then, but apart from such superfluous luxuries lives much the same as his servants.

Because of its international importance Japan's fishing industry may be considered here. Lately it has captured front-page space in the American newspapers, together with textiles and rubber shoes. About 1,130,000 Japanese make a living by it, giving their country the largest annual fish catch in the world: aggregating between two and three million tons. Nature is chiefly to thank for this, as a glance at an economic map of the Far East will show. Japan might be described as islands surrounded by oceans of fish—fish of remarkable variety and inexhaustible abundance. The supply is literally inexhaustible, millions on millions of fish being constantly attracted from the distant ocean spaces

by the excellence of the feeding grounds. There are few such spots in the world. The intelligence of the Japanese has made the most not only of this but also—in recent times—of ultra-improved fishing methods, resulting in an approximate doubling of the catch in the last twenty years. The description of a floating crab cannery, under ship-building, gave a hint of these methods. Besides crabs, Japan cans and exports huge quantities of other fish, including tuna, which has such a delicate flavor that it is often called sea chicken. As the United States imports 208% more fish than it exports, Japan has responded to the demand. But the tuna fishermen of California complain that Japanese fish have recently been selling for a dollar a case less than American, the cost of the American tuna catch and delivery to canneries being \$100 a ton (they claim) as against \$20 in Japan. American fish imports from Japan have grown from 30,000 cases in 1930 to 600,000 cases in 1933. The Tariff Commission now orders a fifteen per cent increase, bringing the duty up to 45% *ad valorem*, but the Pacific Coast packers demand an absolute ban.

It may surprise the tuna fishermen of Southern California to learn that their rivals in Japanese waters, whom they think of as fishing from junks, now own and operate some twenty thousand power boats, most of them being motor driven by American petroleum. The picturesque junk is fast disappearing. Its doom was sealed when the Fishery Experimental Bureau of Shizuoka Prefecture ordered from the Union Iron Works of San Francisco a four-cycle electric ignition petroleum motor for the smack *Fuji Maru*. Other motors followed in its wake, such as the *Dan*, the *Scandia*, the *Griffin*, the *Mitz* and *Weis*, and the *Bolinder*. The *Bolinder* became the most popular, because of its small fuel consumption, simple handling, and smooth

THE HEAVY INDUSTRIES 43

running. It is now a home-made product on a rather large scale. But high-compression motors, using heavy oil—such as Fairbanks-Morse—are also in general use. For still larger power, home-made four-cycle air-injection Diesels have been widely adopted. The sizes of the fishing-boats have stepped up, first to twenty tons, then to forty, sixty, eighty, and even to 180. Several hundred steel ships belong to this huge fishing fleet.

Such are some of the causes explaining the fact that the annual fish catch of Japan proper is now worth over ¥ 35,000,000 instead of the ¥ 20,000,000 of twenty years ago.

Her immense fishing fleet creates a considerable part of Japan's demand for American petroleum. Eighty per cent of her annual supply of petroleum comes from abroad, of which 58% is from the United States. This is 453,000,000 gallons, the American quota being 264,000,000. In 1931 the main achievement in ship-building was three motor-ships built for the oil business. Two of these, each of 12,500 tons deadweight carrying capacity, are notable as being the fastest tankers in the world. Much of the petroleum is for the Japanese navy.

Captain M. D. Kennedy, until recently Reuter's correspondent in Japan, contributed to the new Encyclopædia Britannica an interesting article on Japanese commerce, indicating, among other things, that its organization may have originated with fishmongers!

Early in the seventeenth century one Sukegoro of Yamato province went to Yedo (Tokyo), where the greatest fish market in Japan exists, and organized the fishmongers of the city into a great guild. He contracted for the sale of all the fish obtained in the neighboring seas, advanced money to the fishermen on the security of

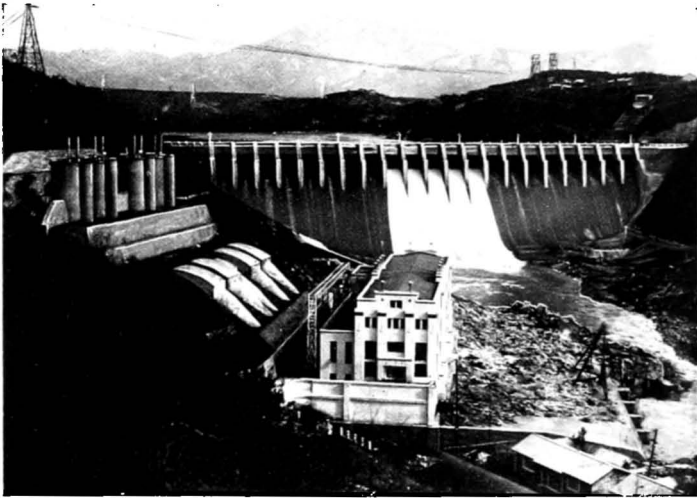
their catch, constructed preserves for keeping the fish alive until they were exposed in the market, and enrolled all the dealers in a confederation which ultimately consisted of 391 wholesale merchants and 246 brokers. The main purpose of Sukegoro's system was to prevent the consumer from dealing direct with the producer. Thus in return for the pecuniary accommodation granted to fishermen to buy boats and nets they were required to give every fish they caught to the wholesale merchant from whom they had received the advance; and the latter, on his side, had to sell in the open market at prices fixed by the confederation.

It would almost seem as if the trust were not an American invention.

III

THE LIGHTER INDUSTRIES

¶ Electric light and power — The Radio — Motion-pictures — A trans-Pacific telephone connection — The electrochemical industry — Fertilizers — Rubber goods — Celluloid — Glassware — Paints and dyes — Matches — “Novelties” — Paper — Books and newspapers — The wide use of English



Where the power comes from.
Japan has 1730 such stations.



"The thrill of a lifetime!"
Cable-cars tie mountain-spurs together.

CHAPTER III

THE LIGHTER INDUSTRIES

JAPAN'S cotton and silk industries are so important as to demand separate chapters. This chapter will consider some of those other manufactures that bring her into competition with Western countries, with a side glance at the radio, "talkies" and telephone, and the publishing business.

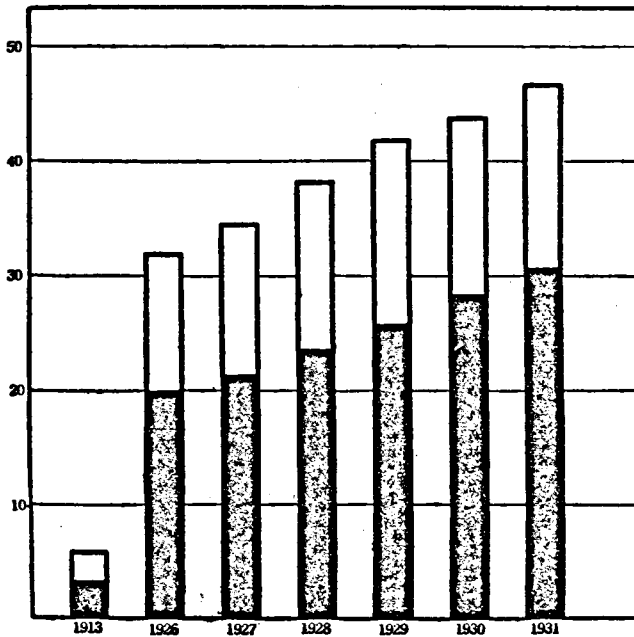
In producing electrical goods, in which she now ranks fourth, Japan appropriately utilizes the hydro-electric energy in which she is rich; so rich as to be largely compensated for deficiencies in iron and coal. Forty-one per cent of the motive power in her factories is electric. With a total horse-power of 14,270,000 (of which she is using only 5,360,000) she has ninety-nine horse-power to the square mile as against twenty in the United States. In power already generated she ranks fourth, possibly third. Steam is used as an auxiliary to water-power, especially in winter. Japan invests more capital in electric industries than in any other. Practically every hamlet is well lit, to say nothing of the glittering cities. Out of a total of 12,500,000 households, 11,400,000 use electric lights. The lamps have doubled in number in the last twenty years, and the candle-power has trebled. Increase in power has been even more noteworthy, horse-power having doubled in a decade, and the number of motors trebled. During this same decade the mileage of electric railways has also trebled, and the number of their passengers more than doubled.

JAPAN'S ADVANCE

Here are the five leading electric power companies, with their paid-up capital at the end of 1932 :

Tokyo Electric Light Co., Ltd.	Tokyo	¥ 429,562,000
Nippon Electric Power Co., Ltd.	Osaka	115,214,750
Tobo " " " "	Tokyo	130,000,000
Daido " " " "	"	130,972,250
Ujigawa Denki Co., Ltd.	Osaka	92,500,000

GENERATION OF ELECTRICITY IN JAPAN
(in millions of kilowatts)



Courtesy of Nippon-Kokusei-Zue
(1933 edition) by Messrs. Yano and Shirasaki

Black shows amount generated by water power; white, by heat power.

THE LIGHTER INDUSTRIES 49

Electro-chemical industries will be considered farther on in this chapter. Under immediate consideration are the electrical goods manufactured not only for home use but for export. The following are the principal exports during the last three years for which statistics are available:

	1930	1931	1932
Telephones	¥ 601,000	¥ 521,000	¥ 642,000
Electrically motivated apparatus	3,003,000	2,686,000	1,415,000
Bulbs	<u>5,316,000</u>	<u>5,875,000</u>	<u>10,187,000</u>
TOTALS	¥ 8,920,000	¥ 9,082,000	¥ 12,244,000

Most of the "motivated apparatus" goes to China in the form of handy motors to run the small modern industries beginning to develop there. The effect of the boycott appears in the figures. Such apparatus as heaters, irons, and fans also figure largely in the exports to China, Manchoukuo, and Russia, besides telephones.

Owing to the expiration of the Tungsten patent in 1929, bulbs have jumped forward, the number exported during 1932 being 280% larger than in 1929. About twenty per cent of the bulbs used in the United States in 1932 were made in Japan. A Japanese authority says: "The prosperity of the Japanese bulb manufacturing industry attained to a sort of golden age in 1932. During that year 35,000,000 bulbs for the home market and 280,000,000 for foreign markets were produced in Japan, their total value being over ¥ 23,000,000. The electric bulb manufacturing business is now one of the main mechanical industries of Japan."

The radio, although not yet a notable item in the exports lists, figures so prominently in Japanese life that a brief account of it seems in place here.

If you were to ride through one of Tokyo's better residential areas on the electric train that threads its way along a viaduct of masonry high above the picturesque roofs, you would see a striking sight—a forest of radio masts. It is more or less that way everywhere you go in Japan. The airplane, wireless telegraphy, the phonograph, baseball, golf and the motion-picture—all were adopted so long ago as to constitute a vital part of the national life of today. The same can now be said of the very efficient and highly organized Japanese radio broadcasting system, which, incidentally, has as yet received practically no attention abroad. Since the Japanese have literally nationalized their system in order to conform to the unique Japanese manner of doing things and have rooted the whole enterprise in certain definite projects which have as their object the welfare of the people, it is not surprising to find that within Japan radio is being given a most unusual, whole-hearted support by every one—a manifestation of enthusiasm that borders almost on patriotic fervor.

An official count of registered radio sets in use in Japan in 1927 placed the number at 377,297. The total had increased to 621,750 in 1929, to 948,822 in 1931. An official count made after ten months of 1932 had passed, revealed that the number of licensed listeners-in had reached the relatively large figure of 1,280,320 (the United States has in use about 10,500,000 receiving sets), representing an increase of some 331,498 subscribers over the figures of the previous year. Additional subscribers who have joined during 1933 have brought the total roughly to 1,500,000. And every licensed subscriber represents, of course, a whole group—family, friends, and neighbors. All told, there must be several millions of Japanese listeners-in.

A careful analysis of Japanese radio programs leads one to believe that educational features are in the predominancy. Everything from the care of infants, chickens and plants to history, the arts and the proper way to dress in European style is expounded. Since the acquisition of a knowledge of the English language is of sincere interest to many Japanese, a great deal of English lan-

THE LIGHTER INDUSTRIES 51

guage instruction is broadcast. The most popular professor engaged in this good and useful work is Yoshi-saburo Okakura. It gives one an uncanny feeling to walk along some dark Tokyo street of a quiet evening and hear English words and phrases coming forth sonorously from some hidden radio beyond intervening fences and Japanese gardens.*

The taste of the radio fans is so divergent that the ingenuity of the programme makers is taxed to the utmost. The principal cleavage is in music, says the Japan Year Book. Japanese culture is not single and uniform; the old and the new exist side by side, the indigenous and the foreign. Some listeners-in demand the native music, instrumental and vocal, that has developed in many varieties through many centuries. On the other hand, Western music has now become popular. The young people who understand it generally prefer it, while old people naturally prefer to hear what they have known since childhood. The ideal programme must therefore combine these two forms. "If thirty minutes are given to the New Symphony Orchestra of Tokyo, thirty must also be given to music that is purely Japanese." Station JOAK in Tokyo during a recent year broadcast 416 items of foreign music: orchestral pieces, 112; vocal solos, 99; brass performances, 39; chamber concerts, 28; piano solos, 25; violin solos, 17; jazz numbers, 16; foreign and Japanese programmes combined, 15; choruses, 12; 'cello solos, 8; flute solos, 4; organ concerts, 2; violin and guitar duets, 2; guitar solos, 2; trumpet, trombone, and xylophone solos, 1 each; *samisen* with orchestral accompaniment, 1; marteno 1; opera 1.

Very little amusement is given in the daytime. The first radio entertainment of the day starts at 12:05 o'clock.

* S. F. Lindstrom in *Asia*, Dec., 1933.

It is usually of a lighter vein and may be Japanese or foreign music or a drama. If there is a major athletic event in the afternoon, a descriptive account usually goes on the air. After this, there will be no entertainment of any kind, except on Sundays, until eight o'clock, when the principal amusement programme begins. (Frequently, however, the children's programme, given at six o'clock for thirty minutes, has fairly good entertainment). From eight to nine-thirty, entertainment of all sorts is offered. Very rarely does the programme extend beyond ten o'clock.

Advertising is barred.

Motion-picture houses are doing a good business all over Japan, their seating capacity running from four hundred to five thousand. The total annual attendance is 180,000,000. There are 1,200 theaters, showing both imported and home-made films. Imported releases amount to about 260 a year, 84% coming from America. Japanese releases are about double. The largest producing and distributing companies are the Shochiku Company, Limited, the Shinko Eiga Company, Limited, and the Japan Motion Picture Company, Limited, the last one being popularly known as Nikkatsu. Shochiku supplies about half the theaters.

A typical programme must have two feature films, a news reel, and a short comedy. Its length is 18,000 feet on the average, lasting about three hours and forty minutes. In the rural districts, one more feature is required, stretching the programme to 25,000 feet. To meet this demand, most Japanese pictures are produced rapidly, usually in a month, although sometimes six months are spent on a single picture. When necessity demands, a film can be produced in a week or ten days. It follows that efficiency in production, compared with that in European and American studios,

THE LIGHTER INDUSTRIES 53

may be maintained without much capital. For instance, Shochiku produces about 150 pictures a year. Though Japan has fewer theaters per million of population than the United States, England, Germany and France, yet a total of five hundred pictures is required each year. Shochiku tops the world's list of companies in the number of pictures produced, and Japan occupies second position in the number of pictures produced by countries. The limited time and expense allowed for production of Japanese pictures cannot but seriously handicap the directors, and compared with the grand scale of many American and other foreign films, the scale on which Japanese films are produced is in many cases insignificant.

European and American films appeal to resident foreigners, Japanese students, and the intelligentsia in general. The so-called modern boys and modern girls (*mobo* and *moga*) have an exceptional longing for things European and American, and they adapt into their life much of what they see in imported pictures. Not a few Japanese go to the cinema for the express purpose of studying English and the manners and customs of foreign countries. The rural districts are averse to imported films and show a strong prejudice in favor of native products, through which they follow the fashions of Japanese city life. The young men and women of the cities and rural communities have come nearer to one another in sentiment and mode of living through the medium of the cinema.

The substance of Japanese pictures is varied. The recent tendency favors a serious view of life, and audiences are more impressed by what is implied than by what is expressed. Scenes may be imposing, but if the meaning is shallow, the film will be disregarded. If the story is full of meaning, the picture, whether foreign or native, will catch

the spectator's fancy. The Japanese people are fond of tragedy. With few exceptions, pictures without tears cannot be expected to prove financial successes. Especially the women, who constitute fifty per cent of the spectators, feel disappointed if they have not shed tears over a tragic scene. Influenced by American pictures, comedies have come to be appreciated, but to satisfy the audience they must have at least thirty per cent of tragic elements.

In talking pictures, Japan is much behind Western countries. Shochiku produces two a month, but the other companies combined turn out only one or two a year. Expansion is artificially retarded for several reasons, chief of which is the fact that audiences are still drawn by silent films. The heavy financial sacrifices that would result from a rapid shift from silents to talkies and the consequent dismissal of musicians must also be taken into consideration.

Practically all imported films are talkies. Their introduction presented language difficulties, for few Japanese understand English when spoken. As a solution, most of the American pictures now exhibited are so-called super-imposed prints, which flash a Japanese translation of the English dialogue into a corner of each scene. This has proved highly satisfactory to native audiences and has dispensed with the *benshi*, or interpreters, who are required for silent films, in the theaters which specialize in foreign talking-pictures.

Japanese telephone subscribers have doubled in the last ten years. They now number 723,054. Dial phones of the latest pattern are in common use. The service, as compared with European countries, is excellent. By the time this book appears Tokyo will probably be linked with New York by telephone. Mr. H. Tsukada, of the Kokusai Denwa Kabushiki Kwaisha, recently said :



Broadcasting a *geisha* orchestra.



Filming a "talkie."



Tokyo Operators for the Trans-Pacific Service.

THE LIGHTER INDUSTRIES 55

"Our plans are rapidly being whipped into shape, and the transmitting station in Nazaki, Saitama Prefecture, and the receiving station in Komuro, Ibaragi Prefecture, have been serviced to the point where they will be fully equipped by the turn of the year.

"People in Japan can talk through their regular house or office telephones with friends or business firms in other parts of the world. An international exchange section is being added to the Tokyo Central Telephone Bureau, which will be the nation's central and will be connected with the two stations.

"Several tests by the Communications Ministry have proved highly successful, and the audibility is just as good as in an intra-city call. A recent test established communication with San Francisco in less than five minutes. The system is not so complicated as one might imagine. You can talk from your own bedroom with a friend in his New York apartment just by calling his city and his telephone number.

"Tokyo will be connected with the American telephone system through the receiving and transmitting stations in Point Reyes and Dixon, California, respectively, both of which will be connected by a land line with the office of the American Telephone and Telegraph Company in San Francisco, from which any telephone in North America on the Bell system can be reached. The European central for the Kokusai Denwa service is in Berlin, with the transmitting station in Nauen and the receiving station in Beelitz.

"Although the number of other radio-telephonic lines has not been determined, it is already planned to link Japan with Manchoukuo, Formosa, Java, the South Seas, and the Philippines."

The Kokusai Denwa is entirely private, and it is a

peculiar company in that it is to equip and manage the facilities and then rent them to the Communications Ministry in return for an annual subsidy.

The concern has a capital of ten million yen, made up of 200,000 shares with a face value of fifty yen each.

The web of speech when the Japanese lines are working will include more than forty million telephones throughout the world, the line stretching from the Arctic Circle down to the Mediterranean, Australia and the South Seas, and completely around the world, with additional service to liners on the high seas.

The electro-chemical industry was brought into being by the Great War. Until then Japan's necessities in this field were all imported. The sudden cessation of imports compelled home manufacture. Now importation has stopped altogether, and exports have set in. In fact, this industry is now in the van in Japan, comprising about fifteen hundred companies, manufacturing not only chemicals and medicines, but fertilizers, rubber and celluloid goods, glass and ceramics, cement and brick, paper, leather, and paints, dye-stuffs and colors, matches and explosives, oil, grease, and wax, and a large variety of toilet goods.

In chemicals proper Japan is hampered by lack of salt for industrial uses, but hopes to bring in supplies from the salt fields of Manchoukuo. The exports of chemicals, explosives, and medicines, combined, amount to less than thirty million yen a year. But in sulphate of ammonia about fifteen per cent of the world's total is now produced, displacing imports to Japan and her colonies and leaving a considerable surplus for export. Production for Japan and Korea grew from some 600,000 tons in 1931 to more than 800,000 in 1933. This ranks Japan among the four chief ammonia-producing countries. Other artificial fertilizers

THE LIGHTER INDUSTRIES 57

now growing in importance among her industries are calcium cyanamide, superphosphates, and compound fertilizers.

In rubber consumption Japan now ties France for third place. There are about seven hundred factories, with an annual output of a hundred million yen, in practically all lines of rubber goods. Imports of motor-car tires fell from 251,595 in 1929 to 29,983 in 1932. "Bridgestone" tires, manufactured at Kurume by the Ishibashi Brothers, are exported. Exports of rubber boots and shoes, of which so much has been heard, amounted in 1933 to 11,290,000 pairs, valued at ¥ 7,629,000; and "others," mostly canvas shoes with rubber soles, to nearly 36,000,000 pairs, valued at ¥ 16,490,000.

Sansom's and Kermodé's report to the British "Department of Overseas Trade" on Economic Conditions in Japan refers to the charges of "dumping" in connection with rubber goods, and adds:

Such charges are as a general rule without any foundation, if by "dumping" is meant the sale of goods abroad at below production cost. There have doubtless been cases where stocks have been disposed of at a sacrifice, and some small traders and producers have probably taken orders at unremunerative prices. But the bulk of the export trade has certainly been conducted at a profit, and the Government, far from encouraging cheap sales, have urged small export traders to combine for the maintenance of higher export prices. No good, but possibly much harm, can come from ascribing the successes of Japan in foreign trade to unfair methods. This report would fail in its purpose if it did not bring out the fact that those successes have been obtained by a deadly combination of low wages, good workmanship, and favourable exchange.

Few Japanese factories have enjoyed a more spectacular rise than that of the Ishibashi Brothers at Kurume, in

Kyushu. Their name means "stone bridge," so "Bridgestone" was the natural name for their tires, of which they produce 3,000 daily, representing between 40% and 50% of total Japanese production and fully 50% of the exports. The only other tire manufacturers are the Yokohama Rubber Company, Ltd., producing 800 pieces daily, and the Far Eastern branch of the Dunlop concern, which turns out 1500. The "Bridgestone Tyre Company" was not established until 1931—as a branch of the rubber shoe business, which in turn grew out of the "tabi" (Japanese sock) manufacture started in 1892. Rubber or rubber-and-canvas shoes can now be produced by this plant to the extent of 150,000 pairs daily, ten thousand workers being employed.

As the chief reasons for their success the Ishibashi Brothers themselves name: (1) Japan's proximity to raw-rubber countries, such as Malaya, with which she does a reciprocating business, returning tires for the raw material; (2) cheap canvas produced by her own cotton factories; (3) the inborn skill of her workers; (4) latest manufacturing methods; (5) the low cost of living; and (6) huge purchasing markets near by.

In 1930 Japan took 4.8% of the world's rubber, being outranked by Germany, taking 6.8%, France, 8.8%, England, 11%; and the U. S. A., 54.2%.

In 1933 Japan took 7.6%, being outclassed only by England, which had dropped to 9.7%, and the U. S. A., which had dropped to 50.3%.

Japanese celluloid products have the advantage of an abundant camphor supply, although the monopoly law keeps its price fairly high. Exports go to America, England, South America, and Australia. They are now beginning to invade the markets of Europe and Africa in rivalry with German products. Besides the advantage in raw materials,



Furisode-Ningyo
("Flowing-sleeve Doll")



Making Dolls for Export.

THE LIGHTER INDUSTRIES 59

they benefit from cheap labor combined with an exquisite technique. Toys are produced in the greatest abundance, besides combs, tooth-brushes, and other toilet accessories. Recently the local motion-picture companies have purchased their raw film at home. Cellophane is plentiful and cheap.

Glassware exports for 1932 showed an increase of ¥ 2,700,000 over the previous year, selling mainly in India, but also in China, Australia, Canada, and the United States. The home demand consumes all the plate glass.

Pottery, strange to say, is in a state of decline. Cement has already been treated, in Chapter II. Paints are a recent achievement, old Japan's substitute for them having been lacquer. Paints and dye-stuffs run now to an annual production of thirty million yen each, much being exported. Matches, benefiting from the collapse of the Swedish match trust, are finding new markets in India, the South Seas, and the United States.

The electro-chemical industry supplies an astonishing variety of miscellaneous goods, or novelties, shipped every year to all parts of the world to supply characteristic Japanese shops. These light goods range all the way from kewpie dolls to serviceable china-ware, decorated lacquer, and gaily colored kimono. Hardly a town in the civilized world but has its Japanese shop; there are said to be twenty thousand in Germany alone. Perhaps their chief national value has been advertisement. They have accustomed the world and its wife to Japanese taste and skill, so that the factory utility products that are now invading markets everywhere find a public prepared to welcome them. Low prices do the rest.

Paper objects, from napkins and fans to umbrellas and table-ware are piled on the shelves of these shops. Most of these objects are made from so-called "Japanese paper,"

which bears slight relation to the new competitive industry. The modern mills were just getting under way when the Great War forced prosperity on them. Importation stopped, the home demand was augmented, exports increased. Production figures for each five years since 1914 tell the story:

1914	1919	1924
327,614,000 lbs.	519,141,000 lbs.	817,383,000 lbs.
	1929	1934 (est.)
	1,418,187,000 lbs.	1,445,000,000 lbs.

In May, 1933, an amalgamation of the principal paper companies was effected under the firm style of the Oji Paper Mills, Limited, controlling 98% per cent of foreign-style paper. The member companies of this huge trust—which has a paid-up capital of ¥ 150,000,000, with Mr. Ginjiro Fujiwara as President—produce pulp besides ordinary paper, and also newsprint.

The local demand for newsprint is so huge that foreign orders are often turned down. Domestic consumption registered an enormous increase as soon as the Manchurian adventure began. Intense public interest not only increased circulations, but led the leading journals to enlarge their size. The demand for printing paper and similar papers also showed a striking gain in the first half of 1933, due principally to two factors, the aggressive sales policies adopted by magazine and book publishing companies, and to speculative purchases made by wholesalers.

Books in the Japanese language run to twenty thousand titles a year, under twenty-six classifications. Literature leads with 2,271 titles, Education comes next with 2,224. Then follow Social Problems with 1,323, Religion, with 1,123, Economics with 1,036, Music with 1,009, Lan-

THE LIGHTER INDUSTRIES 61

guage Study with 813, Geography with 780, Fine Arts with 712, Medical Science with 695, Politics with 641, Law with 574, Philosophy with 548, the Physical Sciences with 461, History with 421, and so on down the list.

The Japanese probably read more than any other people in the world. This is another way of saying that illiteracy is practically *nil*, ninety-nine per cent of the children of school age now being in school. And yet the Department of Education was not organized until 1871. In the following year the Emperor Meiji issued his rescript, "It is intended henceforth that education shall be so diffused that there may not be a village with an ignorant family, or a family with an ignorant member." Twenty years later this wish had been so far fulfilled as to show an increase of more than three million per cent in the number of Japanese acquiring an education. Today it has been almost wholly fulfilled. One result is an immense number of newspapers, with large circulations.

The number of daily newspapers in Japan proper at the end of 1932 was 1,124, showing a gain of 41 over 1931, according to government statistics. In addition, there were 463 newspapers issued four times or oftener a month, and 4,714 issued three times or less a month. These aggregate 6,301.

The majority of newspapers are published in Tokyo and Osaka. This is because Tokyo is the capital of the Empire and Osaka the center of social and economic life in West Japan. The combined number of newspapers in these two largest cities is twenty-five per cent of all, and their combined circulation covers the country.

Circulation of individual journals ranges from about four thousand up to 1,500,000. The estimated circulation of the leading dailies at the end of 1932 was as follows :

JAPAN'S ADVANCE

TOKYO :		OSAKA :	
Asahi Shimbun	1,000,000	Asahi Shimbun	1,200,000
Nichi Nichi Shimbun	1,050,000	Mainichi Shimbun	1,200,000
Yomiuri Shimbun	500,000	LEADING PROVINCIAL PAPERS :	
Hochi Shimbun	500,000	Shin Aichi, Nagoya	200,000
Jiji Shimpō	300,000	Fukuoka Nichi Nichi	180,000
Kokumin Shimbun	150,000	Kahoku Shimpō, Sendai	100,000
Chugai Shogyo Shimpō	150,000	Hokkai Times, Sapporo	100,000

“Rengo” and “Nippon Dempo” are the two largest news agencies in Japan. Rengo’s directorate comprises representatives of six Tokyo dailies, its membership many papers throughout the Empire. It maintains close relations with the Associated Press in America and with Reuter’s and Havas in Europe, as well as with the Tass News Agency in the U. S. S. R. Nippon Dempo specializes in the domestic field rather than in cables, but maintains close relations with the United Press in America. Whenever big news breaks, it runs Rengo a close race.

Both agencies feature the use of the radio, broadcasting the news four times every day.

The Osaka *Mainichi* has a staff of 2,124 the Tokyo *Nichi Nichi* one of 3,454. The *Asahi* publishes two dailies, two weeklies, a bi-monthly “Sports *Asahi*,” the “*Asahi Camera*,” the “Screen and Stage,” “The Woman,” the “Children’s *Asahi*,” and the Library Editions of the Osaka and Tokyo *Asahi*, monthlies. It is equipped with 36 super-speed presses, one German Iris color-press, two German gravure presses, 19 airplanes, 500 carrier pigeons, two sets of telephoto equipment, and private telephone lines between Tokyo and Osaka. The *Mainichi* and *Nichi Nichi*, under the same management, also have private lines between the two cities. Besides equipment rivaling that just outlined, a Braille

THE LIGHTER INDUSTRIES 63

press issues a weekly newspaper for the blind, the only one of its kind in Japan. There are numerous other special publications, besides a unique "Charity Corps" in Osaka, dealing with circuit hospital-work, relief of the poor, poverty prevention, the support of various social welfare enterprises, and the emergency relief of sufferers. The Osaka *Mainichi*, like its rival the *Asahi*, has done a great deal toward making the Japanese air-minded, holding demonstration flights all over the country. During a recent summer *Mainichi* planes made adventurous flights across the Japanese Alps, as well as in the Chugoku, Shikoku, and Kyushu districts.

The *Mainichi* and *Nichi Nichi* jointly issue a handsome daily in English, with a circulation of some fifty thousand, almost entirely Japanese. There are other excellent dailies in English, such as the *Japan Advertiser*, *The Japan Times and Mail* (Japanese owned), *The Japan Chronicle*, and the *Kobe Herald and Osaka Gazette*, but these are mainly for foreign residents. Assuming that the paper issued jointly circulates exclusively among Japanese, and that it has three or four readers to each copy, one gets some idea of the large numbers of Japanese that read English daily. When dealing with the "talkies" the statement was made that only a few Japanese understand spoken English, but reading is a different matter. For more than a generation it has been a required subject in the schools, the educational leaders perceiving that the ability to read this foreign language would give the people intellectual contact with the British Empire as well as with the United States. English is now by way of becoming a true world-language, there being 120,000,000 English users in the United States, and 80,000,000 others scattered around the globe. In the ability to read English Japan probably ranks next to these

two great national groups, the British Commonwealth and North America.

Not only do English books abound in home, school, and bookstore, but several publishers bring out English books, including one firm publishing English books only. Among firms publishing in English may be mentioned Maruzen, Kyo Bun Kwan, Sanseido, Fuzanbo, Hasegawa, and the Japan Times Co., all of Tokyo, and Kawase & Son, Ltd., of Kobe. The first two houses and the last-mentioned one are also importers of foreign books, which they retail. The Maruzen Company are the largest importers of foreign books, having thirteen branches throughout the country, while the Kyo Bun Kwan represents Christian literature. The Sanseido and the Fuzanbo bring out English text-books and dictionaries, and the Hasegawa Company have put out many beautiful English books, including a few Japanese fairy-tales collected by Hearn, and certain translations of Japanese stories. The Kenkyusha Company, one of the two largest publishers of English books, bring out eight magazines, including several bilingual magazines devoted to high-school English. They also feature the publication of an English Literature series and many bilingual dictionaries. Mr. G. Kosakai, the president of the firm, is a "self-made man."

Last, but by no means least, the Hokuseido Press, who produce the present book, publish in English exclusively. They specialize in the works of Lafcadio Hearn, and are often referred to by foreign readers as "Hearn publishers."

Y. Nakatsuchi, founder of the Hokuseido Press, hit upon the publication of English books as the best contribution he could make to Japanese education. Before he had been long in business he was struck with the paucity of manuscripts. All the text-books in use at that time were reprints, and most of them poor ones at that. He

THE LIGHTER INDUSTRIES 65

resolved to do only good work, and longed also to bring out something original. When the immigration ban came up for discussion in the American Congress and this discussion was reported in the Japanese press, he made up his mind specifically. He would try to dispel the American belief that Japan was just a huge reservoir of cheap coolie labor by a concrete demonstration of Japanese culture. At that time the playwright Kurata Hyakuzo had just produced "The Priest and His Disciples," which was enjoying a great vogue in Japan. Mr. Glenn W. Shaw, an American teacher in a government school, translated it. This translation Mr. Nakatsuchi printed in clear type on good paper and bound in the durable silk known as *habutae*. He shipped to America a consignment that at once ran afoul of the tariff on silk cloth, thus scaling up the price prohibitively. Although this beautiful book—beautiful in every sense—failed of large sales abroad, it did find its way to the shelves of a chosen few, including Romain Rolland in France, and Harold F. Rubinstein in England, letters from whom warmed the publisher's heart in lieu of cold cash in his pockets. And then a surprising thing happened. This English book began to "catch on" in Japan. In a few months it sold ten thousand copies!

Mr. Shaw followed with other successful translations, including Kwan Kikuchi's "Tojuro's Love," but these have never caught up with "The Priest."

In 1922 Nakatsuchi brought out a Lafcadio Hearn series edited by Professors T. Tanabe, M. Otani, and T. Ochiai, who had all been students of Hearn in the Tokyo Imperial University. This series, in English and Japanese, with notes, did much to introduce the author to Japanese readers in general. Hearn's literary executor, Mr. Mitchell McDonald, a paymaster in the United States Navy, now sent for Nakatsuchi and said to him:

"It is now twenty years since my dearest friend, Hearn, died. I am now over seventy, and cannot hope for many more years to live, while you are still young, with a great work to do in publishing English books, including the works of Lafcadio Hearn. In publishing those works I suggest that you fix the prices as low as possible, so that they may be widely used by Japanese students, whom Hearn so loved when he was here."

Nakatsuchi devoted himself to this mission, but before he could carry it out — while steadily bringing out text-books as his source of income — the great earthquake of 1923 killed Mr. McDonald in Yokohama and demolished the little publishing plant in Tokyo, stock, type, presses, everything. Instead of being disheartened, Mr. Nakatsuchi decided to take advantage of the destruction so as to begin all over again with the best types he could buy from America. His presses he had made at home.

Hokuseido has now published twenty-three separate works of Hearn's, and has succeeded in introducing him, in handsome but inexpensive form, throughout the schools of Japan. "The History of English Literature," printed in two superb volumes, made something of a sensation abroad, bringing praise from such critics as Saintsbury. Most of the royalties went to Hearn's widow, Nakatsuchi receiving most of his emolument in imponderables. As he himself puts it, he makes enough out of standard text-books to pay for the luxury of publishing books that give him joy. His entire list runs to several hundred items, including many great names.

English magazines published in Japan are led off by *Contemporary Japan*, a quarterly review of politics, literature, and social life that does credit to everybody concerned. Published by the Foreign Affairs Association, it naturally



Tokyodo Bookstore.



Top: Magazines being distributed from Tokyo Station.

Left center: Speedy bookbinding by machines. (*Nisshin Printing Co.*)

Bottom: Binding the Lafcadio Hearn books by hand at the Hokuseido Bindery.

THE BOOK AND MAGAZINE BUSINESS.

THE LIGHTER INDUSTRIES 67

stresses foreign relations, presenting Japan's case to the English-speaking world as thought out by her leading men, aided now and then by foreign residents. *The Oriental Economist*, an able technical review edited by Mr. Tanzan Ishibashi and published in Japanese ever since 1895, now issues an English monthly, as carefully edited as its neighbor. *Japan in Pictures*, issued monthly as the overseas edition of the *Asahigraph*, holds its own with the best illustrated journals of the world, in text as in pictures. *The Tourist*, another attractive monthly, serves the highly efficient "Japan Tourist Bureau," subsidized by the government and a godsend to travelers. Most of the other periodicals using English abuse it. Some Japanese suffer from a false pride that inhibits submission of their English composition to revision by British and American scholars, employed in the schools.

In the vernacular, periodicals abound. The Foreign Affairs Association serves the Japanese public through a monthly international review, *Kokusai Hyoron*. *Gaiko Jiho* also specializes in foreign affairs. *Chuo Koron* and *Kaizo* cover current topics of many kinds most ably, the former being managed by Mr. Yusaku Shimanaka, the latter by Mr. Sanehiko Yamamoto. *Bungei Shunju* is literary. In science and industry the journals are abundant and good. On the writer's table at the moment lie *Kikai*, dealing with machinery, *Shigen*, with natural resources, *Kosei*, with industrial problems, and *Kogyo Chosa*, a bulletin for fundamental research in industries, edited by the Ministry of Commerce. These are but a few of many.

Among so-called "popular" magazines the *Hinode* or "Rising Sun" (Shinchosha) circulates 450,000 copies, and "The King" (Kodansha) 1,000,000. Mr. Seiji Noma is the president of the Kodansha Publishing Company, which

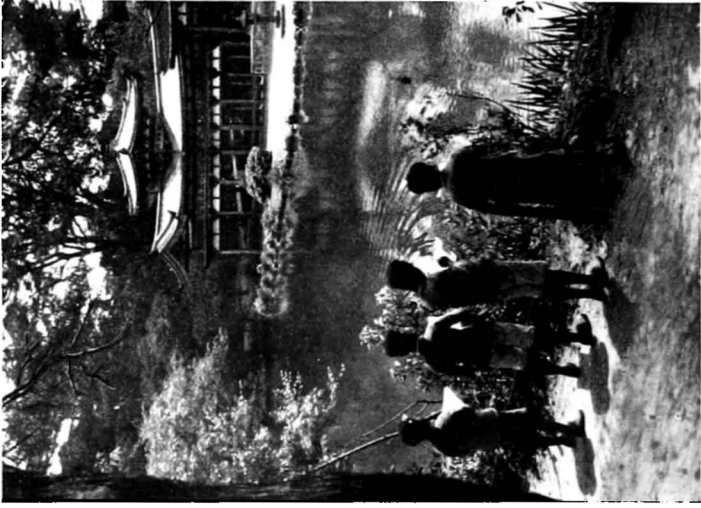
brings out nine monthly journals. Mr. Noma is also president of the *Hochi Shimbun*, a Tokyo daily newspaper, and is often known as the magazine king of Japan. Magazines serving the women include *Fujin Koron*, with 300,000 subscribers, the *Fujin Club* with 600,000, and the *Shufu no Tomo* with 800,000. Altogether Japan publishes 782 magazines, of which eighty deal with education, seventy-three with politics and sociology, seventy-one with economics, commerce, and finance, while seventy-four are for children.

Four great distributing houses serve the retail book and magazine business of Japan from Tokyo headquarters: the Tokyodo, the Hokuryukwan, the Tokaido and the Daitokwan.

IV

INVENTORS AND INVENTIONS

¶ Greece and Japan — An invention exposition with 700 exhibits — An ultra high-speed camera — A new method of microscopy — Have we been fair to Japan? — A pearl nursery — Ten inventors



Love of art still dominates Japanese life.

CHAPTER IV

INVENTORS AND INVENTIONS

SCHOLARS familiar with both ancient Greece and modern Japan are almost invariably struck by a resemblance between the two peoples. Theodore Roosevelt, in a letter to a friend that had lent him some books, once wrote: "I return 'The Greek View of Life.' Isn't it curious how much resemblance there is between the Japanese spirit and the Greek spirit of the Periclean age?" Lowes Dickinson, author of "The Greek View of Life," himself wrote in a subsequent volume: "Japan is the only country I have visited which reminds me of what I suppose ancient Greece to have been. There is a universal prevalence of art. Every common thing is beautiful, the cups, the teapots, even the very toys. Fineness of taste and skill of hand seem to be general, save where the Western invasion has destroyed them."

Dr. H. H. Powers, another profound student of Greece (see his "Message of Greek Art"), wrote after visiting Japan:

Never since the Greeks has art so pervaded the life of a people. Never have the craftsmen of any people found so many things on which to exercise their skill, or developed such skill in the exercise. In the vicissitudes of Japanese history the development has suffered interruption, but with each restoration of peace art has revived

with amazing promptness and vigor. In the eighth century at Nara, in the ninth and tenth at Kyoto, in the thirteenth at Kamakura, and in the seventeenth all over Japan, art responded to the sunshine of peace and prosperity.

It is the fashion in some quarters to disparage the originality of the Japanese, to call them imitators. The Japanese have borrowed everything. So did the Greeks. Yet whoever questioned the creative faculty of the Greeks! Creation is not making something out of nothing. Only the Almighty has that privilege. Creation is only a significant elaboration, a conversion of less perfect into more perfect forms. This means endless repetition and the patient accumulation of small increments of progress. That is the secret of the Greek grave reliefs as it is of the Japanese screens. Both borrowed and both perfected by patient repetition.*

With regard to modern invention, the impression is so widespread in Western countries that "the Japanese never invent anything" as to demand confutation.

Toward the end of 1933 the first "Invention Exposition" under auspices of the Patent Office was held in Tokyo to display the most recent achievements of Japanese inventors. Out of twelve hundred items submitted some seven hundred were accepted: mechanical, electrical, and chemical, although no attempt at close classification is made in the following account of a few of them.

As everybody is interested in printing and the simpler arts, the first object to engage the attention was a "myriagraph," a successful device for the rapid and accurate reproduction of wood-prints in either monochrome or polychrome. Thus the innate Japanese love of beauty was emphasized at the outset; but even more important than this myriagraph was a photographic printing outfit that

* "Japan," pp. 3-4.

INVENTORS AND INVENTIONS 73

permits of an instant and easy change of type size, saving much labor in a printing craft that has to use thousands of letters. A Japanese typewriter carrying three thousand characters has been in use for some time, but this exposition demonstrated a *portable* typewriter.

Among other printing inventions there was one that imprints colored designs on concave surfaces, such as the inside of bowls and dishes, by means of a rubber membrane; together with an autochrome process for decorating china-ware, and a plain one for magnet painting.

In photography proper a highly successful panorama camera seemed remarkable until the observer passed on to the even more noteworthy work of a telephoto lens using infra-red rays; then still on to the "sakuragraph" talking cinematograph for home use; and finally to the Hamamatsu system of home television, a complete unit retailing for only ¥ 500.

For commercial broadcasting there was a new and improved 100-kilowatt instrument, while the Japanese Navy exhibited a novel directive device for long-distance radio-telegraphy.

Minor contributions in this general field included non-combustible films made from agar-agar; a non-dazzling electric light bulb; and easily directible motor-car headlights.

Light was forced to do clever detective work in various arrangements for revealing flaws in the blades of revolving fans, and steel shafts such as locomotive axles.

There were two major contributions in the optical field. One was Dr. T. Suhara's recently improved "Super High-Speed Motion-Picture Camera," which, when first invented in 1926, exposed twenty thousand frames a second, six thousand being the maximum number of exposures possible

at that time with other cameras. In 1928 Dr. Suhara succeeded in doubling his speed. But now he has raised it to the almost incredible capacity of sixty thousand exposures a second, being actually able to photograph the movement of sound waves through the air.

The second major improvement in optical processes revolutionizes the use of the microscope. Invented by Mr. J. Suzuki while endeavoring to investigate the microscopic structure of raw silk and cocoons, its full name is the "Suzuki's Universal Micro-printing Process," but this has been irreverently abbreviated to "Sump." Heretofore the preparation of biological specimens for microscopic examination has involved an enormous amount of delicately painstaking labor. Mr. Suzuki accidentally discovered that celluloid possesses a property enabling it to copy off from almost any object a minutely accurate print, when treated with a certain solvent. Consequently, small celluloid disks are now lightly coated with the solvent, which is sufficiently adhesive to hold them for two or three minutes to almost any surface to which they may be applied, the solvent then evaporating without leaving any trace. The disks are then placed under the lens and found to be perfect objectives, as the writer can testify. Living organisms can thus be easily examined without the slightest injury; the most delicate tissues or micro-organisms can be caught and studied alive, and most expeditiously.

Besides its obviously large benefit to scientific inquiry, "Sump" has a high educational value. Microscopes that have hibernated on their shelves in the school-room will now be available for eager use, even in the primary grades.

For prolonging the life of telephone instruments a carbon arrester was exhibited. There was a new process for the manufacture of carbide. An improved suspension

INVENTORS AND INVENTIONS 75

insulator for telephone and telegraph wires uses no cement. Cellophane is the element in a protector for high-voltage fuses.

New chemical processes abounded. The Japanese, true to their immemorial skill in the use of lacquer, now coat aluminum with it, producing a beautiful ware that is strong and light but without trace of metallic sound or other betrayal of its base. "Inanium" is a new acid-proof ware with aluminum base.

Another process extracts gasoline from waste shale by catalytic action. Still another extracts alcohol from soy during manufacture,—hitherto extremely wasteful,—with a high-grade soap as a by-product.

Mr. Shimazu shows how to make inexpensive but good paint from red peroxide. Another inventor makes felt from ox-hair; still another, imitation linen out of cotton, by means of sulphuric acid; while the Hiroshima Technical College sends up a plate-glass substitute, non-breakable, and permitting the passage of ultra-violet rays.

A new method for drying fish involves fermentation and adds a delicious flavor. Five-gallon tins can be packed with fresh fruits and vegetables — big ones — guaranteed fresh for a year, oxygen being used to displace air.

In the realm of disease colloid treatment is applied to both gonorrhoea and leprosy.

To protect ships from barnacles a specially treated paper is applied over a coat of special paint.

Another special paint for straw hats makes them both waterproof and fadeless.

Two little dyeing devices, one a comb, the other a sort of curling-iron, turn gray hair back to its youthful color, "or your money back, sir!"

More serious chemical processes produce beautiful

paper plates and even attractive paper tiles. But far and away the most important chemical processes would seem to be those designed to help the farmer. One of these takes his waste rice-hulls and out of them gets a building material that insulates from both sound and heat. The other produces "regenerated silk," or "fibroid," only slightly weaker than standard silk, and equally beautiful—from hitherto wasted cocoons.

In conjunction with this silk process a really marvelous method has been developed to prevent the silkworm from spinning troublesome cocoons and compel it to release its thread into lovely thin sheets, thus saving human labor as well as the precious product.

Mechanical contraptions cannot be enumerated. For the children, a "talking buoy" amuses them while teaching them to swim. Adjustable relief maps teach physical geography. A double-keyboard piano teaches music: the lower scale for the child, the synchronized upper one for the teacher. A damp-proof piano defies the Japanese climate.

Fittings for the ladies range all the way from manikin hand-bags with zippers slitting their pretty sides down to covers for the *tabi* to prevent cold feet and up to high-pressure cookers and a "Jupiter" hot-water machine that cannot overheat. Besides, a laundry spray utilizes the last drop of liquid, a detective egg-container shows up the bad eggs, a floor-cleaner with ebonite rollers generates its own electricity, and the floor may be beautified by sanitary rugs woven from rags. When Madame goes out she may protect herself from sunshine or shower with a convenient and really charming umbrella for only thirty sen, or ten cents.

There are all sorts of office conveniences. An efficient fountain pen economizes the gold in its nib by fusion with stainless steel, while an extravagant pen-stand with a mag-

INVENTORS AND INVENTIONS 77

netized base — preventing overturning — asks the absurd price of ¥ 20.50 for itself.

An arithmetical robot adds, subtracts, divides, multiplies. For the Japanese salesman or saleswoman, accustomed to use the abacus, a *soroban* links up with a down-to-the-minute cash register so that he or she may calculate old-style in connection with the newest machinery. For cigarettes there is a robot salesman, while a mechanical money-changer may be entrusted with a banknote and depended on to deliver the right change. A remarkable oil purifier takes the black fluid from the gear-case of your car after a long run and converts it back into clear oil. Incidentally, these inquisitive Japanese have learned that oil lubricates better with 20% of water mixed in, and have therefore invented an emulsion in place of the more expensive and less efficient pure oil.

Vicious trolling devices using both hook and net are repulsive to the sportsman, but this was just about the only fly in the ointment of an astonishing exposition, which literally exhibited "infinite riches in a little room."

Having saved up some of the best inventions for the last, we may note a new weaving method, which automatically copies the most elaborate design by means of photo-cell and magnet, obviating recourse to the Jacquard patent. It is even possible to reproduce the unsurpassed fabrics of the old Nara times and put them to such practical use as the upholstering of the Emperor's private train!

Reverting to the field of extreme utility, the Imperial Navy contributes a stout "endless" chain of solid unwelded links cut clean from steel bars; the Mitsubishi Company a fluid gear-coupling for the Diesel engine, using either oil or water, and already extensively employed; the rayon manufacturers a great new process that is rapidly revolutionizing

that giant young industry; and some unnamed benefactor of the rice-grower a robot rice threshing machine.

It seems likely, in view of such a remarkable showing, that we Westerners have hardly been fair to Japan. Eighty years ago we began to thrust our own inventions on her, and no one can deny that she has appropriated them with wonderful rapidity and thoroughness. Perhaps it was not quite fair to expect her to invent on her own account while she was appropriating and assimilating what the West had to offer. Now that she has done that, she seems to be striking out with an initial success that is startling.

All the inventions shown at this first exposition are quite new. Previously, ten Japanese inventors had so distinguished themselves that the Emperor summoned them to lunch with him at the palace one day: December 11, 1930. An insight into their work intensifies one's admiration of what these so-called "Yankees of the East" are doing in our own pet field of achievement.

One of these men is Mr. K. Mikimoto. As I write, the morning paper brings a dispatch from Washington saying that Mr. Mikimoto has just presented to the Smithsonian Institution his recent exhibit at the Century of Progress fair: a pearl-built miniature of Mount Vernon containing five thousand "Mikimoto pearls" and twelve thousand pieces of mother of pearl. He is so much in the news that it may not be inappropriate to reproduce here an enthusiastic letter that I wrote to a friend in America after a visit to the famous "pearl farm."

"I have stepped outside the world into an island of dreams! I have been down to Pearl Island, in the sunny southern sea near Ise Bay, where a poor boy once dreamed of breeding pearls to his will, and now, aged seventy-six, is known the world over as Mikimoto the Pearl King.

INVENTORS AND INVENTIONS 79

“He was the eldest of nine children, working when fourteen like a beaver to help support the big family by aiding his father in making macaroni, and then, during his off-hours, peddling vegetables through his native village of Toba. Four years later—in 1875—he got his first glimpse of a world beyond Toba, when a British squadron rode into Ise Bay; and he promptly collected and sold—at a big profit—fresh eggs to bluejackets sorely in need of them. When twenty-two he came up to Tokyo resolved to make a man of himself, and here fell in with certain Chinese pearl merchants, whose example he determined to emulate. Old-fashioned pearl diving had already been practised in a desultory way at Toba, but young Mikimoto went back and injected new life into the business. In 1890 he came up to Tokyo again. Himself uneducated, he had a native respect for science, and it was from a Tokyo biologist that he now caught the idea of producing multitudes of true natural pearls by supplying oysters with the necessary irritant. As you know, pearls result from an oyster’s effort to protect itself from some intruding foreign substance by secreting nacre around it. Sequestering himself on an island just off Toba (he has since named it Shinju-shima, Pearl Island), he gave himself to lonely research with all the self-sacrifice and devotion of a monk, and at long last—after innumerable experiments and failures—succeeded. Not until 1913, however, did he produce pearls of that perfect sphericity demanded by a fastidious taste.

“The youthful old gentleman met me at the station at noon, and almost immediately I was in a world of enchantment. Walking a hundred yards or so to the seashore, we found awaiting us a group of the girl divers who pluck up from the sea the special kind of young oysters essential to perfect pearls. Clad decently in white cotton, with caps of

the same material to keep the hair out of their eyes, and wearing round glass masks over their eyes and noses, these utilitarian mermaids tumbled joyously out of their boats to the bottom, each roped to a big floating bucket into which she thrust the results of her plunge. The baby oysters are brown, fuzzy creatures the size of a nickel, and these are carefully nurtured through three years of growth, in wire cages suspended in sea water, before they are operated on so as to make them pearl breeders. For that is what Mikimoto's assistants actually do—perform delicate surgical operations on the three-year-old oyster by inserting into its mantle, just between kidney and stomach, a mite of fresh-water mussel, around which the oyster secretes, for seven more years, its protective deposit of nacre. All during this time the oysters are suspended from scaffolds some ten feet beneath the surface, in steel cages each containing seven shelves, or compartments, with 150 oysters to the cage. Three times a year these little nurseries are raised and cleansed, and then coated with tar to ward off submarine enemies. So at the end of ten years of the most exacting care perfect pearls *may* be produced. I underscore 'may,' for twenty per cent of the pearl oysters die, while another twenty per cent fail to respond to treatment. Besides, the scant remaining output are tested by such severe methods that only four or five per cent ever reach the market bearing the hall-mark of 'Mikimoto pearls.'

"From watching the divers we walked past several fascinating fishponds to a dainty pavilion built on the exact spot where, as he tells you chuckling, Mikimoto pounded macaroni as a boy. Upstairs, surrounded by sliding glass panels above which hang photographs of visitors and friends, we sat down to a lunch of which every item was either grown in Toba or trapped in the Toba sea. The photo-

INVENTORS AND INVENTIONS 81

graphs are almost exclusively American; my host informing me, with obvious sincerity, that his own *kimochi*, or natural feeling, is distinctly American. Compelled to go to Kobe in the afternoon, he turned me over to a modest young woman recently graduated from one of the Japanese universities, whom he had brought down from his Tokyo establishment to serve as my hostess, he being a widower. Accompanied by her and one of the superintendents, I spent an enchanting afternoon in motor-car and launch, motoring through mountainous woodlands or gliding through an opal sea.

“We were shown the scaffolding suspending its precious freight, and then the steel cages were hoisted and exhibited. We were told that Mikimoto now controls almost fifty thousand acres of sea-bottom for his unique industry, including one pearl farm in the Caroline Islands. We were shown many flat cages, a new device for collecting the free larvæ of the distinctive pearl oyster, so as to augment the harvest of the girls. But the supreme experience of the afternoon came with afternoon tea. In another glassed-in pavilion, crowning a ‘heaven-kissing hill,’ two little crisp oysters were served with the tea. Noticing the watchful mirth of the superintendent, I rolled the morsels carefully under my tongue; and then, for the first and only time in my life, out of my mouth came pearls! Yes, actually—two iridescent spheres of perfect loveliness, which the kneeling servant promptly wrapped in rice paper and lifted up for my grateful acceptance!

“Half wondering whether I was dreaming such a Monte Cristo experience, my surprises had only begun. The superintendent, beckoning me to the side of the room where he had set up a little work table, exhibited five carefully selected and as yet unopened oysters, much larger

than the two just served to me. Deftly opening each shell, he thrust a keen little knife into just the right spot in the mantle, and then I got the full thrill of witnessing *the first gleam of sunlight on pearls!* Most beautiful they were, perfect at birth, glowing against a background of silvery pink flesh; these jewels in living caskets. Every shell but one held its treasure, and to atone for that blank, one of the shells contained not only a pure black pearl, a rarity, but three seed-pearls of accidental, or wholly natural formation. Of the other three pearls, two were of uncommon size and perfection, so that everybody cried out at my luck. Not till that moment did I guess that these treasures, besides those I had rolled under my tongue, were to be ours!

“When we got back to Toba at twilight I found that the most charming of all the pavilions had been reserved as my private lodge. It stands on a hill upon a hill, so as to command the best possible view, and the upper hill is quite sharp, the ascent being too steep even for a high-powered motor-car. The distance to the top is but slight, however, and I was more than ready for an unassisted climb. But, no! Mr. Mikimoto’s invention lavishes itself on little unheard-of attentions to his guests. So there stood a sturdy serving-man, holding what seemed to be a short crutch with a particularly large arm, or saddle, well padded. Before I could guess its use I felt its propulsion at the base of my spine, and before you could say Jack Robi’son I was pushed up that sharp little hill with no personal exertion at all except the necessarily rapid motion of my knee-joints. As you know, the Japanese are a mirth-loving people, and this experience being too much for my own risibles, we salaamed to one another in doubled-up laughter at the entrance to my lodging for the night.”



A Pearl Farm.



Performing a Surgical Operation for Pearls.



Takura

Niwa

Mitsuda

Mikimoto

Mano

Shimazu

Honda

Sugimoto

A GROUP OF INVENTORS.

INVENTORS AND INVENTIONS 83

Some time after their imperial distinction had been conferred, the little group of inventors already mentioned were invited by Mr. Mikimoto down to Toba, where the accompanying photograph was made.

Mr. Tsunekichi Takuma, of whom an extended account will be given at the end of this chapter, is the first figure at the left. For the others there is sufficient space for brief sketches.

Dr. Y. Niwa, Number Two in the photograph, was born in 1893 in Miye *ken*. After graduating in Electrical Engineering from the Imperial University at Tokyo in 1916, he made tours of inspection through America and Europe. His inventions are in telephotography. He is chief of the Engineering Department of Nippon Electric Company, Limited.

Dr. R. Mitsuda, Number Three, was born in 1885 in the city of Toyama. Graduating in 1911 from the Engineering courses in the Imperial University at Tokyo, he entered the Electric Bureau of the Communications Department. In 1914 he went to America and England for further study, and in 1920 received the degree of Doctor in Engineering. His chief invention is the "Mercury Lightning Conductor," which has a special and powerful electric discharge. In addition to his position in the Electric Experiment Station of the Communications Department, he is a professor in Waseda University.

Number Four is Mr. K. Mikimoto.

Number Five is Dr. B. Mano, a distinguished Mechanical Engineer and Honorary Professor in the Imperial University, who, while not a member of the group of ten, accompanied their representatives to Toba because of his distinction as a patron of invention.

Number Six is Mr. Genzo Shimazu, who was born in

1869 in Kyoto. Besides the Electric Battery which made him famous, Mr. Shimazu has done valuable original work in illumination. It is said that he was offered a million dollars for the American patent rights of his battery. Mr. Shimazu is president of the Shimazu Seisakusho, Limited, and managing director of the Japan Electric Battery Company.

Number Seven is Dr. K. Honda, whose invention of "K. S." magnetic steel was mentioned in Chapter II. He was born in 1870 in Aichi *ken*. Graduating at the Tokyo Imperial University in 1897 and then from University Hall, he received the degree of Doctor of Science in 1902. He was sent abroad for study several times by the Imperial Government.

Number Eight in the photograph is Mr. K. Sugimoto, inventor of the Japanese typewriter, one of the most amazing machines ever produced; and of the Japanese Monotype machine. He was born in 1882 in Okayama *ken*. He is president and chief engineer of the Japan Typewriter Company, Limited.

Unfortunately, three of the inventors honored by the Emperor are not in the photograph.

Dr. U. Suzuki, who was born in 1874 in Shizuoka *ken*, graduated from the agricultural department of the Tokyo Imperial University with high honors, and was awarded the degree of Doctor in Agriculture at the early age of twenty-seven. He discovered Vitamin B, and then invented a synthetic *saké* in order to conserve rice, the staple food of his fellow-countrymen. He is also an authority on albumen. He is a professor at the Imperial University, and a member of the Imperial Academy.

Dr. C. Kakizaki, who was born at Sendai in 1868, graduated from the Veterinary Department of the Tokyo

INVENTORS AND INVENTIONS 85

Imperial University, and was later awarded a Doctor's degree. He discovered a vaccine preventive for rinderpest, superior to other serums, being good for three years. It is due to him that the cattle plague which swept through the whole of Korea has been gradually rooted out. He is now chief of the Serum Factory at Seoul, under the Government.

Dr. T. Yamamoto, inventor of the Synchronous Motor, was born in 1881 in Kochi *ken*. Graduating in Electrical Engineering from the Tokyo Imperial University in 1905, he studied for three years in America, and subsequently visited there and in Europe. He is now a professor in Waseda University, with the degree of Doctor of Science in Engineering.

Tsunekichi Takuma was born in Tottori prefecture in 1872, his father being a *saké* dealer who lost all his money through a shipwreck. The boy was educated in "the university of hard knocks." At the outbreak of the Russo-Japanese War he found himself almost bankrupted as a lumber dealer, but managed to pay off his debts by sacrificing his stock. After the war he went to Korea in the hope of bettering his fortunes, and did not learn of his beloved wife's death until he returned. After some time he remarried, his second wife becoming such a devoted helper that she had a large share in his eventual success.

His mind was turned to invention by accident. On a trip to buy lumber he met one Okamoto, who had invented a saw-mill driven by ox power, and seemed to him to be a genius. Takuma was even more impressed when Okamoto devised a simple wood-burning boiler to replace the ox. The two formed a partnership. Takuma improved the boiler, and set out to promote it. But when Okamoto had to flee to escape punishment for fraud Takuma was accused

of complicity and had to struggle for years against undeserved embarrassments. During this period he went back to Korea and sought out his old friend Akita; his faithful wife taking care of the children and facing his troubles as best she could during his absence. It was during this really desperate voyage to Korea that he formulated his philosophy, after an inner voice had reclaimed him from suicide. No just estimate of Japanese character can be formed without taking into account its essential idealism, and Takuma's philosophy is worth pondering :

1. I am a son of God. I must *endeavor*, just as God had to endeavor in order to create me.
2. Concentration of mind creates force.
3. Every man has characteristics bestowed by Heaven. These must have full scope if he is to fulfil himself.
4. Everything is determined by mind. There is no real difference between pain and pleasure.
5. Nothing can exist alone. Love must be the basis of existence.
6. Endeavor to create! Leave some creation to posterity! Herein is the object of life.
7. Everything circulates; life and death are mere changes of form.
8. The evolution of man required tens of millions of years. A single body is completed in ten months. Yet the process is the same.
9. Everything should be done according to order.

Later Takuma extended his philosophy to include invention, as follows :

Invention is the extension of the divine creation. It is the noblest of achievements to promote the welfare of mankind by realizing and applying the truths of the uni-

INVENTORS AND INVENTIONS 87

verse. The civilization of the twentieth century arises from the inventions of the past.

We know neither the limits of invention nor any particular way that leads up thereto. But we must keep in mind these three fundamental requisites: (1) a firm faith, (2) scientific knowledge, and (3) the unity of matter and spirit.

I. Determination of the Object of an Invention.

Select an object of interest, and one that will promote the welfare of the world. In such a case, ability will be developed beyond expectation, and difficulties overcome with less pain.

When the object is being determined, consider whether the necessary invention is not already in existence, or something similar. Then reflect on your intellectual ability, physical strength, financial resources, and other circumstances. If convinced of ultimate success, set up your object as your life's work—work that shall never be given up until achieved. This is most important and difficult, so that it is advisable to confer with one's elders. But when one feels confident in oneself, proceed bravely, without considering the circumstances or even the advices of elders.

II. Once the object is determined, never turn to another device until it is thoroughly achieved.

Many boast of the number of patents acquired, but never put to practical use. These are worse than worthless, for they hamper others' inventions. Some try to make something out of nothing. Those bent on invention must respect the laws of the universe.

III. The Necessary Knowledge.

Adequate knowledge is necessary for invention. Knowledge can be acquired through reading and by experiment or experience. Then analytical thought is needful; in the case of a boiler, the analysis of the generation, conduction, and absorption of heat. Then combine your studies, and observe synthetically. Repeat your analysis and combination. Then you will encounter difficulties that seem insuperable, and feel lost in darkness.

This is the sign of reaching the unknown sphere! The real invention awaits you just beyond this sphere.

IV. Sometimes inventions are achieved by chance, or intuition.

In the course of researches on one invention, another unexpected one is sometimes achieved incidentally. But only a very careful man, or a genius, can do such a thing.

V. Practical Design.

This should be based on knowledge acquired through experiment. Always endeavor to apply new devices in the design.

In improving the design, the parts should be kept in mind in their proper connection. Otherwise, the "improvement" will fail.

The process of invention is the same as the growth of men. The efficiency of an invention is determined when the idea is conceived, just as our ability is determined inherently. And just as we need education, the invention requires its inventor's designing and improving. The practical design is comparable with our schooling; experimentation and improvement with training in practical business. To achieve an invention, one must be ready to exert much effort long after the first idea is conceived. And even after the first invention is completed, it is a mistake to think there will be no more difficulties.

Those that have enough capital had better stand on their own resources until the main features of the invention are appreciated by the public. Those lacking capital should make their investors realize both their ability and their eager spirit of inquiry. Those having neither capital nor the ability to demonstrate their capacity to investors had better refrain from invention.

Theories and experiments are of men. They are not absolute truth. Even if they were absolutely correct, varying circumstances and methods of application might produce varied results.

Takuma's own method, reduced to a sentence, has been to study a theory with utmost diligence, then with

INVENTORS AND INVENTIONS 89

equal diligence everything he can find out opposed to it, and thus arrive at the truth.

When at last his main invention, the Takuma boiler, had gained the attention of experts, one of them said: "This comes as a surprise. It has many remarkable features, such as low cost, high efficiency, simple make. The water-receiver and downtake tube are most unusual. Some may ask why we had to wait so long for this boiler. Well, academically trained men incline to demand a theoretically perfect mechanism, which may become too complicated or delicate for practical use. So your business man turns away from coal to some new motive power, such as gas or oil or hydro-electric energy, rather than bother with unnecessary and costly refinements in steam-engines. Mr. Takuma has gone back to first principles."

When Osaka honored Takuma in a great banquet Dr. M. Kamo, of the Tokyo Imperial University's great school of mechanical engineering, praised him without stint. Later, when the present Emperor—then the Crown Prince—visited an exhibition of Japanese inventions Dr. Kamo explained the Takuma boiler and said: "This was invented by a Japanese and is the best one in the world."

Takuma's biography, prepared with much charm and insight under the supervision of Dr. Kamo and Mr. Shun Ichi Ono, is widely read in Japan, but deserves translation into English and other foreign languages. Next to his extraordinary strength of character and originality of mind the most remarkable thing about him is the fact that without any technical education whatever and in the face of almost incredible discouragement he worked his way back to first principles and outdistanced all competitors in a highly developed field. In Japan invention is a feature of the national spirit, and Takuma its central figure.

V

COTTON AND WOOL

¶ Four key industries—Japan's economic ambition—Spindleage and looms—Cotton competition with America and England—Lancashire loses and one reason why—Japan's modern methods—India, home of the cotton plant—Old England—Japan's raw supplies—Conferences and the League—Manchoukuo as a source of cotton and wool—Japan's predisposition to textiles

CHAPTER V
COTTON AND WOOL

THE key industries in Japan's foreign trade are textiles: cotton and wool, silk and rayon. These constitute half of her exports. Cotton goods now head the list, even exceeding the export of raw silk, as shown in the opening chapter. This is in face of the fact that Japan produces seventy per cent of the world's silk supply, but has to import all her raw cotton, chiefly from the United States and India.

The fact is, Japan is making a bid to supply the colossal markets convenient to her shores and still undeveloped. Mr. Sanji Muto put the case squarely in *Contemporary Japan* for September, 1932, as follows :

It is estimated that of the world's population, 500,000,000 are completely clothed, 750,000,000 partially clothed, and 250,000,000 not clothed at all; and it is calculated that the cotton industry supplies nine-tenths of the clothing now worn. These are indeed significant facts for the cotton industry as a whole, and they have an added significance for Japan in that the vast majority of those populations which will constitute the cotton demand of the future lie close to the overseas markets which our industry has already established.

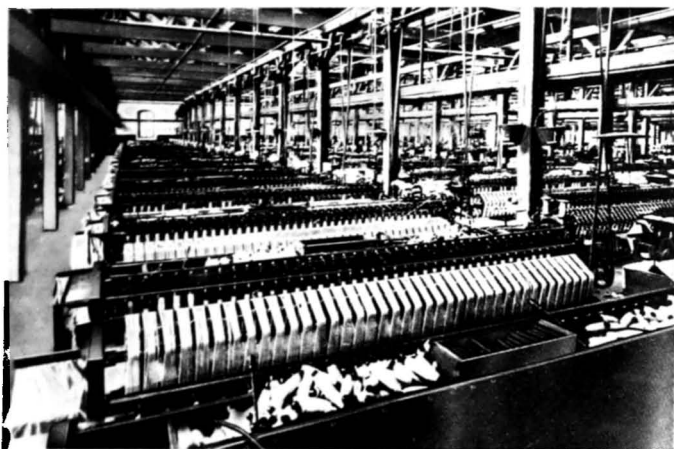
No feature in Japan's industrial revolution is more remarkable than the growth of the cotton industry. The four leading cotton spinning countries are England, India, the

United States, and Japan. The Great War so retarded British industry that between 1913 and 1926 the increase in British spindleage was something less than two per cent. That of the United States was 20%, that of India 40%, and that of Japan 110%. To put it in figures, Japan in 1913 operated 2,365,000 ring spindles, and in 1926 5,644,772. Today she operates eight million, and is still going strong.

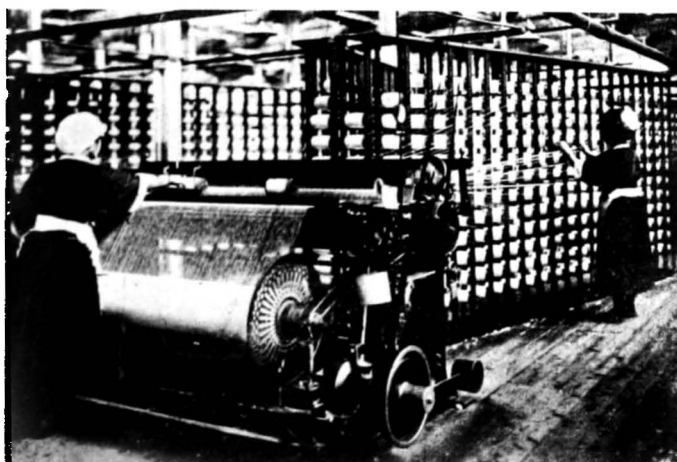
Power looms have increased since the Great War from 22,000 to 75,000. During the last decade production of cotton cloth by the firms in the Cotton Manufacturers' Association has doubled, and now amounts to a billion-and-a-half yards, in addition to three billion woven by firms not in the Association. Of this total, two billion yards are marketed abroad, thus leaving only three billion yards for other producers to divide among themselves as best they may.

Paid-up capital in the Japanese cotton industry is now nearly four hundred million yen, with reserves of nearly ¥ 250,000,000. The new "Britannica" says that the extremely strong capital position of the industry has been the result of the far-sighted policy adopted by the mill owners in building up, out of the large profits made during the Great War, capital reserves that were not only strong enough to carry the mills over the difficulties of the years succeeding the war, but available to meet immediately the heavy losses caused by the earthquake of 1923.

Industrialization being Japan's best answer to her population pressure, she has seized with avidity on the opportunity suggested by Mr. Muto as constituting her largest industrial opportunity. Climatic conditions are as favorable as those of Lancashire, the people have a natural aptitude for textiles, — of which more at the end of this chapter, —



Typical Mills.



Efficiency is such that output per worker has doubled
in ten years.

labor is abundant and cheap, and in organizing capacity Japan's industrial leaders have proved themselves unsurpassed. They work as a unit, and their government helps them, as in the Delhi and London conferences. Result: the whole world is stirred up.

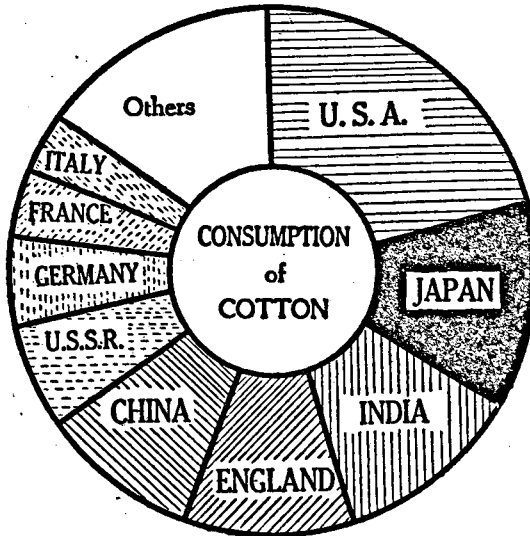
Some of this stir is in the United States. Mr. F. A. Colt, secretary of the American Textile Exports Association, said in the autumn of 1933 that American cotton cloth exporters, caught in a cross-fire of intense competition between Great Britain and Japan for dominance in the world's textile trade, had watched their foreign sales dwindle from an average of \$130,000,000 annually (in the years 1925 to '29) down to a basis of a single million dollars annually at the time he was speaking. Anglo-Japanese competition, he said, had made serious inroads into the last remaining outlet for American cotton cloth: the South American republics. Although exports of American-made cotton normally represent only about seven per cent of the output of American mills, that seven per cent, he claimed, represents a vital factor in fixing values on the other remaining ninety-three per cent. "Any surplus left in the domestic market would drag down the whole price structure."

Japanese activity in South America, said Mr. Colt, was a direct result of expulsion from the Indian market by prohibitive tariffs levied by Great Britain. "In addition to their South American activities the Japanese have instituted a drive against American-made cloth in Cuba, the Philippines, and other markets developed by American exporters during the past five or six years."

As if to offset the complaints of Mr. Colt, the United States Department of Agriculture announced shortly afterward that the early seasonal exports of raw cotton to Japan were the largest for the period in the history of the cotton

trade. On the same day a noted American expert forecast that on the basis of the last quarter's exports of three-and-a-half million bales there would be a ten-million bale export for the season, the second largest on record.

CONSUMPTION OF COTTON
(1881-1932)



*Courtesy of Nippon-Kokusei-Zue
(1933 edition) by Messrs. Yano and Shirasaki*

England is much harder hit by Japan's competition than America is, as there are no cotton exports to offset the manufacturing losses of Lancashire. Conditions in that once prosperous district are graphically described by Sir Gerald Hurst in the *Fortnightly Review*, as follows:

No one can revisit the scenes in which this greatest of British textile industries once reigned opulent and

paramount, and see the sky undimmed by the smoke of a thousand chimneys, without a sense of grief and disillusion.—The main streets of Manchester are full of empty offices, and warehouses to be let. About a third of the better class shops have closed down.—Outside Manchester itself the whole complicated and highly skilled mechanism of the cotton trade, in which are bound up the prosperity of millions of people and the security of immense capital, is largely paralyzed. Mills have not merely stopped working. They have been largely dismantled, the machinery being sold as scrap. The whole of East Lancashire is in acute distress.

This writer is equally outspoken in characterizing the root of such trouble. "The workers have obstinately resisted mechanical improvements in the industry. Their rigid attitude is incompatible with success against less conservative competitors abroad."

Mr. G. Ward Price, an able British journalist who visited Japan for himself during 1933, comes straight to the point in the *Sunday Dispatch* :

With good-natured, almost contemptuous tolerance, we let other nations send their young men to study our methods. We sold them machinery of our own invention and manufacture with the secret conviction that they would never be able to use it.

These comfortable beliefs prevailed with especial strength in the cotton trade. The people of those gloomy, rough-paved towns that lie between Manchester and Blackburn have never suffered from an inferiority complex.

"What Lancashire thinks today England will think tomorrow" was the saying by which they expressed their opinion of their fellow-countrymen.

If, thirty years ago, any one had retorted, "And what Lancashire makes today, Japan will be making tomorrow," hearty, complacent laughter would have been the only response.—

Japan's cotton exports last year were below our own by only 170,000,000 square yards. She has eight million spindles to Lancashire's fifty-five million, but more than half of ours are idle.—

We should clear our minds of prejudice against Japan. Much of it is based on ignorance. "Sweated labour" and "Government subsidies" are the explanations that one often hears suggested for the cheapness of Japanese goods.

Both are wrong. I spent three months in Japan last spring. I made inquiries into these matters, and visited a number of cotton and other factories.

I can vouch for it that, outside the silk industry, which is largely carried on by family and cottage labour, there is no sweating, and that the supposed wholesale subsidising of Japanese industry amounts to very little more than a couple of million pounds a year allotted to the shipping trade.

Certainly the Japanese work far harder, and for about one-quarter the wages of British factory-hands. But that does not mean that they are "sweated."

They do it willingly, by inherited habit, and with their low wages they get as much comfort and happiness—and twice as much cleanliness—out of life as the British workman with four times the money.

Nor can we attribute Japan's invasion of our markets to the depreciation of her currency. The Japanese cotton industry, like our own, has to buy its raw material abroad, so that the depreciated yen does not help it there.

Admittedly, before the yen went off gold, manufacturers placed large advance-orders for stocks, but those are now exhausted.

The reasons which make Japan so formidable a competitor are that:

Her cotton industry is equipped with the very latest plant, whereas much of ours is out of date;

Her mills are not over-capitalised, and can afford to work for small margins of profit;

Her merchants are restless in seeking new outlets overseas, and travel constantly in search of customers; and

Her manufacturers work ten hours a day, six days a week, in their offices.

This British testimony may be supplemented by that of an American observer, Dr. A. J. Brown, in "Japan in the World of Today:"

The Japanese are skilful in getting trade, and American business men might well learn a lesson from them. They send their agents to a country to ascertain the kind of goods that the people want, in quality, color, price, and size of package. For example, the Korean, in order to make his peculiar garment to advantage, demands white cotton cloth eighteen inches wide. The Western exporter often ignores this, and the consequence is that the Korean does not buy his cloth as there would be waste in cutting it. Japanese firms do not attempt to change Korean sentiment, but make the cloth of the desired width. Then they pack the goods in packages convenient in size and weight for handling by porters and transportation on ponies and bullocks; while the more ignorant or careless foreign merchant ships in cases or bales so large and heavy that they must be repacked before the goods can be carried into the interior. The Korean, too, wants his cotton very strong in order to stand the pounding of Korean laundry methods. The flimsy stuff that the foreigner sells quickly goes to pieces in washing. The shrewd Japanese, by careful attention to these details, gets the trade, as he deserves to, while the white merchant curses the alleged stupidity of the Korean and "the trickery" of the Japanese.

The advantages of Japan in commercial rivalry with other nations are numerous. Control of transportation lines by land and sea, government subsidies, and, in the trade with Asia, short haul are important factors. The Japanese are so near to the great markets of the mainland that they can fill an order from Korea, Manchuria and China within a week or ten days. Labor is so cheap that the cost of production is much less than in Europe and America, and prices can be kept low consistently with good profits.—

The Japanese, moreover, move as a unit in furthering their commercial ambitions. Several of their great enterprises are controlled either directly or indirectly by the Government. In some instances, the Government owns them outright; in other instances, high officials and members of the Imperial family are heavy stockholders. The nation as a whole rules in commercial as well as in government affairs. The business man does not have to fight alone for foreign trade, as the American business man usually must. He has the backing of his country. Shipping companies give him every possible advantage. He is a part of an immense "trust," only the trust is a government instead of a corporation.

As this book goes through the press the Tokyo papers report that six merchants of Osaka, Kobe, and Nagoya, just returned from extensive trade-promotion travels in Egypt, Spain, and Africa, think that the low buying power of Africa makes that region an ideal market for low-priced Japanese goods. They carried with them thousands of samples of such Japanese manufactures as hosiery, rubber shoes and boots, bicycles, clocks and watches, gramophones, chinaware, and porcelain.

India is the original home of cotton—if we except the aboriginal Americans, who were isolated, and consequently had no influence on the development of the cotton trade as we know it. Cotton cloth was first seen in Europe when the soldiers of Alexander the Great brought some of it back, as a curiosity, in the fourth century before Christ. All India was clothed with it then, as today; some of the ancient textiles being so delicate and beautiful as to give rise to the poetic description, "webs of the woven wind."

Centuries passed before the new goods made any impression on England, whose people wore wool exclusively. When cotton goods did begin to come in, a fierce conflict

ensued with wool, which was then styled "the flower and strength, the revenue and blood of England,"—so important was it in the economic life of the people. Opposition to the new Indian "friperies" became so pronounced that the wool weavers of Lancashire, already influential in politics, secured the passage of extreme excise laws, one of which (in 1666) actually imposed fines on the survivors of any dead person not buried in a woollen shroud—perhaps the strangest of all English laws. But when Lancashire weavers finally understood that their fellow countrymen and especially their fellow countrywomen were bent upon cotton goods, they decided to make a virtue of necessity. Inventors succeeded in producing a marvelous succession of machines for spinning and weaving cotton, instead of wool, wherein lies the origin of the British Industrial Revolution.*

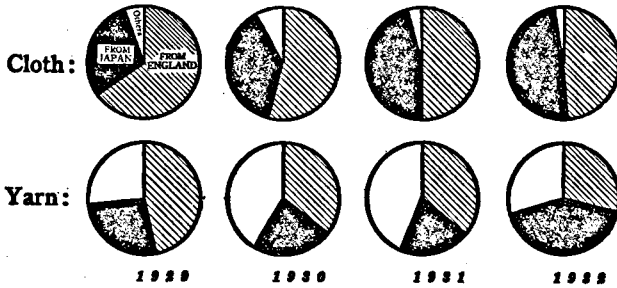
India was long the sole source of the raw material that turned pastoral England into "the workshop of the world;" until an American inventor, by devising the modern gin, made the American cotton plant commercially available. America then forced India into a secondary position in the cotton trade, the Indian fiber being brittle and harsh as compared with its New World rival. Japan, however, has developed extraordinary skill in combining the two fibers in her mills, mixing the cheaper Indian stuff with the American in such a manner as to effect marked economy without depreciating the product. Until two or three years ago she bought from both countries — roughly speaking — equally. But lately she has favored the United States, so that, as shown in the opening chapter, she now takes from us about three-quarters of her supply.

Several factors account for this shift, one being the development of trans-Pacific shipping. Freight across the

* See the author's "Cotton as a World Power," pp. 51 ff.

Pacific ocean now costs no more than a land haul of three hundred miles. But, further, Japanese mill men have felt disgruntled by a constant stepping-up of Indian duties on their cotton piece-goods. Until 1930 the Indian levy on British and Japanese cottons remained equal. But in March of that year the Indian government raised the Japanese duty to 20% and the British to only 15%. A year later the Japanese duty was raised to 25% and the British to

IMPORTS OF COTTON CLOTH AND YARN
INTO INDIA



*Courtesy of Nippon-Kokusei-Zue
(1933 edition) by Messrs. Yano and Shirasaki*

20%. In October, 1931, the Japanese duty was raised to 31½% and the British to 25%. In September, 1932, the Japanese duty was raised to 50% while the British remained at 25%, or half. And in June, 1933, the Japanese duty was made practically prohibitive by an increase to 75.06%, while the British duty still remained at 25%. Not only so, but Lancashire, alarmed by the inroads of Japanese competition in Indian markets, had just persuaded Whitehall to announce to Japan that the trade convention under which Japan and British India had done business for twenty-eight years would be abrogated at the end of six months.

During every one of these twenty-eight years down to 1932 the trade balance was favorable to India at the rate of some ¥ 130,000,000 a year, but in that year the balance became favorable to Japan.

As India has been taking thirty-two per cent of Japan's cotton piece-goods, these two measures—the threatened abrogation of the trade convention followed by a prohibitive tariff—alarmed the Japanese Spinners' Association. Somewhat to the amusement of disinterested foreign observers, they immediately applied to India the same form of retaliation for which all Japan has been so roundly denouncing China; namely, the boycott. The leader in this retaliatory movement, Mr. S. Tsuda, president of the Kanegafuchi Spinning Company, took the view "that the whole of Japan's foreign trade position had been attacked, and that the only possible way of obtaining some improvement of the situation was by such a strong retaliatory measure."

Diplomacy, however, intervened. With the persuasive assistance of the Japanese Foreign Office both the boycott and the abrogation of the trade convention were suspended pending a conference, held first at Simla and later at New Delhi, between representatives of the cotton interests of Japan and India. After a hundred days of delicate and difficult negotiation these delegates reached an understanding (on January 5, 1934) embodied in a new convention to be signed at London; where, moreover, another conference was arranged, this time between Japanese and British cotton interests.

The Indians, under the leadership of Sir Joseph Bhore, handled themselves well in the conferences at Simla and New Delhi. This experience must have gratified their national pride. Has there ever before been a time when Indians held the disposition of a prize for which there were

two suppliants, one of them masterful Britain? Undoubtedly India had the moral support of Britain in standing out for stiff terms against Japan, whose trade competition is so serious a matter to Lancashire. These terms reduce the tariff on Japanese cotton goods from 75% to 50% *ad valorem*, and permit an annual importation of four hundred million square yards of such goods, provided, in turn, that Japan buy a million-and-a-half bales of cotton from India.

Mr. Setsuzo Sawada and his Japanese delegation deserve equal credit with the Indians, for they were "beset behind and before": from the home base by the Spinners' Association, at the front by the combined British and Indians. Such well-informed and fair-minded Englishmen as Mr. G. B. Sansom helped matters out.

Of course, neither side is quite happy. Lancashire regards India as over-generous, Japanese spinners think Japan was out-bargained. But this is only natural. The significant and important result of the Conference is—as the London *Financial Times* says—that a novel precedent has been set up in commercial diplomacy. If this precedent becomes truly a precedent, if international economic conferences become an international habit, then the result on human welfare is beyond all calculation.

Perhaps the World Economic Conference at London attempted too much, besides being in wrong hands. At this rudimentary stage of social evolution it may be expecting too much that a large group of politicians, representing all manner of ancient rivalries, should at a stroke compose all their trade differences. But the World Conference was a step in the right direction, even though it seemed to fail. The dire prophecies concerning the result of its failure were happily not fulfilled. Already there are hints that it will assemble again. If it does re-assemble it will be much

more carefully prepared for, and the egregious mistakes of the first Conference can be avoided. But meanwhile Japan has had the honor of demonstrating that the business men of two nations, with governmental co-operation and oversight, can hold a successful conference over conflicting interests, and herein lies a hope for the world.

To the writer it seems that this Indian Conference might well offset, to a certain degree, the avalanche of criticism hurled at Japan for quitting the League of Nations. But then, he has believed from the beginning that the League must inevitably fail, owing to the radical flaw of its notorious tenth article. It was this article, pledging members to preserve against aggression the political independence and territorial integrity determined by the Treaty of Versailles, that kept the American people, with their sound common sense, out of the League; although "every syllable" of that article was written by an American President, who not only proclaimed his authorship of it, but spurned even the slightest alteration. Human society is not static, and the Versailles Conference certainly was not endowed with sufficient wisdom to determine for all time the boundaries of all nations. Japan, in entering the League, was less wise than America in staying out. Japan suffered from the circumstances and manner of her withdrawal, but now she has set up the precedent of conferences between business men of two nations in the place of a league among politicians from nearly all nations, and has proved such a conference to be workable. Instead of appealing to high-flown ideals for which the world does not seem to be ready, such a conference appeals merely to enlightened self-interest. Instead of being bound by a rigid and ill-conceived covenant, the negotiators are free to act as occasions demand. Instead of political rivalry and jealousy

and perhaps hypocrisy, they represent plain common sense. So, again, it is a great day for the world when the business men of two countries can sit down at the same council table, discuss their economic competition, and reach a *modus vivendi*. Had such a course been taken before the Great War, perhaps there would have been no such war. Japan and India have set an example to the nations that marks a major advance in history — if, as Mr. Sanji Muto said, “Economic internationalism has come to stay. It is a prime necessity for the welfare of the world.”

Perhaps the Nederland Indies will follow India's example in holding an economic conference with Japan. Certainly the heavy trade warrants it. One is reminded, however, of the old jingle about

the fault of the Dutch,
That of giving too little, and asking too much,

on learning that Holland proposes, as preliminary to an agreement, equalization of imports and exports. Japan now enjoys an annual balance of ¥ 145,000,000.

Of Japanese exports 21.24% go to the Indies, comprising textiles, yarn, iron and steel products, cement, porcelain, eatables, clothing and ornaments. Of Japan's cotton textiles the Indies take a larger percentage—17%—than any other buyer except India, which has been taking about 32%. Of exports from the Indies Japan takes 4.37%, including sugar, oil, tobacco, copra, coffee, and rubber. In other words, Japan takes raw materials and the Indies manufactured articles. These latter can be bought from Japan at lower prices than anywhere else, but Japan could easily buy the enumerated raw products elsewhere, at no higher prices. Of course she would like to be able to supply them herself.

Japan longs for economic independence. Whether this is within reach is open to question. Certainly there is a much better chance of it since Manchoukuo came into being. Experimentation in cotton culture is carried on there. The Mukden Cotton Association reports that about ninety million *kin* were grown in Fengtien province in 1933, from which twenty-two-and-a-half million *kin** will be ginned. This is from thirty to forty per cent more than the yield of former years. The Manchoukuo government intends to cooperate with the Japanese government and with Japanese spinning interests in the Mukden experiment, where alone the cotton enthusiasts lodge their hopes. Experimental stations will be established at various points, fertilizers and improved seeds will be provided, and encouragement in other ways given to growers. It is planned to arrive at a production of a hundred and fifty million *kin* in twenty years, though some of the cotton interests are trying to get even this ambitious programme speeded up.

Ideal conditions for cotton growth require, in exactly the right proportion, these elements: bountiful sunshine; a deep, mellow and rich soil; a warm and steamy atmosphere, with plenteous moisture until the bolls are well developed, but a dryer soil and atmosphere while the fiber is being ripened and harvested. Such conditions confine cotton to a latitude extending about thirty-six degrees in both directions from the equator, and to altitudes of not more than a thousand feet. Outside of the famous Cotton Belt of the Southern United States and of some parts of India, this peculiar combination of conditions has not thus far been developed on any large scale except with the aid of irrigation.

In the United States only one acre is at present planted to cotton out of seventeen suited to cotton cultivation, so

* A *kin* equals 1.32 lbs.

that the American supply can meet the world's demand for a long time to come. In deciding where to look for the greater part of Japan's supply Japanese mill men will undoubtedly take into account the shipping advantage enjoyed by the United States. Nine-tenths of Japan's raw silk is shipped to America, and it is obvious economy to load the returning vessels with cotton in the place of silk.

While Manchoukuo is questionable as a source of abundant and inexpensive cotton, it is rich in the promise of wool. Japan today raises only two hundred thousand pounds of wool every year, but consumes over two hundred million pounds. Most of her raw material she gets from Australia; some from Africa, some from the Argentine.* Comparative proximity to Australia gives her a decided advantage over England in the matter of freight. Besides the short haul, she suffers less loss from shrinkage, which runs as high as sixty-six per cent of the original weight of the wool. This shrinkage is due to the evaporation of natural oils. The longer the haul, the greater the shrinkage. Japan, being comparatively near Australia, not only saves freight on her wool, but can extract from it that proportion of the oils still unevaporated, for the manufacture of lanoline and such like emollients. She is now the largest buyer of Australian wool, taking 693,000 bales for the wool-year of 1933 as against 540,000 bales taken by England. Her manufacture has progressed so rapidly than in a single year she has cut her imports of woolen goods in half and increased

* Japan's total imports from Australia in 1932 amounted to ¥134,226,259, of which wool accounted for ¥84,225,799. From the Argentine she imported during that year wool to the value of ¥481,106. An editorial article in the *Japan Advertiser* of Aug. 15, 1933, said: "If nearly 70% of Japan's purchases from Australia come to an end it will be a bad thing for that Commonwealth, while if cotton goods to a corresponding value are sold to the Argentine it will be a bad day for Britain."

her exports of the same 170%, to the value of ¥6,370,000. Australia is one of the most important economic units in the Pacific Basin, and it is another hopeful sign of the times that as this book goes to press her Deputy Prime Minister, who is also Minister for Foreign Affairs, is in Japan on a good-will mission.

There are now only two million sheep in Manchuria, but it is calculated that the number can be raised to twenty-five million in twenty-five years. Even the two million sheep now grazing there are of poor breed and are badly tended, mutton, not wool, being the object of their care. But this breed is in process of improvement. The South Manchuria Railway, at its great experimental farm near Kung-chu-ling, which the writer has visited, is accomplishing startling results in animal husbandry. In spite of inferior wool, the native or "Mongolian" sheep is a hardy beast in comparison with other breeds, especially during the first two months of his life, when the ordinary lamb mortality runs high. He is also a good grazing animal, being accustomed to climb to high slopes. Merino wool has now been successfully fixed to his back, and this combination of superior wool with a sturdy stock should be of distinct advantage. The extremely valuable wool known as Persian Lamb is also under experimentation, with fair prospects of success.

Mr. B. W. Fleisher, publisher of the *Japan Advertiser* and an expert on wool, writes in his paper :

The development of a supply from Manchuria would unquestionably prove advantageous to Japan, for whatever the characteristics of the wool might be, it would in time create an industry which would adapt its production to the character of the supply and probably give pre-dominance to that industry in its specialized field.

Small wonder that Japan is predisposed to textiles. With an innate love of beauty that is an undisputed racial characteristic, the girls of Japan are accustomed from childhood to finger the exquisite textures of silk, to admire and to appraise them. This has been the habit of Japanese women for ages, it is bred in the bone. When, under modern conditions, population pressure drives farmer girls from their homes to the new factories, they carry this textile appreciation with them. It is an asset. To them employment in a textile factory is not merely a matter of making a living—though it is that too, and most seriously so, as will appear in the chapter on “Women, Especially in Industry”—but it is also a sort of career, satisfying their inbred esthetic sense far beyond the power of any farm occupation.

To a slighter degree, but appreciably, this same trait is shared by male operatives, such as engineers and foremen, who are of a different stripe from the men that fill similar positions in British and American mills.

In a word, the mill operatives of Japan come from a silk background, and this tends to predispose them to textile manufacture.

At any rate, such is the belief of the writer, who lived four years in an American cotton-mill town, and who has also made a study of Japanese operatives. If he were setting up a mill of his own in an imaginary “world state” and had the world’s labor supply to choose from, he would choose Japanese or possibly Chinese laborers, much as he would choose carrier pigeons if he wished to train birds to carry messages.

How ingrained silk is in Japanese industrial life will be indicated in the next chapter.

VI

SILK AND RAYON

¶ Aristotle and Marco Polo — A Chinese mystery is discovered — How the silkworm spins — Japan and America — An unorganized industry — A romance of the rails — The American depression and silk — Paterson — Can silk ever “come back”? — The problem of the Japanese farmer — Canned comestibles? — Density of population — Urbanization — Rayon: man learns from the worm — The struggle with silk — Italy sounds an alarm — The domestic use of rayon — Manufacturing costs

CHAPTER VI

SILK AND RAYON

SILK has had a fascination for Western readers ever since Aristotle, the teacher of Alexander, wrote quaintly of "a great worm that hath horns and so differeth from others. At its first metamorphosis it produceth a caterpillar, then a bombylius and finally a chrysalis, all of these changes taking place within six months. From this animal women separate and reel off the cocoons and afterward spin them."

Fifteen hundred years after Aristotle, Marco Polo made frequent mention of silk in the first Western book about China, where it had been a highly prized commodity more than two thousand years before Aristotle was born. In describing the Peking of Kublai Khan Marco wrote that "the quantity of merchandise sold there exceedeth the traffic of any other place; for no fewer than a thousand carriages and pack-horses loaded with raw silk make their entry every day; and gold tissues and silks of various kinds are manufactured to an immense extent."

For thousands of years the Chinese succeeded in keeping secret the strange method of their ancient manufacture of silk. However, they shipped it to Europe by caravan, and by the time Christ was born it had become one of the luxuries of Rome, where it literally brought its weight in gold. Not until 550 A. D. did the West learn the secret of

its manufacture, when two Nestorian monks who had lived long in China "and there learned the whole art and mystery of silkworm rearing" brought to Constantinople silkworm eggs concealed in their bamboo canes. From this slight beginning Byzantine silk became famous, and the industry slowly spread. France is now the center of the European silk trade, followed by Italy and Germany. But the production of raw silk has declined there since the World War, until now China and Japan produce nine-tenths of the world's supply.

Japan got the secret from China in proto-historic times. The Emperor Yuryaku (457-479 A. D.) encouraged his empress to set a good example in the cultivation of silkworms, and afterward brought over Korean experts in sericulture, who settled in various places and taught it. It made such progress that in the year 604 we hear the great Prince Shotoku inquiring concerning his people, "If they do not attend to the mulberry trees, what will they do for clothing?" The growth from that time was steady, until in the Meiji era the silk industry began to be rationalized under modern methods of management. But it is by nature an agricultural pursuit, and whatever the mechanical improvements applied to the industry, there is scant hope of altering the hereditary mode of production.

In its origin silk is a viscous fluid contained in two ducts, or glands, under the silkworm's stomach. When the worms get hungry "it is a beautiful sight," as a Japanese writer says, "when young country lasses are picking the leaves on some fine spring day to the tune of their song, with bamboo baskets dangling from their hips."

The young worm is extremely small. Forty thousand of them weigh only seven-tenths of an ounce. After they have been fed for a month they weigh six hundred pounds.

To effect such a growth one and a half tons of mulberry leaves are required. As the worms grow so fast, they must not only be constantly fed, but room for their expanding bodies must be provided on the trays where they lie. These trays must be kept sanitary, and at just the right temperature. Consequently, the wives and daughters of Japanese farmers during the feeding season have almost no time to sleep.

When the worms are well grown, they begin moving about as if searching for something. This is the sign that they are about to form their cocoons. They are removed to a cocoonery, this step being called "mounting." Then the viscous fluid begins to come out as a filament from the worm's spinneret, the little spinner moving its head round in regular order for about three days. The thread thus ejected consists of filaments from two separate glands, and forms the cocoon. Two other glands secrete a resinous substance, which is believed to serve the double purpose of assisting the threads through the spinneret, and causing them to adhere to each other on contact with the atmosphere. A single cocoon fiber being twenty-five hundred or even three thousand feet long, the Japanese writer says that "the combined length of four or five of them may be as the altitude of our Sacred Mountain, Fuji-san."

Cocoons are of three grades. The middle and lowest may be turned into yarn or floss silk. First-grade cocoons are sent to an inspection office, and there examined, smothered, and then dried for storage. This ends the labors of the women of the farms, and the Cocoon Festival is celebrated with great joy.

The inspected and approved cocoons are now sold to silk filatures and reelers. In the filatures, they are boiled until their fibers are loosened. Operatives then painstakingly

ingly find the end of each fiber, and the reels begin to revolve. The raw silk thus unwound is made up into skeins, which in turn are packed into bales of about 140 pounds each, for local consumption or export.

In a total of some 5,600,000 farm-houses, forty per cent practise sericulture; in some districts seventy or eighty per cent, the rice-paddies having nearly all been converted into mulberry fields. These fields now constitute about thirty per cent of all cultivated land.

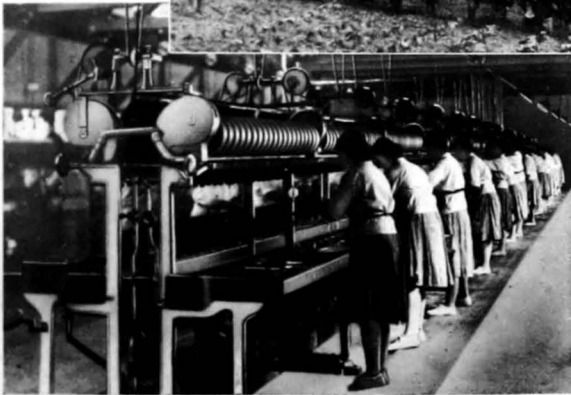
Over 180,000,000 grams of silkworm eggs are hatched every year, and from these about 800,000,000 pounds of cocoons are produced. Except for the eggs kept for breeding, the cocoons go to the filatures, of which there are 3,700, containing 320,000 "basins"—the units of facilities for silk reeling.

Eighty-five per cent of the silk thus reeled is exported, all but one-tenth of the exports going to the United States. Only fifteen per cent of the entire output is used in Japan, the high tariffs of foreign countries having made it unprofitable, thus far, to weave silks for export.

The average cocoon crop per acre of mulberry shrubs is 462 pounds. From each acre about forty pounds of raw silk may be expected, so that three and a half acres are required for a bale.

Silkworm rearing continues from spring to autumn. There are two varieties of "spring cocoons," white and yellow, producing white and yellow yarns. The summer cocoons are principally white.

The Japanese government maintains in its department of agriculture and forestry a bureau to supervise the silk industry, and each prefectural government also has its facilities. There are experimental stations where the breed of worm is improved, and various scientific methods are



Top: Sorting Cocoons.

Center: Gathering Mulberry Leaves.

Bottom: Reeling Silk from Cocoons.



Silkworms on their Feeding-Shelves.

Insert: Section of a living egg
photographed by microscopy. —See p. 74

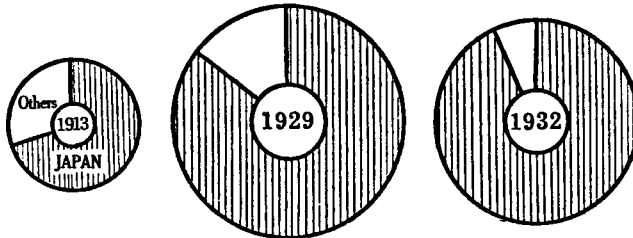
studied. Three colleges specialize in sericulture and filatures, while many schools offer special courses.

By visiting the Yokohama Silk Exchange one may see how fluctuations on the New York market are instantaneously reflected in Japan. The American depression, added to the growing popularity of rayon, has scaled down the price of raw silk to an unheard-of minimum. A year ago a thousand yen was the price of a hundred *kin*, but the price at present is only ¥ 550. As so many farmer homes depend on the cocoon industry, distress in the rural districts is acute. Farm relief is the real problem of the Japanese government, and so far there is little in sight. If the Japanese farmer were not inured to hardship, Japan might be facing a peasant revolution.

The export of raw silk to America is a romance of commerce. As millions of dollars may be tied up in a single cargo, even one day saved between Yokohama or Kobe and New York means a big saving in interest and insurance. Fast motor ships have therefore been built for the silk trade. Each ship has its fireproof, waterproof, and ventilated silk vaults, into which the bales are carried with as much care as though they were babies. The doors are sealed, and the vaults taken under special care throughout the fourteen-day voyage to San Francisco or Seattle or the twenty-one day voyage to New York. When the ship enters its Pacific coast dock the hatch of the silk room is the first to be opened. Waiting, under a full head of steam, stands the celebrated "reefer," the fastest continental train in America, with steel cars of passenger construction, designed for speed. The wealth of the Orient is shuttled over from the liner to the limited, which goes rushing eastward with right-of-way over everything else on the line. Passengers in their pullman may be surprised when un-

ceremoniously shunted over to a siding on some lonely desert or prairie, but they stop grumbling and crowd to the observation platform when told that the Silk Express is in sight. A hoarse blast, a rush and a roar, and the long reefer dwindles into the distance on its flight to New York. Thus the little worm crunching mulberry leaves in a Japanese peasant's hut spins its romance of the rails.

IMPORTS OF RAW SILK INTO U. S. A.



*Courtesy of Nippon-Kokusei-Zue
(1935 edition) by Messrs. Yano and Shirasaki*

But the silk trains are not now running. Eight hundred bales is the minimum for which a silk train can be advantageously run, and few ships during the last year have carried such a cargo as that between Yokohama and Pacific coast ports. Low water rates have consequently attracted silk shippers to choose the Panama route to New York, this route costing six dollars a hundred as against nine by water and overland. Silk shippers have to weigh carefully the balance between interest and insurance on the one hand and the low rates of the all-water route on the other. Uneasy lies the head that deals in silk.

Paterson, N. J., seventeen miles out of New York, is at the other end of the silk skein originating with Japanese

farmers. The father of American manufactures, Alexander Hamilton himself, chose Paterson in 1791 as the site for his "Society for Establishing Useful Manufactures," founded with the hope of making the United States industrially independent. One of the first American cotton factories was built there, on the great falls of the Passaic river. In 1839 two enterprising men that had learnt the silk business in England set up the first silk mill, and within thirty years Paterson was taking two-thirds of all American raw silk imports. This lead has never been lost. On any day of any normal year a million dollars' worth of silk, in all stages of manufacture, passes through the streets. Paterson's silk industry represents an investment of more than \$ 110,000,000 and gives employment to a fourth of the city's population of about 150,000.

Important as silk is to Paterson, it is far more important to Japanese farmers. Paterson has other industries, ranging from locomotives to submarine cables and airplane motors, while even its silk mills might possibly be made over into mills for the manufacture of rayon, the new commodity which threatens to displace silk. But the Japanese farmer, having converted his rice-fields into mulberry fields, cannot well turn them back again, rice now being brought over into Japan from the cheap-labor reservoirs of the Asiatic mainland cheaper than he can produce it. Just as the American standard of living is costlier than his, so his standard is at least twice as costly as that of the mainland of Asia; with the result that the Japanese farmer can no more compete with a Korean rice-farmer than a Californian can compete with him. Besides, he is suffering at present from a local over-production of rice. If he cannot live by rice culture, and if silk also fails him — on account of the low cost of rayon—what will he do?

The common answer given is emigration, but this is not as simple as it sounds. Paraphrasing the old saw about leading a horse to water, the Japanese government has discovered that its agrarian population pressure cannot be induced to discharge itself into such carefully prepared vents as Korea and Manchoukuo; at least, not in considerable volume. Learning that he cannot compete successfully in those lands with native labor, the potential Japanese settler stays at home. Ben Dorfman states the case clearly in *Asia* for January, 1934:

“Potential Japanese emigrants are in no position to compete economically with the (thirty million) Chinese who are already working the land in Manchuria. The Chinese standard of living is far below that of even the lowest stratum in Japan. The Japanese settler demands better food than his Chinese competitor. The Japanese stomach requires rice, fish, and other comparatively expensive foods, whereas the Chinese functions quite satisfactorily on such coarse fare as *kiao-liang*, millet, soya beans and the like. The Japanese settler demands better dwellings, and he wants them kept cleaner. He insists on solid and durable structures, whereas the Chinese is quite content with crude huts of the cheapest construction. The Japanese must have more fuel and water, not only for his cooking and cleaning, but for his person as well. He wants his daily bath, while the Chinese is content to do without it. Bathing requires soap, water, towels, laundering, space and facilities—all of which cost money. The Japanese demands better and more clothing not only for the sake of variety but to allow for frequent change as well. Whereas the Japanese feels he must have good cottons and possibly some few woolens and silks, the Chinese is satisfied with the coarsest of cottons, which he ‘piles on and peels off’ as the season dictates.

The Japanese wants books, magazines and papers for himself and good schools for his children. The illiterate Chinese—and the great majority of Chinese in Manchuria are illiterate—largely avoids such expense. The notion that Japan in any marked degree can solve her population problem by sending settlers to Manchuria is an ill-founded and vicious illusion. Japan may be able to exploit Manchuria, but she will not be able to people it. In addition to the direct economic obstacles to Japanese settlement of Manchuria there are a number of other obstacles. The Japanese do not like to leave their home-land for places so unfamiliar and physically distasteful as Manchuria. Neither the climate nor the landscape appeals to them."

Americans disposed to find fault with the Japanese farmer for feeling this way might do well to remember that in his shoes they would feel the same way. They should also realize that the Japanese government is but little better able to force its farmers to emigrate than the well-wishers of persecuted Jews are to lead them to Palestine, or those of the Negroes to tempt them to some New Liberia. Human problems are the same the world over, and emigration is essentially a human problem.

Rayon, the new artificial silk, affords of all things the most impressive example of Japan's industrial swiftness. Less than ten years ago it loomed on her horizon as a serious rival of silk. Silk at that time was just as important to Japan as cotton is to Lancashire today. A momentary panic occurred, but with that flexibility in which they excel the people rallied from it and set about adjusting themselves to a changed condition. The result? Japan today exports more rayon than any other country in the world.

Long ago British and French scientists, scrutinizing the silkworm, suggested the possibility of artificial spinnerets that might duplicate its processes and so produce an artificial silk. Many years later clever technicians had succeeded in liquefying filament-forming substances and then ejecting them through the orifices of crude spinnerets in such a manner as to produce a fiber suitable for weaving. Thus man learnt from the worm. But such devices were little more than curiosities until (in 1892) Cross and Bevan evolved a filament-forming substance called viscose, which in turn had to wait until (in 1900) Topham and Stearn made it remunerative by an ingenious spinneret named the Topham box after its principal inventor. Meanwhile other inventors had devised other processes, but the combination just described was so potent that by 1927 it accounted for eighty-four per cent of a total world output of rayon of 280,000,000 pounds.

Viscose is cellulose made viscous. Cellulose is the fiber element in the membranous cell-walls of plants: cotton, flax, hemp, even trees. In fact, wood cellulose, preferably that of spruce, is now the main source of viscose. The "cuprammonium" process of rayon production also uses wood pulp. But as the manufacture of rayon consumes only two per cent of the annual output of wood pulp it seems clear that ample material will always be available without serious impairment of the world's supply of wood pulp.

Modern cellulose products illustrate the practical benefits sometimes arising from the interplay between pure and applied science. Cellulose itself has been known a long time. But as organic chemistry developed, a very few purely inquisitive scholars explored its chemical and physical properties, with results highly stimulating to the research workers in industry. In the cellulose industry today the

most advanced type of organic chemical knowledge is combined with the simplest processes of grinding wood pulp, and there result such widely different products as non-explosive movie films, gun cotton, superior "bone," cheaper "ivory," better automobile paints, better paper, and the variegated textiles woven or knit from artificial silk, or rayon.*

When rayon was first imported by Japan it seized on the fancy of the people much as calicoes and muslins from India had caught British fancy centuries before. As cotton threatened to displace wool in England, rayon threatened silk in Japan. The menace may be seen by glancing at the mounting rayon imports into Japan for three separate years divided by four-year intervals:

1918	1922	1926
77,086 pounds	226,409 pounds	3,317,921 pounds

But Japanese adaptability and resolution determined 1926 as the peak year for rayon imports. A liability was turned into an asset. Japan's swift mastery of the new manufacture is attested by the falling imports:

1930	1934	1938
3,317,921 pounds	798,671 pounds	256,763 pounds

In the peak year of rayon imports Japan was producing only five million pounds. The next year she produced more than ten. The year after, her rayon production mounted to 16½ million pounds, in 1929 to 27, in 1930 to 36, in 1931 to 47, in 1932 to 69, in 1933 to almost 100.

Of course these figures imply rapidly increasing exports

* See Willis R. Whitney, "Industrial Progress Made through Research and its Economic Importance," in "Proceedings of the World Engineering Congress, Tokyo, 1929."

of the novel commodity. Export values grew from 8,328,539 yen in 1928 to 27,000,000 in 1929, 35,000,000 in 1930, 39,000,000 in 1931, 60,000,000 in 1932, and more than 70,000,000 in 1933. Rayon textiles have thus in an amazingly short time become Japan's third most important export, the first two being cotton goods and raw silk. Silk textiles have sunk to fourth place.

The export race between rayon and silk textiles is shown in the following table:

EXPORTS OF RAYON FABRICS AND SILK FABRICS

	<i>Rayon</i>	<i>Silk</i>
1928	¥ 8,239,000	¥ 124,736,000
1929	27,163,000	149,955,000
1930	34,935,000	65,775,000
1931	39,713,000	43,053,000
1932	60,540,000	50,288,000
1933	77,379,000	63,542,000

British India is Japan's best rayon customer, the Nederland Indies the next best. Then come Australia, South Africa, and Egypt. Others range the world over, including the Philippines and even the United States. The United States is still the world's largest producer of rayon, but Japan during 1933 outstripped it in rayon exports. Italy, displaced by Japan, has sounded a general alarm. In November, 1933, the Rome *Tribuna* carried the headlines, "EUROPE, AWAKE!" and a month later Il Duce himself shouted to America through the Hearst papers that "the peril of Japan does not exist in a political or military sense but in the economic field," and that "the Western nations must join forces to seek a readjustment of Oriental and Occidental civilizations."

Commenting ironically on Il Duce as "the leading

journalist of Italy," the *Journal des Nations* of Paris hails him as successor to the Kaiser, who, with his appeal to certain crowned heads to "protect their most sacred treasures" against the Yellow Peril as a military bogey, brought on the Russo-Japanese War.

Instead of heeding such sinister advice, why not try the experiment of extending the Delhi and London conferences? The World Economic Conference failed, because it attempted too much. Instead of all nations trying to iron out all their trade differences at once, does it not seem more practicable for the nations to join council by pairs? If each pair of economically interdependent nations sit down successively together in a spirit of give-and-take, the world's array of economic rivalries will in time disappear. That is the true road to peace, as modern wars are mainly rooted in economic rivalries.

Meanwhile, to come back to Japan, a study of the foregoing table is suggestive. In 1932 silk fabrics began to "come back," showing a further increase last year. This is largely because scientific management in the filatures and factories succeeded in the last two years in cutting one-third from the cost of production. Japan's silk leaders next propose to turn their attention to cocoons. Improvements in silkworm rearing have heretofore been agricultural. Highly technical methods of improvement are now beginning to be undertaken, as shown in the chapter on Inventions. These will further reduce costs. At least one great industrial leader—with whom the writer has conversed—is convinced that silk production will be cut to a cost point as low as that of rayon, which he thinks has already reached its minimum.

Rayon production costs have been analyzed by one of the chief producers as follows :

Pulp	¥ 13.44
Ammonium sulphate	3.05
Caustic soda	10.02
Other chemicals	1.96
Motor power and coal	7.00
Manufacturing	6.50
Packing expense	5.99
Business management and freight	8.00

This is the cost of a box of rayon, based on the current market price of 120 yen for 120-denier rayon. It will be seen that there is a net profit of about 64 yen a box. Little wonder that so many new companies are being organized as to threaten over-production.

Local consumption goes on increasing, for the following reasons, as tabulated by the *Osaka Mainichi* :

1. Rayon is not so costly as silk, and yet it is much finer and better-looking than cotton fabrics.
2. Its production is possible artificially, without regard to natural and weather conditions, all the year round.
3. Its improvement is possible indefinitely, from the technical point of view.
4. It can be effectively used in the production of mixed fabrics.

The same newspaper, answering the question why Japanese rayon is so popular both at home and abroad, says :

1. Japan is climatically best suited to the production of high-grade rayon.
2. Japanese have a better knowledge of silk than other peoples.
3. Japanese have unrivaled skill in spinning and weaving.

4. The cost of labor is low in comparison with that in most of the other rayon-producing countries.

The capital invested in the rayon industry by the six leading Japanese concerns alone now amounts to more than 160,000,000 yen. It is believed that this figure will grow to 250,000,000 when the capital of the newly founded companies is added.

“Rayon came to Japan to fill a long-felt want,” says a Japanese writer. “Japanese dress styles now change very rapidly. Special designs and different color schemes are in vogue each season. The *obi*, or sash, is the decorative center of the native costume, and women want variety in them. The *natsu-obi*, or sash for summer wear, is worn for but a few weeks, and the next year its color may be out of fashion. Under these circumstances the comparatively low price of rayon is especially tempting, for it enables women to keep close to the styles without unduly straining their means. Besides, manufacturers have been making vigorous efforts to improve the quality of the yarns. Some makers are now turning out multi-filament yarns, which consist of a larger number of finer filaments compared with ordinary yarn of the same size. They are more supple than ordinary yarns, and the cloth when woven is practically free from the creases that are unavoidable in textiles made of ordinary yarn. A further innovation is that dull-luster yarns are now being made in some factories.—It is hardly necessary to extol the superior quality of natural silk, its beauty, soft feel, and durability, but sometimes it is more expensive than one can afford, and a trade in mixed rayon and silk fabrics has arisen. Such textiles are finding more and more favor with the public. This weaving of a silk and rayon mixture has made a unique development in Japan, and has

attracted world-wide interest. These mixed fabrics enable dyers to produce pleasing effects by cross-dyeing, that is, by applying at separate times the dye that affects silk only, and the one that affects only rayon. Such stuffs are increasingly popular in making *kimono*. Rayon and cotton mixtures are also being woven with excellent results, and the same method is being applied successfully to such other fibers as hemp and wool."

Fresh proof that silk fabrics are recovering from a long period of weakness appears in the *Chugai Shogyo* as this book goes to press. Weavers, although fined for exceeding a prescribed monthly output, have cheerfully paid fines for the first four months of 1934 on excess production for export as follows:

	<i>Prescribed:</i>	<i>hiki</i>	<i>Produced:</i>
January	50,000	<i>hiki</i>	51,189
February	50,000	"	50,588
March	55,000	"	58,496
April	55,000	"	60,000

A *hiki* is a roll of silk about 23½ yards long. The fines are 10% per roll on lower values and 20% on higher values.

To aid the silk industry two laws were passed by the Diet in the spring of 1934.

The Export Silk Trading Law places all silk wholesalers under a license system, designed to prevent small irresponsible dealers from lowering prices by quick sales on a declining market. To obtain licenses, each wholesaler must have exported at least 5,000 bales within a year, and have a capital of ¥ 200,000. To facilitate control, all sales will be registered. When deemed necessary, exports will be restricted, and prices held to a predetermined minimum.



Examining Silk for Shipment at Kobe.



Silk Conditioning House at Yokohama.

More rigid examinations at the Silk Conditioning House will be enforced.

The Silk-Egg Control Law will promote scientific management on the farms, especially by reducing the cost of cocoon production, now 80% of the total cost of raw silk. Heretofore egg-cards have been sold to the farmers by irresponsible private dealers in no fewer than six hundred varieties. When the new law becomes effective the Minister of Agriculture and Forestry will supply only the ten best varieties to the prefectural governments, which in turn will propagate eggs and distribute them to the farmers, thus reducing the total cost of cocoons by about ¥ 100,000,000 annually.

VII

FROM PROFITEERS TO THE LABOR MOVEMENT

Q The *narikin* — Rice riots — The first labor unions — Serious strikes — The Great Earthquake as a safety valve — The Suffrage Act as a tonic — Growth of labor unions — Social justice also grows — Welfare work — Three philanthropists — The Mitsui Foundation — The family system

CHAPTER VII
FROM PROFITEERS TO PHILANTHROPY
—AND THE LABOR MOVEMENT

JAPAN'S profiteers grew so rich during the Great War that the word *narikin*, or "queened pawns," was humorously applied to those who made fools of themselves. As Galen Fisher wrote in "Creative Forces,"

Alone among all the belligerents, Japan emerged from the struggle with a substantial balance on the credit side. In the space of four years her industrial system developed beyond all expectations, her foreign trade increased fourfold, and her gold reserve tenfold.—Shipping speculators paid for a vessel in a single voyage. Mills declared 100 per cent dividends and gave fat bonuses to directors so as to avoid the income tax, while wages were only grudgingly raised. Vulgar rich sprang up like mushrooms after a spring rain — despised narikins who, lying back in pink-upholstered limousines, honk-honked the common millions out of the narrow streets. And with every new narikin the price of rice rose another notch.

Under such strong provocation labor could no longer be controlled, even by the strong arm of government. Strikes grew from fifty in 1914 to 417 in 1918, involving 66,457 workers in the latter year as against only 7,904 in the former. In August, 1918, rice riots suddenly flared up among fisherwomen on the west coast, spreading like wild-fire to such industrial centers as Nagoya, Kobe, Osaka, and

Tokyo, and leaving in the end a deeper impression on the Japanese mind than the Great War itself. Profiteers, their greed unappeased even by the fat war profits, had succeeded in concerning the rice market, which resulted in trebling the cost of the Japanese staff of life. A proletariat emerged as by magic. The masses, inflamed by the cries of hungry fisherwomen, "*Give us rice!*" made their strength felt in a social upheaval that shook the whole country. The Imperial Household rushed a gift of three million yen and the government ten million more to the relief of the victims of the *narikin*, who, fortunately, had sense enough left to join with honest men of means in raising twenty-five million besides; all spent hastily in setting up public markets, cheap restaurants, and other alleviating agencies.

The rice riots died down, but labor had tasted power. From pre-war suppression it leaped at one bound to syndicalism; and then, without going through the stage of craft unionism, passed on to industrial unionism, taking steps in 1925 to form a political party. Its spirit was expressed by its leader, Bunji Suzuki: "We in Japan have thrown off many yokes, but have put on a new yoke—capitalism. But we have learned to throw off yokes, and that is something."

Bunji Suzuki, a newspaper man with socialistic leanings, had taken advantage of the war to foster what had been a dockyard social club into a strong labor union, the *Yu-ai-kwai*, or Labor Friendly Society. By 1919 the union movement had gained such strength that it sent its own representative, one Domae, to the International Labor Conference held at Washington. The government's official representative was the director of a ship-building yard, naturally unacceptable to the unionists, who made merry over his departure with burlesque obsequies. Capital was represented by Mr. Sanji Muto, then the managing director of

PROFITEERS AND LABOR

Japan's model cotton mill; and the working-women by T. Tanaka, Viscount Shibusawa's niece, who joined more than once with Mr. Muto on the conference. Mr. Domae, with an interpreter's friendly aid, succeeded in telling the world of the hardships of his fellow-laborers, and when the meeting adjourned the world knew that "labor in Japan was now a body at least partly organized, and with aspirations similar to those of labor in the Occident, not a mere inarticulate horde of coolies."

The Washington Labor Conference helped materially in bringing about in Japan a measure of child protection, including the proper care of women during and after childbirth.

The slump following the war-boom was scarcely less big and resounding than the war-boom itself, being naturally accompanied by huge-scale unemployment, which has been called the modern substitute for famine. Capitalists that had relied blindly on the persistence of feudal loyalty among their "retainers" were rudely disillusioned when throngs of jobless and hungry employees marched on their works.

Of all the strikes the most serious were those at the Yawata Iron Works in Kyushu and the Kawasaki Dockyards at Kobe, in 1921. The latter, led by Bunji Suzuki himself, occasioned a manifesto from seventeen thousand out of a total of thirty thousand idle men, declaring that "without syndicalist control of the shops permanent industrial control was impossible." Hunger, however, finally called off these strikes, such men as jobs could be found for going back to them, and the others being absorbed by a shock-absorber left over from feudal Japan to do priceless service in the Industrial Revolution, namely, the family system. Nevertheless, dissension spread and deepened, and Japan seemed headed for unimaginable perils when a bolt

from the blue—the Great Earthquake of 1923—came upon her, a blessing in disguise. This overwhelming disaster demanded the instant attention of all the Japanese people; compelled them to “stop, look, and listen.” As so often before, they demonstrated their capacity to respond to the logic of facts. Reckless post-war indulgence on the part of the rich was at least measurably bridled; the old-time habitual frugality got a chance to reassert itself. The bitter discontent of the masses was alleviated by well-paid employment in rebuilding the devastated cities of Yokohama and Tokyo. Suffering, that magic peacemaker, knit the people together again, high and low, rich and poor, in the bonds of a common sympathy.

While this enormous reconstruction programme was still under way, the Manhood Suffrage Act of 1925 conferred on the common people a new sense of dignity. Their reaction revealed itself admirably in the overheard remark of a rickshaw man just come from casting his first vote: “I don’t know what it’s all about, but it makes life a lot more interesting!”

Even if this Act did not alter materially the actual administration of government, it wrought an incalculable effect on mass psychology. It enfranchised practically all Japanese males aged twenty-five or over, and entirely abolished the poll-tax. It increased the number of voters from three million to about thirteen, or a larger proportion of the male population than enjoys the franchise in England. But by far the most important of its consequences was this: it gave Japan a social solidarity against which syndicalism is harmless and “bolshevism” a battering-ram of straw.

The Peace Preservation Act, “adopted by the Diet in return for the passage of universal manhood suffrage,” completed by compulsion what suffrage was achieving

PROFITEERS AND LABOR 137

through suasion. "Fearing that the great increase in the number of voters might strengthen the political status of labor unduly, any movement or proposal to abolish private property was made punishable. Thus, the advocacy of socialism by any political party was prohibited. All parties that favored the abolition of private property were considered as 'communistic' and were dissolved."

In his study of "Labor Conditions in Japan" Dr. S. Harada singles out 1926 as eventful. The Administration Act of the amended Factory Act of 1916 (Japan's first factory act) was put into force, with other enforcement measures; and important Acts concerning the conciliation of industrial disputes and public safety police regulations were passed by the Diet. In the following year regulations for the dormitories attached to factories were provided by the Home Department Ordinance.

The growth of unions during a decade is shown in the following table:

<i>Year :</i>	<i>Number of unions :</i>	<i>Number of members :</i>
1923	432	125,551
1924	469	228,278
1925	457	254,262
1926	488	284,739
1927	505	309,493
1928	501	308,900
1929	630	330,985
1930	650	342,379
1931	768	370,123
1932	906	376,060

The members in 1932 included 13,959 women, and represented 8.1% of the total number of industrial laborers, namely, 4,620,000. The increase for a number of years down to 1930 had been at the average rate of some twenty-

five thousand, but the rate of increase has recently been cut in half. Among some of the major unions there was an actual decrease during 1932, while some minor unions disappeared altogether. The number of members in the General Federation of Labor has fallen from 48,000 to 45,000. Commenting on such facts, the secretary of the Federation says:

The number of strikes in 1932 was 2,217, a decrease of 238 from the previous year. They were even fewer in 1933. If a decrease in the number of strikes is interpreted as a sign of ineffectuality, the Japanese labor movement is on the decline. But we believe that the labor movement has been rapidly growing in health and strength, and that it will so continue. We have become prudent, and learned the advisability of settling disputes by negotiations instead of precipitating strikes just for the love of it. We have now the Japan Trade Union Congress, representing 300,000 members of organized labor. The Congress adopted a resolution a few years ago, opposing not only the present methods of capitalists, but communism and fascism, and has been consistently following the provisions of this resolution. The police authorities have been growing increasingly favorable toward organized labor, and capitalists as a whole have ceased to be suspicious of it, because the movement has become prudent and intelligent in its dealings, and consistent in its ability.

Our General Federation of Labor, which is a leading member of the Trade Union Congress, is the representative labor union in Japan. The organization as such was marked out as the first field of communist activity. We could make no headway until we got rid of the communist element ten years ago. Since 1924 we have been insisting that national and class interests do not clash.

Commenting on this statement, Mr. Setsuo Uenoda writes in the *Japan Advertiser* of January 27, 1934, that the General Federation of Labor is apparently well established "since extricating itself from communism."

PROFITEERS AND LABOR 139

It maintains a regular staff of about twenty, working as regularly and busily as employees of any business office. The Federation now has seven factories, managed by members. These were originally operated by small capitalists, but when they went into bankruptcy on account of the depression the employees took them over. They are now making both ends meet. About four hundred workers are running these factories.

Besides, the Federation operates a labor savings bank, and handles an average of about seventy thousand yen a month, accommodating loans and receiving deposits. It also maintains a co-operative society on a large scale. The strike funds amount to fifty thousand yen.

A growing sense of social justice among employers has at least kept pace with the growth of the labor movement, until now it is possible for Dr. Harada (in the work already cited) to list welfare facilities as follows :

1. Living places, such as factory dormitories, with subsidy for rentals and lighting expenses.
2. Food: free supply of meals, or partial contributions to the cost of food.
3. Sales of factory products at reduced prices, and establishment of co-operative stores.
4. Sanitation: free medical advice and attendance, free medicine, factory hospitals, emergency relief bureaus, free baths, contributions to the cost of hair dressing.
5. Amusement and cultural opportunities: factory field days, excursions, free tickets to theaters and motion-pictures, accommodations for chess, billiards, tennis courts, and celebrations of festivals; parties; free instruction in sewing, the tea ceremony, and flower arrangement.
6. Education: factory elementary schools; higher education for promising workers at technical schools; lectures: free reading matter. (The factory elementary school

is not to be regarded as a philanthropic act of the employer, being compulsory. According to the Japanese educational system, all children are compelled to finish a six-year course of elementary education. Accordingly, the Administration Act of the Factory Act (Article 26) compels the employer to provide the necessary equipment for the education of juvenile workers that have not yet completed their requirements.)

Bonuses : special bonuses in spring and autumn ; employers' contributions to various beneficiary funds, offers of prizes, part payment of workers' insurance premiums, part payment of expenses incurred in nursing young children, free ice during the summer, free transportation of workers to their homes after the term of their employment has expired.

Japan has been predisposed to welfare work since the beginning of authentic history. In the year 593 A. D. the great Prince Shotoku, father of Japanese civilization, opened hospitals for the poor. This princely precedent has ever since been followed by the Imperial Household. In modern times the Emperor Meiji not only gave a large sum of money for poor relief, but issued an edict that has had immense influence on the conscience of the people. In 1907 another imperial gift — of ¥ 1,500,000 — resulted in a popular response amounting to ¥ 24,350,000, laying the foundation of present-day social work through the establishment of a society for medical treatment of the poor. In 1921 the Imperial Household began to make donations an annual affair. The following year the present Bureau of Social Affairs came into being, bringing under one control the administration of all social work. The Do-ai Hospitals in Tokyo and Yokohama were established with money given by the American people at the time of the Great Earth-

PROFITEERS AND LABOR 141

quake of 1923. As Japan suffers an annual loss of a hundred and fifty million yen from floods and fires, a Calamity Relief Fund now has resources of nearly ninety millions. Within the knowledge of the writer an enormous advance has taken place in the treatment of lunacy; there are now hospitals and asylums with a capacity of 14,426 patients. The Japan Red Cross is one of the best units in the world. Some of the large cities, notably Osaka and Tokyo, carry a regular budget for poor relief, that of Tokyo now amounting to fifty million yen. Mr. Ippei Fukuda, in his "Sketches of Men and Life," paints this true picture:

Tokyo's night is seen particularly bounteous to the poor. Hundreds of people out of work and homeless find rest and comfort in the "Free Hotels" operated by the city authorities. The writer has knocked about fairly extensively in the odd corners of the world, but knows of no other place where down-and-outers are looked after with such human kindness, that makes these homes for the homeless veritable havens of paradise.

After a vain hunt for a job on a blazing summer day thither comes an ex-rikishaman, no longer light of feet. There are now thousands of his fellow-pullers of rikisha driven into unemployment by the arrival of fifty-seven taxi-cabs. At the entrance to a two-storeyed foreign-style building he washes his tired feet, takes a bath, and changes into a clean *yukata* (a kimono for summer wear) provided by the management. Faultlessly clean is the spacious room with its wide windows. A library of popular magazines and books is always open to those who can, and care to, read. A group of sunburnt figures, also comfortable in neat kimono, listen-in in rapt appreciation. Songs come streaming from the radio set, assuaging the wounds of despair. Every habitué of the free hotel is given a cleanly washed Japanese *futon* to sleep on. Provided that a person is short of money but in possession of good health, the Mother City welcomes any individual with open arms.

Such are a few of the more striking forms of Japanese relief work. There are altogether 5,027 relief institutions, with properties estimated at ¥ 215,844,951, and an annual outlay of ¥ 42,267,879. Yet the official year book modestly says:

Social work in the true sense of the word is one of the hardest things on earth, because it must, in its final outcome, mean the practice of religious teachings and realization of human ideals, and the actual condition at present certainly leaves much to be desired both in form and quality. The scope and variety of it must be widened and increased. Legislation, administration, finance and the practical management of the work must be so improved that they are most effectively carried out for the needy and the miserable with the high aim of bringing about an age when less kinds of social work shall be necessary.

Three individuals may be cited as examples of the spirit of social service that is taking hold on Japan.

Mr. Sanji Muto, whose name has already been mentioned several times in this book, was one of the greatest men of affairs Japan has produced. After spending several years in America he entered the Mitsui Bank, and afterward became manager of the Kanegafuchi Spinning Company, and succeeded in bringing up this company to the foremost position among the mill owners in Japan. Later on, interested in political reform, he founded a new party, but the idealism of its platform was too far ahead of the times. Failing in this, he turned to newspaper work as the best channel of public education open to him. Resigning in 1930 from the presidency of the Kanegafuchi, he devoted his whole time to the *Jiji Shimpo* of Tokyo; his chief ambition being to carry it forward in the spirit of its founder, the great teacher Fukuzawa, who also founded

Keio University. Mr. Muto was a patron of the arts. Desiring to keep alive the best artistic traditions of Old Japan, he encouraged the vanishing arts and crafts, and brought out at heavy expense a magnificent set of volumes containing faithful reproductions of the best work of the old Chinese and Japanese masters. He did much good by stealth. He was assassinated March 9, 1934.

Mr. Umeshiro Suzuki, another graduate of Keio, became manager of the Oji paper mills in 1902. During eight years of travel through Japan investigating branch factories, he became dissatisfied with the medical treatment of the poor. Some factories took good enough care of their operatives, but the villagers who were not laborers in them were neglected.

The villagers were asking for help from the factory doctor. Mr. Suzuki saw the reasonableness of their request and ordered the branch factories to open medical treatment for the public. The factory doctor charged only ten sen for a day's medicine, while the common practitioner charged from eighteen to twenty. To Mr. Suzuki's surprise, several months' experience proved that so far from losing money the factory medical bureau was actually making a small profit on its enlarged business. The increase in patients coming to the factory doctor because of the cheapness of medicine and treatment, well compensated for the apparent sacrifices of the company. This practical knowledge prepared Mr. Suzuki to stand up for medical social work when he heard of the Emperor's wish for the medical relief of the poor in 1911. In July of that year he published a statement appealing to the public for cost-price medical treatment for the proletariat. In this statement he said that many people in the lower stratum of the middle class—such as small-salaried public officials, secretaries, shopmen, teachers, policemen, students, artists, apprentices,—were without social relief of any kind, although their incomes were very small, in spite of their intelligence and ability. He said that such people

formed an important element of the nation, and that their welfare had much to do with that of the nation in general; that they bore a heavy tax burden and also had to keep up an honorable standard of living. Their most important and acute need was medical treatment, and it was the responsibility of the government and the people at large to help them, so as to prevent their descent into actual poverty, and in order to promote the general welfare of society.

Associating himself with Dr. T. Kato, Mr. Suzuki set up in September, 1911, the Cost-Price Medical Treatment Association, a corporate juridical person. In spite of opposition from some of the doctors' unions, the Association has made such progress that there are now forty-one cost-price medical treatment offices throughout Japan, and 112 hospitals in which patients are treated at cost-price. The Association has its headquarters in Tokyo and four branch offices in Tokyo, Yokohama, and Osaka. Mr. Suzuki describes its purposes in a booklet, "The Socialization of Medical Treatment."

On the 1st of November, 1933, Baron Mitsui, head of the great house of that name, announced a gift of thirty million yen as a foundation for social welfare and culture, the largest such foundation for a single philanthropic purpose in Japan. There are three objectives :

1. Scientific research and technological experiments in urgent cultural enterprises.
2. Social welfare enterprises and other public facilities in urban communities.
3. Public facilities intended for the improvement of rural communities.

"Regarding these enterprises," the announcement continued, "the foundation will, both at present and in future, give assistance to those who manage the enterprises so as to contribute to their success, and may manage some enter-

prises itself. In deciding such questions the foundation intends to seek advice and assistance from the intellectuals at large. It will not only spend the interest of its assets, amounting to thirty million yen, but intends in case of necessity to disburse out of the principal for the realization of its object. It will also gradually increase its assets in future. The present step was decided on by the family council on the basis of the traditional spirit of the Mitsui family and is intended to pay a bit of what the family owes the country. The undertaking has been realized as a result of frequent considerations conducted since the tenure of the previous president of the company."

Once more, the family. Does the reader need to be reminded that in the West the accepted social unit is the individual, in the East the family? Nations of the West have been likened to pyramids built up of single individual pieces; nations of the East to pyramids built up of other pyramids, that is, of families. In Japan the Imperial Family is the capstone pyramid, the Emperor father over all. When Baron Mitsui speaks he speaks for a family council; he even suggests the principle of family continuity by referring in his closing words to his father. So also when unemployment hits the big cities we have seen the unemployed flocking back to their rural families, who take temporary care of them as a matter of course.

The family has a wider connotation in Japan than with us. In the West it signifies father and mother, brothers and sisters, perhaps the grandparents. In Japan it circles out into a clan.

The disintegration of China derives mainly from the undermining of the family. But the Chinese is a born individualist, apparently eager to escape from the responsibilities so long laid on him by the strong hand of Confucius.

Never has he treated his emperor as a father, but rather as a necessary nuisance. The Japanese, on the other hand, are ingrained loyalists, despite their individual energy. Their energy is devoted whole-heartedly to the service of the State, namely, the great national family.

There are signs that this family tradition may be breaking up even in Japan—just when America is learning the folly of “rugged individualism.” Japan should not lightly dispense with an institution that has served it so well through the ages, and never better than in these turbulent times.

An interesting example of its transfer to changed social conditions appears in the mutual aid organizations called *tanomoshiko*, a word that embodies the idea of the dependence of children on mothers. T. Kagawa, the Christian social worker, reports that the influence of these mutual aid societies is enormous.* They spring up spontaneously, even in the slums. Those registered with the government have an aggregate capital of ¥800,000,000. Were all registered, this amount would be doubled. On the 21st of each month, the memorial day of the Buddhist saint Kobo Daishi, each member contributes something to the big artificial family, so that a fund is always available for the relief of distress. Out of the *tanomoshiko* have grown large group organizations. One of these, among the employees of the government railways, has 160,000 members and a reserve fund of ¥80,000,000. For ten years each member pays into the treasury 6% of his salary, and from the fund thus created he may subsequently draw amounts equal to one-third of his salary. Workers in the munitions factories support a group of 31,445 members, with a reserve of over ¥5,000,000. Both organizations provide benefits for long service, retirement, disability, accident, death, and funeral expenses.

* *Contemporary Japan*, June, 1933.

PROFITEERS AND LABOR 147

In such *tanomoshiko* organizations labor disputes are almost unknown.

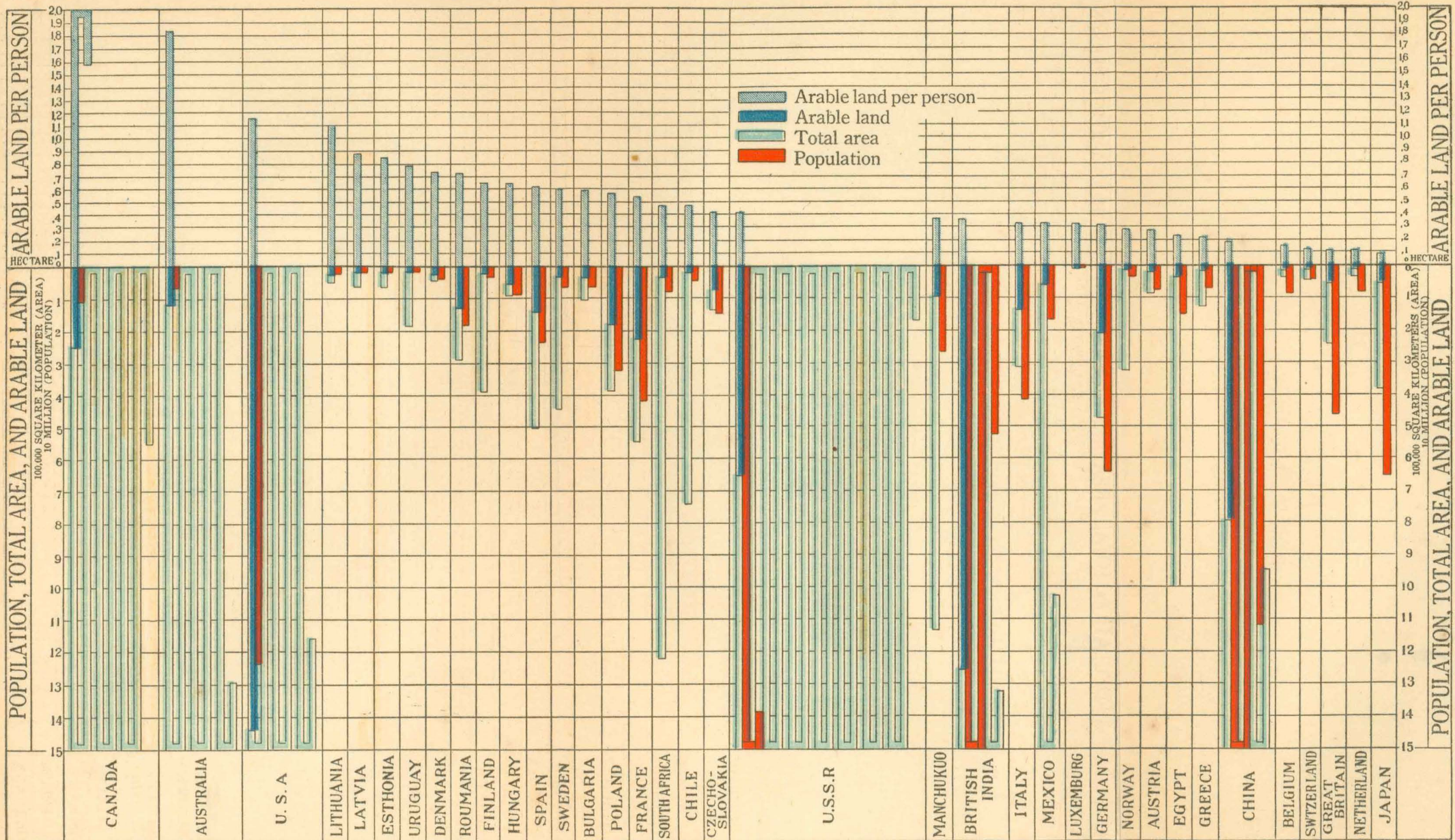
Mr. Kagawa is perhaps the chief Japanese writer who portrays social conditions under the guise of fiction. His "Grain of Wheat," admirably translated into English by Marion Draper, has exceeded a hundred and fifty editions in the vernacular, to say nothing of "Before Dawn" and "Shooting at the Sun." "*Strassen ohne Sonne*" is the German translation of a proletarian novel by a typographer, Choku Tokunaga. But the leader of the more advanced novelists is without doubt Kwan Kikuchi.

VIII

THE NATIONAL BACKBONE

¶ Four mistakes about Japan — The peasant's sense of humor — His "horse sense" — His industry — His idealism — The woes of the Japanese farmer — Canned comestibles? — Urbanization — Decentralized industry and its advocates — Past promises, and the present programme of farm relief — Japan needs a strong backbone

LAND AND POPULATION OF VARIOUS COUNTRIES



The amount of arable land per person in Japan is smaller than that of any other civilized country, not even excluding England where only 7 per cent of the population live on agriculture, while in Japan 50 per cent of the population is still living on agriculture. It is easily seen that the farm for each peasant is so small that there is but little space to improve the standard of living or to sustain the increasing family. This is the fundamental reason why the Japanese are being forced more and more to find a living in industry.

CHAPTER VIII
THE NATIONAL BACKBONE

As the writer goes about the world four statements concerning the Japanese are continually tossed at him with a certain cock-sureness that brands them as fixed ideas, and they are all wrong.

1. "The Chinese are more honest."

In reply to this he invites a careful consideration of some of the final paragraphs of Chapter I and their implications.

2. "The Japanese can't invent anything."

The same invitation is more or less hopefully extended in behalf of Chapter IV.

3. "They can't be understood."

An opinion on this point is reserved for the final chapter.

4. "They have no sense of humor."

This seems a good enough introduction—by way of contradiction—for the present chapter, as the writer has never met anywhere a jollier set of honest-to-God human beings than Japanese farmers. The mere fact that they have survived is in itself proof positive of their inborn hilarity. Humor is the lubricant of life, and except for this lubricant they would long ago have been ground down.

By and large, all Japanese have humor—quite as much as Americans or Englishmen or Frenchmen—but the Japanese peasant is fairly racy of it.

Long ago, during the years of his apprenticeship to “the awful Japanese language,” the writer dug into a book of Buddhist homilies, recommended by his teacher for the homespun quality of its style. Surprisingly,—since it was a book of sermons,—this treatise on “The Way of Heavenly Learning” abounded in humor, and in humor of the peasant variety, since the sermons were those of country priests.

Once upon a time—thus opened one of the sermons, quoted from memory—a certain bald retainer called on his lord and master, to discuss various matters pertaining to the management of a farm.

It was winter, and when the noble lord came in, he saw to it that a liberal supply of glowing charcoal embers were heaped upon the brazier set between him and the retainer, on the floor.

Thus they sat upon the mats and talked, the retainer now and then uttering little grunts of astonishment at the wisdom of his sage employer, who was known far and wide for sound sense and unflinching presence of mind.

While they talked, this last mentioned attribute got a fresh and convincing illustration. The charcoal, snappy and saucy in the frosty air, suddenly sent a glowing ember leaping into the very lap of the stately lord, falling upon his handsome apron of silk. The bald retainer flew all to pieces in his helpless anxiety to relieve the situation—gazing wildly about for some implement to remove the red-hot coal, and sputtering like a sperm-whale in his excitement. Meanwhile the master, murmuring something about it's being nothing to worry about, had quietly inserted his hand beneath the silken apron, and, with the skill of a boy play-

THE NATIONAL BACKBONE 153

ing marbles, had shot the saucy fire-ball back into its place again before it had even scorched the precious silk.

When the excited retainer comprehended what had happened, he sat back on his haunches almost speechless with admiration; able only to utter an occasional *Naruhodo!* of amazement over such marvelous presence of mind. He had learnt a lesson! Ever hereafter would he strive to emulate the matchless wisdom of his lord.

Meanwhile the old samurai sat talking along as though nothing had happened, to his faithful, if somewhat abstracted, servitor, whose thoughts now wandered to loftier themes than tenantry and rents. Would that he might have opportunity to imitate the wisdom of his lord!

Well, the opportunity arrived. The malicious charcoal once more vented its fiery spleen, a living coal leaping this time straight for the flat bald head of the retainer, where it lay and glowered.

Now it was the master's turn to grow excited. He looked from side to side for some utensil of relief; he clapped his hands wildly to summon the maid—exclaiming:

“Why, man, that coal will burn straight through into your stupid brain!”

But the retainer sat calm and collected, beatific superiority upon his suffering brow.

“Never mind!” he murmured. “It's nothing to worry about!” And, mindful of his lord's example, he reached up and chucked himself under the chin!

If that is not the quintessence of rustic oriental fun, then the author himself doesn't know humor when he hears it.

Into this present age the Japanese farmer has brought over his old-fashioned lovable traits, including humor. Mr. Yusuke Tsurumi, campaigning for office in the country districts, recently had this experience:

In one of the farm villages about sixty peasants, apparently most unsophisticated, were attending a meeting of the opposite camp. A citified supporter of Mr. Tsurumi's antagonist took the platform and said:

"We hear there are two reasons for boosting this chap Tsurumi. One is that he has traveled widely in America and Europe. Well, now, if travel is a qualification for office, why not send to Parliament the captain of an ocean-going ship? A second reason advanced for Tsurumi is that he's a good English scholar. Well, why not go to Yokohama harbor and pick out one of the interpreters there, and send him to Parliament? No, gentlemen, the candidate I present to you today is another sort altogether. Instead of wasting his time in travel or in talking English he's been ever since he graduated from the University a worker in the rice-fields!"

This might have been a knock-out for Tsurumi had not an old peasant jumped up and burst out:

"All right, if *that's* the best qualification for Parliament, we farmers can send ourselves up, for we've been working in the rice-fields all our lives, without wasting time in any university!"

This incident, which broke up the meeting, points another characteristic of the Japanese peasant, his downright hard-headedness and "horse sense." Robertson Scott, that zestful student of agriculture at first hand, came across a delightful instance of this trait in the course of his six-thousand mile journeys—covering four and a half years—throughout rural Japan.

An official of the Department of Agriculture visited an inland district to speak at the local temple in behalf of the adjustment of rice-fields. The *guncho*, or head of the county, was waiting at the temple to receive him, but nobody

THE NATIONAL BACKBONE 155

else appeared except one lone old farmer. Finally the *guncho* addressed this lone old farmer about the absent audience, and he in turn inquired the object of the meeting. "I thought so," he commented, on being told—"but you see our farmers are busy men, especially at this time of year. I'm the oldest man in the district, so they've sent me. I can tell from my long experience whether what you're proposing is a good thing for our district or not. If you convince me you've convinced the village." And after two hours of argument they convinced him.

The proverbial industry of the Japanese farmer is implicit in the foregoing story. The farmers were too busy in their rice-fields to leave them, so they sent a very old man, who was both wise, and also unfitted for much labor.

It is because more than half the paddies are always under water that rice cultivation is so laborious. Think of the Western farm laborer being asked to plow and dig almost knee-deep in mud! Following the turning-over of the stubble under water, comes the clod smashing and harrowing by quadrupedal or bipedal labor. It is not only a matter of staggering about and doing heavy work in sludge. The sludge is not clean dirt, for it has been heavily dosed with manure. And it ordinarily contains leeches. Therefore the cultivator must work uncomfortably in sodden cotton leg and foot coverings.—Planting-time arrives in the middle of June or thereabouts, when the paddy has been brought into a fine tith or rather sludge. It is illustrative of the exacting ways of rice that it cannot be sown as cereals are sown. It must be sown in beds and then transplanted.—The rate at which the planters, working in a row across the paddy, set out the seedlings in the mud below the water, is remarkable. The first weeding or raking takes place about a fortnight after planting. After that there are three more weedings, the last being about the end of August.—Most of the weeding is done simply by thrusting the hand into the mud, pulling out the weed and thrusting it back into

the sludge to rot. The back-breaking character of this work may be imagined.

This merely gives the rice a start. It has to be worked clear through to the harvest, and by that time another planting has to be started!

To complete the portrait of our Japanese farmer we must add to his industry and hard-headedness and humor an exceptional idealism. An incident of which Robertson Scott learned during his rural travels makes the point clear.

A thrifty and intelligent peasant finally grew so old that his affectionate son insisted on his laying off work altogether. But the old man objected. Circumventing his son, he wandered away each day to a barren hillside a long way from the farm-house and there, little by little, feebly and painfully, he built a retaining wall. Then he managed to fill it in with good soil and to level it. It was a prodigious labor, but in the end the old man had a paddy-field where there never had been one before. But it was only about thirty feet square. When the son at last saw it he wept. "You have worked hard and long, to what end? Only a rice-field so small and so far from home that it can't be worked economically!"

The old man knocked the ash from his little brass pipe and replied:

"If you go up to the capital and visit Aoyama cemetery you'll see many big monuments. They are carved in big letters with the renown of office-holders and soldiers that few people have heard of. I'll wager you don't even know where the great hero Kusunoki Masashige is buried. He has just a little tomb near Kobe. Then there's the Taiko. Only lately a monument has been put up to him, in Kyoto. So you see that the monuments of really great men may be

THE NATIONAL BACKBONE 157

small, or only recently erected. They don't need marble or bronze. What they did in their lives was their monument. They built their monuments in the hearts of the people. We peasants, in our own way, can erect monuments. To make a new paddy-field, to plant the bare hillside with trees, these are our monuments. How lonely it would be for me if there were no monument left after my death! Small as this paddy-field is, it will not be forgotten so long as it yields a little rice for our posterity. And I intend to plant this hillside with trees."

The old man lived long enough to carry out his intention, and now the wood that grows there is worth ten thousand yen.

Beginning during Meiji, the Great Enlightenment period, the troubles of this lovable character, the Japanese farmer, have continued to increase with cumulative effect, until now they threaten to crush him.

The first blow dealt to him was a modern system of taxation. In old days he had paid his taxes in kind; so many bushels of rice for himself, so many bushels for the government. Now they had to be paid in money. He had hardly seen any money, much less handled it. Manipulating it was beyond him. In fact, according to the old social scale money-changers and their kind rated low. The farmer, a creator of wealth through his labor, ranked higher in this old social scale than merchant or broker or banker; all of whom made their living by manipulating, and that at a profit, the products of the creative groups, such as farmers and artisans and artists. Long practice had made these manipulators well-nigh perfect, and lack of standing tended to make them unscrupulous. The farmer was no match for such skilled practitioners. He was exploited, as "hay-

seeds" are liable to be. Forced to convert his crops into cash so as to pay the new-fangled taxes, and unskilled in the use of money, his resources rapidly dwindled.

Scientific agriculture, intended to help him, dealt him another blow. To stimulate his land, he was told to buy artificial fertilizers. He was so obedient that in a decade the sale of artificial fertilizers doubled. They increased productivity, but they also became a tool for the farmer's exploitation. *Narikin* manufacturers laid their heads together and fixed prices. The farmer could "take 'em or leave 'em." He took them, and had less left for himself.

Finding it difficult under the new régime to make ends meet, the farmer was urged—with the best possible intentions—to consider such by-products of farm life as live stock and poultry. He did so to such purpose that in ten years the number of fowls on the farms of Japan doubled, as also the value of the eggs. Dairy and meat products likewise scored a marked increase.

But the energetic traders and middle-men and money-changers ran a neck-and-neck race with the farmer, steadily scaling up the prices of chicken-feed and wire fencing and incubators and the like without scaling up the market prices of chickens and eggs. Result: richer people in the cities, poorer farmers on the farms.

Certain incidental features of this new citified Japan have hastened rural insolvency. As already shown, the Japanese farmer is delightfully human, and it is only human to be curious and inquisitive about the glittering new cities. And they are so easily reached. So the Japanese farmer took to spending his scant leisure and his scantier cash surplus on trips into town. That amazing increase in passenger patronage of the railways noted in Chapter I was largely provided by him. It has been said that the railway

THE NATIONAL BACKBONE 159

is a veritable tube through which cash from the farms is diverted to the cities.

Civilization, then, as it is understood in the twentieth century, has not been an unmixed good to the Japanese farmer. Even education, its crowning glory, has piled up debts on his back. Japan's percentage of illiteracy is almost nil, but so is his income. Compulsory education has meant compulsory taxation, and of this he has had to pay a back-breaking share. Some rural districts have been known to pay out from seventy to eighty per cent of their revenues for the upkeep of schools.

Now one begins to see why the hard-pressed Japanese farmer has in recent years converted so many rice-fields into mulberry fields—only to find the cocoon industry failing him, as already shown.

If he continues to insist on remaining on his land, there is one way that seems to be opening to him to make a living there, and that is the production of vegetables and fruits for the new canning industry in which Japan is beginning to excel. She already packs and ships small fruits successfully, and under a sanitary control as strict as that enforced anywhere. The new canning process mentioned in the chapter on Inventions should enable her to can many vegetables—large ones—not hitherto packed anywhere. Her soil is admirably adapted to many kinds of fruit and vegetables, and only in the North is the climate severe. As mere side crops she already produces tasty tangerines to the value of eighteen million yen a year, with quantities of persimmons and pears, grapes, figs, peaches, and plums. The yearly crop of green vegetables runs to ¥170,000,000, and that of leguminous plants to about ¥50,000,000; these and the fruits just named could be raised to a much larger output. Due to industrialization, the cities are rapidly

growing, providing a convenient home market. America already takes tinned and bottled comestibles, to say nothing of canned crabs and tuna, but a practically inexhaustible demand for canned foods of all kinds might be developed on the Asiatic mainland if costs were held down. Even jams and preserves and pickles are not to be ignored, as Heinz of Pittsburg and Crosse and Blackwell in England have proved. Strawberries are beginning to be grown on Japanese terraces where rice used to grow, to be turned into delicious jam at low cost. Marmalade also has made a fine beginning. Surely there is some hope for the Japanese farmer, as such, if he allies himself intelligently with modern industry. If no mention is made here of tea, it is because of the limited areas suitable for its production in competition with such highly favored countries as India, Ceylon, and Java.

If the total area is considered, Japan's population has not yet reached its saturation point. The density is approximately 437 persons per square mile as against 468 in Great Britain, 598 in Holland, and 670 in Belgium. But there is pressure of farm population, as only fifteen per cent of Japanese land is arable, and forty-six per cent of the people live on farms. Thus the number of persons *per square mile of arable land* is exceptionally high :

Japan	2,774	Italy	819
Great Britain	2,170	Germany	806
Belgium	1,709	France	467
		U. S. A.	229

The prospect of a terrifying increase of working population for the next twenty years intensifies Japan's problems. Dr. T. Uyeda, Professor of Economics in the Tokyo University of Commerce, profoundly impressed the Banff con-



Old Farm Village.



Not Rice, but Strawberries. Note the women at work.



Transplanting Rice.



The Tea Harvest.

THE NATIONAL BACKBONE 161

ference of the Institute of Pacific Relations (in the summer of 1933) by his carefully reasoned discussion of this increase. He reached three conclusions :

1. The population of Japan can never reach a hundred million, as has been imagined ; it will probably stop at about eighty million.

2. As the fecundity of women diminishes, the child population will stop growing, although the diminishing rate of infant mortality will counteract this to a certain extent.

3. But the age groups which constitute the working population will expand rapidly during the next twenty years. The working population in 1950 will exceed that of 1930 by ten million. For at least half this number, additional employment must be provided, i.e., for from 200,000 to 250,000 people a year. Birth control cannot solve this problem for the simple reason that the working population of the next twenty years is already born.*

“What is to happen to this population?” asked Dr. H. F. Angus of the Vancouver Institute. He answers his own question by saying that if occupations are to be found for the increasing population it is to industry that Japan must turn. He then adds : Japan’s economic peril is that she is compelled by her growing population to become industrial and to rely on foreign countries for raw materials, while at the same time the protective policies of those countries may prevent her from acquiring the money with which to pay for her raw materials.

Hugh Byas, the best informed foreign resident in Japan, reaches a similar conclusion in *The Asiatic Review* for October, 1933.

* “Future of the Japanese Population,” Japanese Council, Institute of Pacific Relations.

There is a social cause at work which, in the opinion of Japanese statistical authorities, will bring about equilibrium within say twenty years from now, the population becoming stationary at between eighty and ninety millions. The age of marriage is gradually growing later. Middle-class families no longer hasten to marry their sons at twenty-one and their daughters at eighteen or nineteen. The married student is a rarer bird than he was even ten years ago. In 1921, 519,193 marriages were registered; in 1931 the number had fallen to 496,754. The Japanese student today, as he leaves the university with his hard-won degree and tightens his belt for the struggle to capture a "white collar" job, may look forward to equilibrium about 1953. But even when equilibrium is reached it will be at a level ten or twenty millions above that of today. And the question is: If sixty-six millions are straining Japan's resources to the uttermost, how is she to cope with an additional ten millions?

It is generally admitted that emigration is at best a palliative and not a remedy for over-population. But even as an effective palliative it is denied to Japan. The countries which could absorb any considerable proportion of her surplus—America, Canada, and Australia—have banged and bolted their doors. Manchoukuo may provide useful openings for Japanese traders and technicians, but there can be no colonization in the real sense, for Manchuria is inhabited by Chinese and, low as the Japanese farmer's standard of living is, that of the Chinese farmer is lower still. Brazil received Japanese settlers, but the number has never exceeded twelve thousand a year. The sale of contraceptives is illegal, and the birth-rate is sufficient evidence that birth-control is not practised. By a process of exhaustion, therefore, we come to industrialization as the only means by which Japan can provide food and work for her people. Industrialization is a difficult task, since it means that Japan must pit her cheap labour and frugal standards of life against the machines and capital of the West. But up till now it has succeeded. Japan has been able to rectify her narrow political frontiers by an expanding economic frontier.

THE NATIONAL BACKBONE 163

—Japan's population problem boils down to the question whether her industrial frontier can continue to expand and provide work for the coming millions. Her agricultural frontier has been reached. The land, subdivided into minute farms of an average size of 2.7 acres, can employ no more. It is super-saturated. Can the factories continue to absorb the increase? The answer seems to be that if international trade is given at least no less freedom than in the past, Japan can face the future with confidence.—If economic nationalism means a blocking of economic frontiers, it seems hardly worth while troubling the Disarmament Conference further.

At present, when the Japanese peasants do leave the farms, they take the line of least resistance, and follow their children to the cities. The factories act like a lodestone. Urbanization is a well-known phenomenon of industrial revolutions, and Japan is no exception. During thirty-five years its city population has increased nearly three hundred per cent, its rural population less than seven per cent. "The remarkable growth of the cities has been due for the most part to migrations from the rural areas."

To aid in solving the immediate problems of the farmer the decentralization of industry has been proposed. Although the proposal seems almost like "pouring prayers into a horse's ears," it deserves consideration if for no other reason than the eminence of some of its advocates. The late Sanji Muto was one of these. He told the writer that in his opinion the growing volume of unemployment in the cities would in time discharge itself back into the country, and there find employment in a revival of the domestic industries. Mr. Setsuo Uenoda recently assembled in a series of articles in the *Japan Advertiser* the views of other prominent and unselfish men. Mr. Fumio Goto, the Minister of Agriculture and Forestry, suggests that industrialists

may use surplus electric power to their own advantage by establishing small factories in villages. He says there are already eleven thousand such factories in operation, of which 226 are run by municipalities, 1,471 by co-operative societies, 502 by agricultural associations, and 7,531 by partnerships, the rest being miscellaneously administered. He is using the powers of his office in an attempt to systematize farm work on a rational basis with a view to preparing villages for industrialization. Already there are joint village establishments for silkworm culture and the collection and sorting and shipment of various other farm products. These are rapidly increasing. On the increase also are little factories for handling tea and compound fertilizers, all run by electric power.

The former Minister of Commerce and Industry, Baron Kumakichi Nakajima, agrees in general with Mr. Goto. "He believes that the industrialization of villages will be a great benefit to the nation from the social point of view. If a factory is established in a village, he says, farmers may devote half their time as factory operatives instead of leaving their homes for the cities or going daily to distant places from their homes to work. From the economic point of view advantages and disadvantages of the scheme are almost even."

Viscount Masatoshi Okochi, an eminent mechanical engineer, got the inspiration for his own interesting experiments in village industry from a visit to France during the Great War. There he saw women in various factories making arms, and drew the inference that Japanese laborers could work marvels if provided with proper machines. For ten years or more he has tested out his views in Niigata prefecture, with much encouragement. His factory makes piston rings for motor-cars, employing 400 operatives of

THE NATIONAL BACKBONE 165

whom 360 are girls, living within a radius of a mile. He thinks his piston rings the equal of any made abroad, and has gone into the export business.

Viscount Okochi advocates relief of the industrial situation in general by the establishment of many small factories in the villages. He would dissect the big factories, so to speak, and set up single-duty machine tools in the village factories instead of the universal machine tools now in use in the cities. The former can be operated by unskilled labor drawn from farms, while the latter require skilled labor. Single-duty machine tools turn out better products than the universal machines, even when operated by unskilled labor, the Viscount claims. The parts thus manufactured at village factories should be shipped to an assembly plant, at some central convenient point.

While Viscount Okochi admits that his plan may not apply to the heavy industries he insists that electrical instruments and machine parts for bicycles, motor-cars, and all kinds of vehicles can be manufactured in village factories at so low a cost that the system would more than offset the cost of transportation from these various factories to the assembly plant.

It is interesting to find foreign students such as Professor Orchard in agreement with such plans. "Japan is especially well adapted to the decentralization of industry. In no other country does the same opportunity exist for the development of village manufacturing. The surplus population is in the villages and it prefers to remain there. The farmers live in small communities, and the prevailing form of agriculture with its very small holdings creates both the spare time and the necessity for a subsidiary occupation. Japan is a country of short distances, and raw materials and finished products can be moved easily. There is an

abundance of water power and there are few sections of the country that are not within easy reach of a potential power site. — Electricity is available to the smallest village and is in use for light in the remotest farm-house.”*

It is nobody's fault, in particular, that the Japanese farmer is so beset with problems. Japan is undergoing an industrial revolution, and this has been well defined as “the change that transforms a people with peasant occupations and local markets into an industrial society with world-wide connections.” But then on the other hand the farmer is in no wise to blame for being caught in the wheels of transformation, from which he is helpless to extricate himself unaided. Besides these attempts of industrial leaders to help him, should not the government proffer relief?

In the past, it has been remiss. An explanation supplied by a Japanese writer follows: “It is a well-known fact that the Japanese Government has been quite engrossed in the task of promoting commerce and industry as the national policy, supported by political parties, bureaucrats, peers, scholars, financiers, and business men. Politicians became deeply involved in city interests, or, rather, financial interests. Political parties are supported by capitalists, and many leaders of the parties are closely connected with various financial interests, and it is by them that the affairs of State have been guided, for good or bad. Many members of the House of Representatives have their electoral constituencies in rural districts, and they make all sorts of pledges in the interest of agricultural villages, but when the general election is over hardly any member champions the cause of rural communities.”

To an American, this sounds like old news from home.

* “Japan's Economic Position,” p. 486.

THE NATIONAL BACKBONE 167

Since the downfall of the Inukai cabinet some attention has been given to the farmer.* Last year the government set aside some six hundred million yen to cover a three-year relief plan for agricultural and fishing communities, as well as the small business and small industrialist group. This year the House has approved the appropriation of ¥ 320,000,000 more for farm relief. Hand in hand with relief work the government is also undertaking a programme of self-help for the farmer. It comes none too soon. "Farming is the nation's foundation," runs a Japanese proverb. The farm families, who have laid this foundation, are the national backbone. They even furnish the bulk of the soldiers. Nothing could be more important than to keep this backbone from weakening.

In old Japan farmers and soldiers formed two distinct classes, allowing of no intermixture. But the introduction of compulsory army service in 1871 not only obliterated this distinction, but turned the peasantry into the chief source of supply for new Japan's army. It was the farmers' sons that won the wars against China and Russia, and it was the farmers themselves that had to bear the brunt of the costs. There is thus a strong bond between farmers and soldiers.

* This Cabinet fell in consequence of the notorious "May 15th incident" of 1932, when certain young military officers, sympathetic with the peasantry, assassinated not only Premier Inukai but Baron Takuma Dan, a prominent capitalist. The great banker J. Inouye had already been slain. These three represented respectively the political, commercial, and financial groups most abhorred by the *Aikyo-juku*, an agrarian society founded by K. Tachibana. "The gist of his doctrine, which has had a remarkable appeal, is that the attempted industrialization of Japan is a great economic error, and that the agricultural classes are carrying the burden of it and being exploited by the capitalists of the cities in alliance with the politicians." A writer in *Contemporary Japan* for September, 1932 (p. 271) bears out a part of these charges by estimating that 31.36% of the national and local taxes are paid by farmers and only 13.53% by commercial and industrial people.

The political parties having thus far failed to give the peasantry adequate relief from its troubles, perhaps the Imperial Reservists' Association and the Young Men's Leagues will take a hand. Each of these organizations numbers some three million adherents, mostly in rural districts. They are already a force in politics, and now certain national leaders, dissatisfied with the old-line parties, are espousing the cause of the farmers through appeal to these non-partisan but powerful groups. Mr. Y. Matsuoka, who became famous through his work at Geneva, is attracting a wide following, especially among Japanese youth, with the slogan: "Dissolve the political parties!"*

If the emergence of this movement strengthens the military influence at the expense of the political parties it will be not only because of the connection established between farmers and soldiers during the last sixty years or so, but also because the military influence derives from high moral standards. In contrast with professional politicians, who are largely placemen of "the master-hirers, the moneyed interests," Japan's professional soldiers still maintain the traditional virtues of "Bushido," so that the power they wield is not a military tyranny, as outsiders incline to think, but one of popular assent accorded to moral authority.†

* See his article with this title in *Contemporary Japan*, March, 1934.

† An admirable analysis of Japan's present "camp government," by H. Vere Redman, appeared in the *Fortnightly Review* for March, 1934.

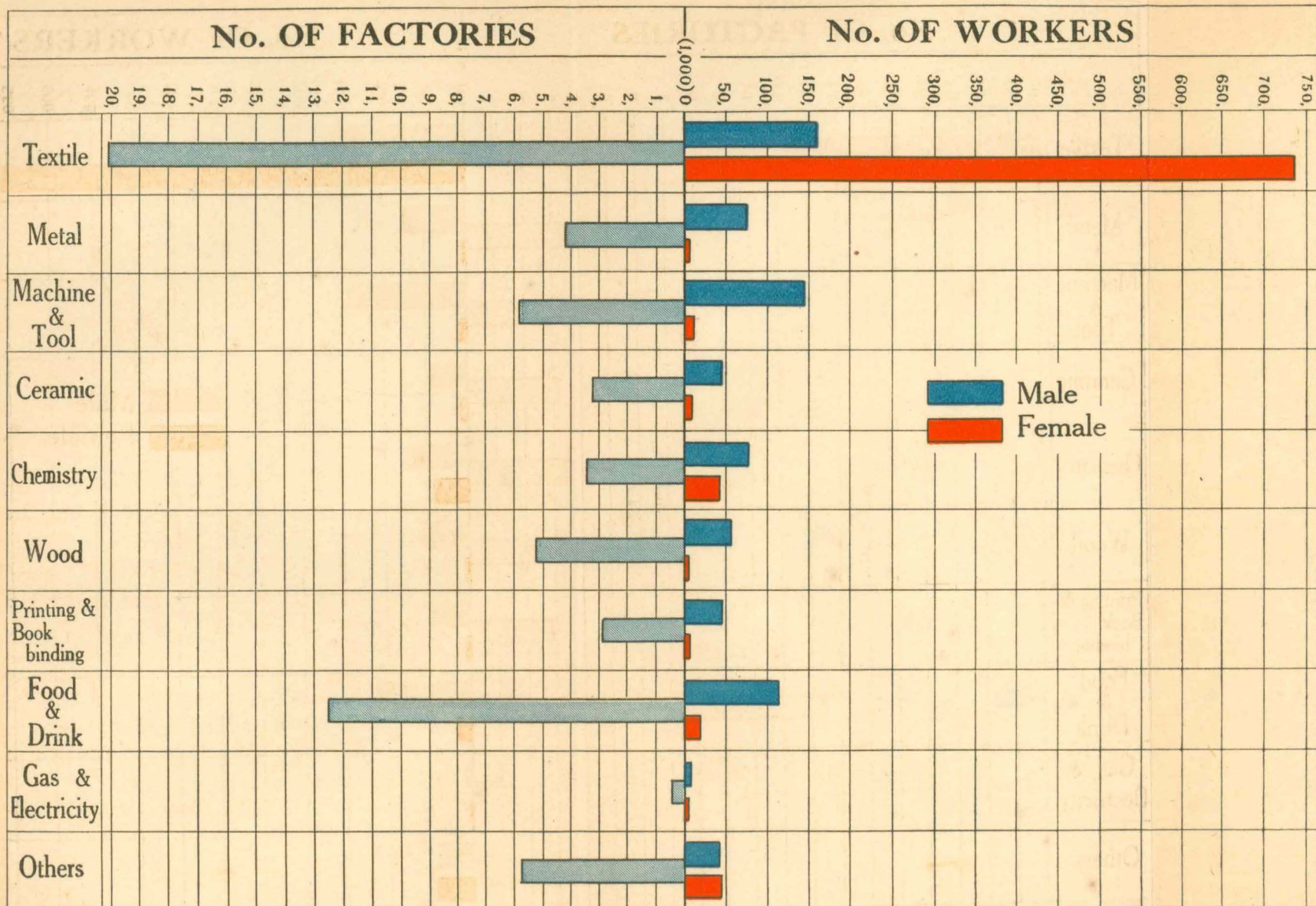
IX

WOMEN, ESPECIALLY IN INDUSTRY

¶ The main driving force—Ancient Japan and woman—Confucianism and oppression—The great Emperor Meiji—The “little embassy” to America—The reforms of 1898—Growth of the women’s movement—Present status of women—Amazing changes—The modern girl—Courtship yesterday and today—Factory laws—Wages—A big mill examined

FACTORIES AND WORKERS IN JAPAN

(CLASSIFIED ACCORDING TO INDUSTRY)



The textile industry is by far the most important industry in Japan, and as the majority of the laborers are women the factory regulations provided for their benefit practically regulate the hours of work for men also, although the present Japanese Factory Act lays down no regulations for men, and in this respect resembles the British Factory Act.

CHAPTER IX

WOMEN, ESPECIALLY IN INDUSTRY

WOMEN are the main driving force of Japan's Industrial Revolution so far as labor is concerned.

In the spinning and weaving industry they furnish 82.4% of the "man power," the number of female operatives being 740,511 as against only 158,281 males. In miscellaneous industries they furnish 54.3%. Although males outnumber them in lumber, machinery, chemicals, foods, ceramics, printing and book-binding, gas and electric works, and the metal industries, yet when the grand totals are summed up, women and girls are still in the lead, numbering 886,234 workers as against 774,098, or 63.4%.

If now we broaden the scope of this inquiry so as to include all gainful occupations it appears that out of the 29,000,000 women in Japan proper 9,930,000 are wage-earners, again more than half of the total number of wage-earners. In late years they have steadily moved upward from exclusively "women industries" into the metallic and mechanical fields, and have also shown a tendency to rise from physical work to mental. In 1931 there were 3,986 women physicians and pharmacists, 154,153 nurses and midwives. In other groups the latest available figures are for 1928, when there were 96,081 women teachers; 46,737 "communications" employees, including, of course, telephone girls; and 9,452 railway helpers. Typists and shop-

girls are legion. Of seventeen thousand women workers in Tokyo 76.57% contribute to the support of their families, besides earning their own living. The majority of these are from sixteen to twenty-five years old, and earn an average monthly wage of thirty yen. On this they can live and save a little, as they could not begin to do in America.

In marked contrast with other oriental countries, ancient Japan accorded a high place to women. Shinto exalted—and still exalts—Amaterasu the Sun Goddess, and worshiped other feminine deities. The Empress Jingu is reputed to have led armies into Korea. Although a Salic law has since 1889 barred women from the Throne, there have been ten officially recognized Empresses. Of the eight rulers of the brilliant Nara Period four were women, one of whom, the Empress Koken, ruled with a high hand. In the Fujiwara Age “men and women were almost equally educated, and stood on terms of perfect social equality.” One court lady, known as Madame Murasaki, wrote the world's first realistic novel, and one of its greatest: “The Romance of Prince Genji,” as it is called in its exquisite English translation. In so doing she probably contributed as much to the creation of the Japanese language as Wicklif and Luther did to English and German by their translations of the Bible. An eminent Japanese scholar names her third among the great Japanese of all time, outranking her only by Shotoku and Nichiren.

Even in the martial Kamakura age Yoritomo's widow, the Lady Masa, ruled court and camp by sheer force of character. She had already so impressed her mighty husband that he not only assigned several women to high positions, but arranged by law for widows to inherit their husbands' property and to adopt heirs if childless.

The subjection of woman was a feature of the reign of

Confucianism emphasized by the first Tokugawa Shogun, Iyeyasu. Its leading exponent was Kaibara Ekken, whose "Greater Learning for Women" taught that "a woman should look on her husband as if he were Heaven itself, and never weary of thinking how she may yield to her husband, and thus escape celestial castigation."

Among "seven reasons for divorce" this worthy named "disobedience to her father-in-law or mother-in-law," failure to bear children, jealousy, and "talking overmuch or prattling."

When the Tokugawa yoke was thrown off and the Meiji Period ushered in, one of the most noteworthy acts of the young Emperor was the rescript of 1871, which among other startling innovations emphasized the desirability of wives, daughters, and sisters accompanying the nobles that went abroad, so that they should "see for themselves how, in the lands they visit, women receive their education."

"The Leaders of the Meiji Restoration" further quotes the young Emperor as saying: "Females heretofore have had no position socially, because it was considered they were without understanding; but if educated and intelligent, they should have due respect."

Enlightened and far-reaching was the imperial patronage accorded to a little "embassy" of five Japanese girls sent over to America in 1871 to grow up in American ways and bring back whatever good they might find to the rising generation of Japanese women. "Before leaving home they were summoned to Yedo, and in testimony of the goodwill of the Mikado, and according to an ancient custom, they were each presented, by the attendants of the Court, with beautiful specimens of crimson crape, and an order was issued that their expenses while in America should be paid by the Government."

Ume Tsuda, youngest of the group — only seven — ultimately founded in Tokyo the women's college of English that has done so much for Japanese womanhood. Surely the "Enlightened Government" never proved its title better than by acts like these.

But it took a long time even to begin to undo the two and a half centuries of Tokugawa oppression. Not until twenty years after the Restoration were the personal rights of women recognized in the national statutes. By the revision of the Civil Law in 1898 "polygamy was made illegal; to force a woman to marry against her will was also forbidden; women over the age of twenty-five were given the right to marry men of their own choice, even without the consent of the family head; women were allowed to possess property of their own; married women, with the permission of their husbands, were permitted to engage in business of their own. These were the main points in the new law by which women were accorded rights which, though still less than those of their men-folk, had hitherto been withheld altogether."

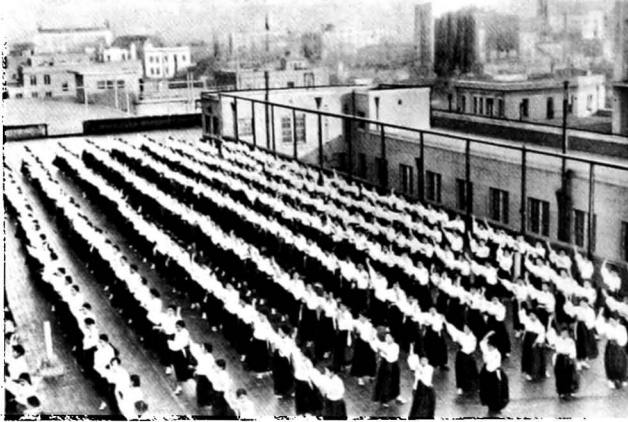
Ten years later the first women's organization was formed; the Women's Patriotic Association, which now numbers half a million members. By 1919 such organizations had become so numerous as to federate. One federation now represents three million members, and supports the suffrage movement. This originated with the Blue Stocking Club (Seitoshu), which soon lost public sympathy through imprudent conduct, and disbanded. The New Women's Society (Shinfujin Kyokai), organized in 1920, was a serious group of politically-minded women, with a lasting influence. Although it disappeared as such, from it sprang five new bodies, whose fine service in the great earthquake of 1923 did more for feminism than everything



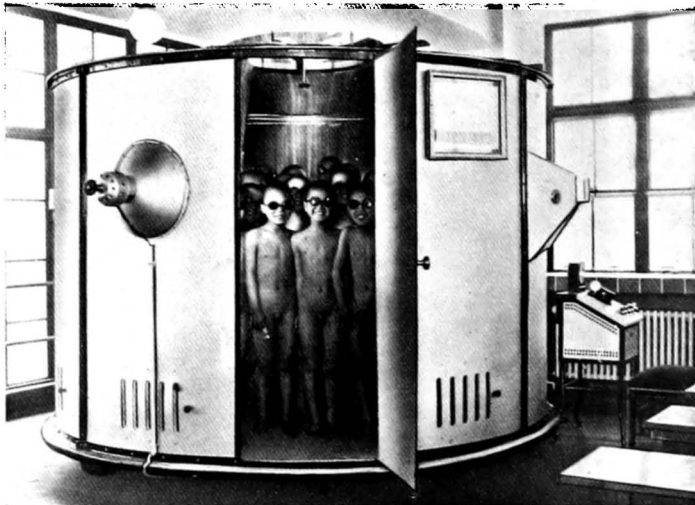
The "little embassy" with their American hostess, Mrs. Lanman
in 1871: Ume Tsuda in center.



Women physicians in 1934.



Operators keeping fit on the roof of the Osaka Telephone Exchange.



Primary schools give ray baths to their pupils.

SYSTEMATIC PHYSICAL CULTURE.

else put together. "Women of Tokyo of all shades were united in a common cause, and they realized that they were handicapped at all turns on account of their lack of political rights. The advocates of woman's suffrage multiplied." In the next year the Women's Suffrage League was formed, "and now, by means of lectures, the distribution of pamphlets, and the wide circulation of a large number of women's magazines, the aims and objects of those working for feminine rights are made known to an ever increasing number of women throughout the country."

How an ardently progressive Japanese woman views the present status of her fellow-countrywomen may be gathered from this statement by Mrs. Kikue Ide in the *Japan Advertiser* of February 11, 1934:

It is not sufficient to say that woman's status is far inferior to that of men. Women are entitled merely to the right of petition and of attending political meetings; women have neither the right of joining political parties nor participating in the work of legislature; women are still unable to secure even the right of citizenship, which would make it possible for them to be in direct contact with municipal and community government. It is worthy of note, however, that within recent years, especially since the promulgation of the so-called General Election Law of 1925, the women of Japan have been working even more zealously than before to establish their position in politics, with an even deeper conviction that, without the vote, the position of women can never be insured in any way.

Concerning woman's position in the government, it should further be noted that women may now belong to and take office in any self-governing public body which makes its own constitution, such as agricultural associations, tax-assessing committees, committees on water rights, and the like.

Again, women may enter direct governmental service under the Department for Education; but here, as else-

where, women may be appointed to minor offices only and are treated as hired employees without rank or title. According to the ordinance for appointing civil officers, two women thus far have indeed been accorded the rank of the lowest order of high officials, and 124 others have been awarded the same title without the rank. The principle of equal opportunity is not yet established; women are not yet eligible to fill professorships in government or other public universities and colleges. There are only a very few women principals of primary schools, and no women heads of public high or middle schools.

Coming now to the economic status of women (as set forth at the beginning of this chapter), the women masses will not long be indifferent to their present status, which does not yet guarantee equal pay for equal work, or women's economic independence.

On this unequal and unstable basis, women find themselves in their relation to society. Thus, for instance, there exists the public prostitute system, which still rests its claims on economic grounds. A girl may sell herself for her father's debts, or he may sell her for them. This and many other evils and vices of present-day society ignore and degrade the women. But with their advance in education, the women masses have awakened. By such social reactions, seen even recently, as the increasing numbers of nullified marriages where the husband was found an unfit mate, women have demonstrated that they have come to see what they are and what they might be in their relationship to the home, society, country—and even in international affairs.

Apart from what has been considered in regard to women's relation to the government, their position under private law, especially under the civil and criminal codes, is just as low as it was thirty years ago. Neither the single standard of morality nor the position of the wife, mother, or widow is as yet established in the eyes of the law. But here again attention should be called to the fact that, although the letter of these "time-honored" laws is still in force, the position of women in family relationships has been recognized already in many decisions of the courts handed down "in the spirit of the law and

in consideration of the times." One example of this is in the granting of the custody of children to a divorced wife, which the law does not permit, but which has actually been done occasionally of late years. In this connection it is significant to note the recent passage of an amendment which makes it possible for women to be admitted to the bar and to the practice of law after the year 1936.

Mrs. Ide, a Japanese, is identified with the Kobe College for women. The missionary president of another Christian college for women, Dr. Allen K. Faust, thinks that "the very surest way to produce a national calamity would be to give instantaneously to Japanese women full equality with men in all relationships of life." He also mentions as "an intensely interesting fact that in the last twenty-five years as much change in the condition of Japan's women was made as it took Europe five hundred years to bring about."*

The present writer's observations would seem to bear out this last statement, extreme as it sounds. Returning to Japan after an absence of twenty-five years, perhaps the most striking change of all was in the appearance of school-girls and other young women. Instead of the petite frame and anaemic complexion were sturdy forms and ruddy cheeks. Instead of the mincing step was the healthy stride. The public schools, with their daily drill in athletics, had actually added two inches to the average Japanese height, with a corresponding increase in weight and muscle. No street scene is more impressive to the thoughtful observer today than one of these "moga"—Japanese slang for "modern girl"—walking alongside her mother. As Dr. Faust says, "the old idea that grace is found in weakness

* "The New Japanese Womanhood," pp. 78, 19.

is being driven out of Japan. Japan knows that if she desires to have strong sons she must first have strong mothers." She is getting them, and that without loss of charm. Skiing is immensely popular in "the Japanese Alps." Young women go in for all sorts of competitive sports. Miss Kinué Hitomi will be remembered as the great runner in the last Olympics, who later sacrificed her life through over-exertion at Prague. Girls even race motor-cars, pilot airplanes, and descend from the sky in parachutes. And modern *geisha* play baseball!

Mr. Uenoda, in his delightful little book "Japan and Jazz," has good words for the "moga."

In former days a girl ate little, talked blushing, and rarely laughed in the presence of strangers for fear that she might be regarded as unwomanly. In those days a girl with a long face known as *urizane-gao* (resembling the shape of a melon seed) and a small mouth was considered the finest type of feminine beauty. Such facial beauty nowadays has no market. It is the interesting face lighted with sparkling intelligence that has begun to appeal. Today the city girl talks heartily, eats enormously, and laughs merrily. The long-faced and small-mouthed solemn beauty of the mid-Meiji Era has died of starvation.

Who is this moga and what is she, that has been gaining so much notoriety in newspaper columns and social gossip? To say that the modern girl is a kind of girl who will do anything she pleases is too sweeping a statement. Bobbed hair and foreign dress are only part of the modern girl. That the modern girl is a vamp is a fable. She is neither a man-killer nor a man-eater.

As a matter of fact, the modern girl is a timid creature, almost as timid as any girl. The allegation that she is bold and challenging to man is an exaggeration. It must be remembered that respectability in the feudal sense of the word still counts for everything in this country, where the family is the unit of national life. The respectability of one's family and its members is of prime

importance. In America, a girl of working age may find an advertisement in the "ad" page, and off she goes to apply for it. In a few hours she returns home having obtained what she wanted, and begins work the next day. This is hardly the case in this country. In order to get even the meanest job a girl is required to submit her personal history. To keep a good name for herself and her family is one of her greatest concerns.

The new status of woman has struck deep into social customs. Take, for example, courtship. During his previous residence, when he lived in an inland town, the writer knew well a young Japanese who decided it had come time to marry. It so happened that the old gentleman whom he desired as a *nakodo*, or "go-between," to find a wife for him, was the writer's language teacher. So the young man came and asked somewhat shame-facedly that Y- be allowed to go up the river and search out a good wife. After an absence of about a week Y- returned and reported to the groom-elect that he had found two very nice sisters, and asked which one he wanted. The groom, who had never met either, said that on general principles he thought he would choose the younger. Y- gave his assent and withdrew, but now Mrs. Y- took a hand. She knew the young women, and felt that the older girl would make the better wife. On being informed of Mrs. Y-'s opinion, the young man replied that it made no difference to him, and the two "lived happily ever after."

Within the present year the writer was guest at a wedding dinner in modern Tokyo. It was all very charming, but nothing so much so as the demeanor of the old-fashioned young bride when she stood up with her husband to hear the speeches of congratulation. Old Japan of a surety! Modestly bowed head piled high with an antique coiffure; exquisite *kimono* and resplendent *obi*; eyes down-

cast, hands folded demurely: she might have posed for a print by Toyokuni. But when the unsophisticated writer reached home he learned that the coiffure was a creation worn over bobbed hair, and that the bride and her husband had first met on the golf links last summer!

"Japan speeds up," and in no respect faster than in respect of her women. This is so much the case that what was true a few years ago may not be true now. Dr. Faust's excellent volume was published in 1926, yet Captain Kennedy, in his equally excellent book, "The Changing Fabric of Japan," published in 1930, said that the former required a number of modifications and alterations.

Especially do Western critics of the industrial treatment of Japanese women find it hard to keep up to date. The critic of five years ago would not think of saying today that the Factory Laws are a farce and that even so they are more honored in the breach than in the observance. True it is that the Industrial Revolution descended on Japan with such suddenness that for a time operatives were ill-treated in a manner to recall eighteenth-century England. But it is equally true that conditions were on the whole rectified with amazing speed and effectiveness. They are yet far from ideal, but they do compare favorably with what any country can show, *when judged by the Japanese standard of living.*

The Washington Labor Conference of 1919 had a direct effect on the Factory Laws of Japan, especially with regard to women and children. The Revised Factory Law of 1923 prohibits women and all children under sixteen from working more than eleven hours a day, exempts them from dangerous work, and also from night work. A Minimum Age Law adopted in the same year provides that children under fourteen shall not be employed in industrial

work, excepting those children over twelve years of age that have finished the ordinary elementary school course. Regulations for the Relief of Minors, adopted in 1926, strengthen the other laws, without adding anything to them. Working hours are being reduced, at least legally. After July, 1929, night work for women and children was abolished in factories under control of the Factory Law, and hours were shortened in the spinning and weaving industries. By further revision of the Factory Law in that same year, the limitation of hours was also enforced in factories employing ten workers or less. This was a real advance, as the chief overtime is done in small factories. The annual report of factory overseers for 1930 says: "Working hours are being shortened in general. But it must be remembered that overtime is widely done, especially by grown-up laborers in the machine-making factories." The average number of working hours in factories in 1931 was ten a day, with a little more than half-an-hour of recess included, and the average number of working days per month was 26.4.

After an elaborate investigation on the field, the "Fact-Finders" for the Laymen's Foreign Mission Inquiry reported in 1933 of Japan: "Factory legislation has been radically improved in the last few years, and now compares favorably with that of other countries."

Legislation for maternity protection is included in the Factory Law, the Mining Law, and the Health Insurance Law. A powerful influence in behalf of maternity protection and children will flow from the Emperor's gift to these causes—¥ 750,000—made early in 1934 in honor of the birth of the Crown Prince.

Unwholesome and improper labor conditions today are confined almost wholly to unorganized or poorly organized

industries, such as small factories making miscellaneous objects, and some silk filatures.* It is almost axiomatic that the treatment of Japanese labor is in proportion to the organization of the mills. Fortunately, the big textile concerns, which employ the mass of women's labor, are the most effectively organized.

Average daily wages in textiles are as follows:

	<i>Male:</i>	<i>Female:</i>
Cotton spinning	¥ 1.70	¥ 1.20
Weaving	1.50	1.00
Silk filatures	1.40	1.80
Dyeing factories	2.00	.90

COMPARISON BETWEEN EARNINGS OF JUNIOR
GOVERNMENT OFFICIALS AND FACTORY
WORKERS: IN 1932

(Reported by the Bureau of Statistics)

Daily Income of Junior Officials —		¥ 2.695
Average Wages per day of Factory Workers:	Metal Industry —	¥ 2.883
	Machine and Tool Manufac- turing —	¥ 2.859
	Shipbuilding; Manufacture of Carrying Machinery —	¥ 2.577
	Delicate Industry —	¥ 2.764
	Chemical Industry —	¥ 1.927

The writer was granted a permit to visit one of the largest cotton mills in Japan whenever he pleased, and

* The great Gunze Filatures, especially the main Kyoto works, are in every way admirable.

dropped in unexpectedly. This mill at present employs 2,280 operatives, of whom 1,850 are women, and only 430 men. Most of the women are eighteen or nineteen years old, but a good many are about twenty-five. Applicants—of whom there are always plenty—must have finished the elementary school course, which is usually done by the age of fourteen. Almost all are farmers' daughters. They work in two shifts: from five in the morning to two in the afternoon, and from two to eleven p.m. Half-hours are allowed for meals, three of which (big and wholesome meals) cost the operatives fifteen sen a day, about five cents American: less than one-half the cost to the company. Between eleven at night and five in the morning the mill is shut down. The morning shift takes free schooling—if desired—from 5 to 7:30 p.m., the other from 9 to 11:30 a.m., a total of 17½ hours a week. There are two courses, each of three years; one regular, the other "post-graduate." Subjects include reading, composition, penmanship, ethics, etiquette, housekeeping, cooking, dressmaking,—both Japanese and foreign,—singing, sports, dancing, and the exquisite art of flower arrangement.

The first and lasting impression that one gets of this mill is that everything is plain and clean. Construction of both spinning and weaving sheds is substantial, with ample fire protection. The mules and looms look old, and many of them bear English hall-marks. But a close examination shows that they are not nearly so old as they are dated, as they have been constantly repaired and renovated, so that many are practically made over on the improved Japanese pattern.

The hospital, while crude looking, was clean, and adequately equipped, so far as the observer could judge. There were sixteen patients, mostly "flue," which happened to be

epidemic. In summer the chief trouble is indigestion from over-eating. The dining-room, 216 feet long, 48 wide, and 30 high, had tables seating eight girls each. A radio functioned *ad lib*. Immaculate kitchens were serving an abundant and varied supply of good Japanese food.

The dormitories were inspected with special interest, as so much has been said about them. It is difficult to see what better system could be devised for large numbers of country girls coming to town, provided always the dormitories are clean, airy, and ample. Such these emphatically were. Each occupant has a floor space of at least thirty-six square feet. Some of the halls are, on this basis, large enough for sixteen sleepers, but thirteen was the maximum number in any one hall at the time of this visit. Ventilation is excellent, as sliding *shoji* are used. Although the weather outside was cold, the temperature inside was comfortable. Furniture was scant, but it is scant in all Japanese homes.

Uninformed foreign observers have made much ado of the fact that the girls sleep on the floor. All Japanese sleep on the floor, except the few that by long residence abroad have become habituated to Western ways. As a matter of fact, these particular dormitories had at first been equipped with foreign beds, but the girls asked to be allowed to sleep as they slept at home. So *futon* are supplied: soft wadded mattresses that stow away out of sight in the daytime, and at night are spread down on the soft clean mats, which no shoe ever touches, none being worn indoors.

As for the same beds being continuously in use, "always warm," first occupied by one shift and then by another, that is prohibited by law, a prohibition that is strictly enforced. Posted regulations require the *futon* to be aired and the pillows and sheets to be frequently washed. Large

tiled bath-rooms are provided free for all workers, with abundant hot and cold water. The drinking water is pure, although the almost universal Japanese substitute is a weak green tea made in boiled water.

When will foreign critics acquire enough rudimentary intelligence to judge factory conditions not by the standards obtaining in their own home lands, but by those of the countries they are visiting? The present writer believes, as already stated, that while the Japanese standard is different from ours, it is not lower. In some respects, such as cleanliness, it is probably higher. At any rate, there is no sort of doubt that the girls in these dormitories have better living conditions than they had in their country homes. They also have ample recreation facilities, while free cinema, free lectures, and other forms of entertainment and instruction are provided in an assembly hall.

In the weaving sheds the girls were working on lawns and triple-width shirtings. One operative tended twenty-four automatic looms while operating twelve non-automatics. This can be increased to thirty-three and sixteen, respectively, if for double width (really two-and-a-half width) cloth. There seemed to be an unnecessary volume of almost deafening clatter, but it has been so long since the writer lived in an American cotton-mill town that he is unable to judge whether this nerve-racking noise is worse here than there.

In the spinning sheds an "ordinary" operative takes care of one frame of 460 spindles. A "skilled" operative works $1\frac{1}{2}$ frames, and a "very skilled" operative two frames. This showing is based on gassed yarns and medium-counts.

Of one thing the writer is sure. In comparison with American operatives these women, instead of looking list-

less, seem healthy and energetic. These Japanese mill-girls are as rosy and merry as Japanese school-girls, which is saying much. The machinery at home is snappier than it is here, but not the operatives. As for England, Mr. Arnold Pearse doubts "whether many girls in expensive boarding-schools in Europe are better cared for or have more freedom."

Inquiring into the comparative health of the operatives it was learned that the average weight of Japanese women operatives is 105.6 pounds in comparison with 99 pounds for non-operatives of like age.

As to holidays, the mill-girls get four at the year-end; those of the *Bon* festival; three national holidays; and four days off every month.

It must be remembered that the Japanese as a whole work much more steadily than Occidentals. Professor Basil H. Chamberlain reports in "Things Japanese" that the servants he took home to England were overheard discussing "our three most prominent characteristics," which they found to be "dirt, laziness, and superstition." He adds: "As to the comparative dirtiness, there can be no doubt in any unprejudiced mind. You yourself, honoured Madam, of course take your tub regularly every morning. But are you so sure that your butler, your coachman, even your lady's maid, as regularly take theirs? Again, what is a stranger who hails from a land of fifteen working hours daily (less now) and of well-nigh three hundred and sixty-five working days yearly, to conclude from the habits of European artisans and servants, from post-offices closed on Sundays either totally or during portions of the day, etc., etc.? With regard to superstition, that is a matter of individual opinion.—Europe and America make a far less favourable impression on the Japanese visitor than seems to be generally expected."

WOMEN IN INDUSTRY 187

Besides the free educational courses, women operatives in the mill inspected get free health insurance and medical service, with bonuses when they leave, based on an allowance of from forty to sixty days of wages at the end of one year of service, with from 10% to 20% more for each additional year. The average term of employment is 2½ years. The usual reason for leaving is marriage. No indenture is required for admittance, and no restrictions are imposed on personal freedom except as necessary to maintain a fair discipline.

This mill is representative of the great Kanegafuchi system, which manages 115 factories for spinning, weaving, knitting and finishing cotton, silk, rayon, and wool, employing 45,000 operatives.

NOTE: The reader is further referred to the report of the International Labor Office, 1933, on Industrial Labor in Japan. It states that lectures, study groups, reading circles, circulating libraries, theatrical and other entertainments, football, baseball, and tennis play a part in the life of many Japanese factories, and adds that while it is true that the dormitory system in its present form involves considerable loss of personal freedom, it has many advantages, particularly from the point of view of welfare work.

X

FACTORS IN JAPAN'S INDUSTRIAL SUCCESS

¶ Germany, the Great War, and Japan
— Japan holds her advantage —
“Dumping” and its false charges
— Sweating — Pickles vs. cheese —
“Convinced determination” — Ra-
tionalization — Hostile testimony —
Summary

FOREIGN TRADE OF JAPAN



Exports and Imports of Japan

(thousand yen)

	Exports	Imports	Excess of Exports	Excess of Imports
1867	15,553	10,693	4,860	—
1872	17,027	26,175	—	9,148
1877	23,349	27,421	—	4,072
1882	37,722	29,447	8,275	—
1887	52,408	44,304	8,104	—
1892	91,103	71,326	19,777	—
1897	163,135	219,301	—	56,166
1902	258,303	271,731	—	13,428
1907	432,413	494,467	—	62,054
1912	526,982	618,992	—	92,010
1916	1,127,468	756,428	371,040	—
1917	1,603,005	1,035,811	567,194	—
1918	1,962,101	1,668,144	293,957	—
1919	2,098,872	2,173,460	—	74,588
1920	1,948,395	2,336,175	—	387,780
1921	1,252,838	1,614,155	—	361,317
1922	1,637,452	1,890,308	—	252,856
1923	1,447,751	1,982,231	—	534,480
1924	1,807,035	2,453,402	—	646,367
1925	2,305,590	2,572,658	—	267,068
1926	2,044,728	2,377,484	—	332,757
1927	1,992,317	2,179,154	—	186,837
1928	1,971,955	2,196,315	—	224,360
1929	2,148,619	2,216,238	—	67,619
1930	1,469,582	1,546,071	—	76,219
1931	1,146,981	1,235,675	—	88,694
1932	1,409,992	1,431,461	—	21,469
1933	1,861,045	1,917,219	—	56,174

The progress of Japan's foreign trade is a world wonder. But always, except during the Great War, Japan has bought more than she sold. During the last 15 years she bought 3,577,585,000 yen (about \$ 1,800 million at par) more than she sold.

(Courtesy of the Industrial Welfare Society of Japan)

CHAPTER X
FACTORS IN
JAPAN'S INDUSTRIAL SUCCESS

THE Great War was the starting-point in Japan's speeding-up process for some reasons not wholly obvious. How much the outbreak of that war meant to the development of Japanese industry cannot be grasped without taking into account Japanese-German relations.

Down to 1914 Japan relied to an extraordinary degree on Germany, not only for the instruction of her young men in technology, but also for innumerable supplies in the shape of chemical and other technological products that she never dreamed of making for herself. After graduating at Charlottenburg or some similar German school, her young men remained for the most part in Germany as experts in the big industrial factories. War instantly achieved two results: cut off all German supplies from Japan, and sent these trained young men packing home.

Two other results speedily followed. To supply herself with commodities for which she had depended on Germany, Japan started plants of her own, to manage which her technologists were thrown on their own resources.

Thus the Great War stood Japan on its own feet as a manufacturer of multifarious commodities. It also brought into the factories already established, such as those making textiles, young blood and trained brains.

But Japan was confronted not only with her own domestic demand for the goods she had been buying from Germany; all the warring Allies, so busy producing arms and munitions that they had no time for anything else, began to deluge her with all sorts of orders. Her participation in the war, while highly effective, involved no large contributions of man power, her services being almost wholly on the water. She therefore became a purveyor to the Allies not only of the munitions and accouterments of war, but also of general commodities of every description. With characteristic adaptability, alertness, and skill she responded to all demands with amazing celerity, and consequently, during the four years of the war, amassed an amazing wealth.

Chapter VII opened with a reference to that hysterical period. Those wishing to look into it closely should study the statistical writers, especially the assassinated banker, J. Inouye,* and such economists as Tanzan Ishibashi. The total paid-up capital of Japanese corporations in Japan proper was ¥ 1,983,232,000 in 1913; in 1919 it was ¥ 5,925,497,000. In other words, Japanese wealth as measured by corporation paid-up capital increased by four thousand million yen during the war years. Imports and exports tell the same story. Shipments of pig-iron grew from 240,000 tons in 1913 to 690,000 in 1918; of steel from 250,000 tons to 530,000. Not only so, but the prices of all the old exports soared; for example, raw silk from ¥ 800 a bale to ¥ 1400, cotton yarn from ¥ 100 to ¥ 400.

This, of course, was a veritable tidal-wave of prosperity. Like other tidal-waves, it receded. News of the Armistice brought pig-iron toppling from a peak price of ¥ 550 a ton

* See footnote on page 167.

to ¥350, and by the spring of 1919 it had fallen to ¥120. Copper, which Japan had been exporting, fell from ¥170 a ton to ¥35, and the cost of chartering a ship from ¥47 a ton to ¥9, not enough to pay for sailing it.

Not until 1921, however, did depression actually set in. At the beginning of that year Japan's foreign obligations stood at ¥1,600,000,000 as against ¥1,900,000,000 in 1914, and her gold reserves at the record figure of ¥2,183,000,000 as against only ¥341,000,000 when the Great War opened. In March, however, the depression began, with the result that by the end of 1922 gold reserves had sunk to ¥1,830,000,000.

Then came the great earthquake and fires of 1923, blotting out Yokohama and destroying two-thirds of Tokyo, with a loss of ten thousand million yen in property alone, to say nothing of human lives.

To repair these gigantic damages Japan borrowed £25,000,000 from England and \$150,000,000 from the United States, for which she was charged at the enormous net interest rate of seven per cent.

Not only are Yokohama and Tokyo magnificently rebuilt in the manner illustrated in this book, but Japan's economic structure withstood the terrific strains, notwithstanding resumption of gold payments at par under the Hamaguchi Cabinet, for which the Premier paid with his life.

That Cabinet partially atoned for its grave economic error by imposing on industry a stern retrenchment and the demand for rationalization as a national policy. As will be seen later, the industrialists responded to the demand with amazing efficiency, and when the Inukai Cabinet in 1931 suspended gold payments the new tide of industrial success set in that is still on its flow.

Japan, in the long course of her history, has given many exhibitions of nerve, but never a better one than that indicated in the preceding paragraphs; one that may be studied statistically.

“Dumping” is a cheap and lazy explanation of Japan’s industrial success. It is also false. Its charge of inferior goods is obviously false. It further charges government subsidies, a low standard of living, and sweating. These may be examined in reversed order.

Sweating, unfortunately, does exist in Japan, as in every country on earth. In the purlieus of any of her six large cities slums may be found, inhabited by the underpaid and overworked makers of small miscellaneous goods, just as in the East Side of New York or certain sections of London. Such conditions may also be found in some silk works in the country districts, and perhaps in a woolen mill or two. But all these factories, small and unorganized as they are, illustrate what was emphasized in a previous chapter: that the welfare of operatives is in direct proportion to industrial organization. There is no large-scale exploitation of labor. The small factories are not those that cause such concern to foreign competitors. They turn out either distinctive Japanese wares or comparatively non-competitive goods. What is more, the government is rapidly improving them and their methods. Big factories, such as the Kurume rubber works and—preeminently—the cotton-mills, operate on a régime that stands comparison with any, as Charles K. Moser recently reported to his government.*

As for England—to be specially considered in the next

* Now chief of the Far Eastern section of the Bureau of Foreign and Domestic Commerce in the United States Department of Commerce. He inspected Japan in 1930.



Making Chemical Tests of Food for Japanese Factory Operatives.



In a Modern Japanese Mill.

chapter — President Tsuda of the Kanegafuchi Company does not overstate the case in saying: "That the living conditions of the Japanese spinning workers is much better than in England is admitted by all Englishmen who have personally inspected the conditions of the Japanese spinning industry. The only difference is in the mode of life in the two countries. In other words, it is the question of the difference between cheese and pickled radish, the latter being eaten in Japan in the same manner as cheese is in England," and radishes being far cheaper than cheese. Developing this idea, another Japanese says: "Transplant a Japanese mill-hand to Lancashire, give him an iron bed with a soft mattress, put him on a ration of bread and butter, beefsteak, coffee and cream, and he will go on a strike, demanding Japanese bedding spread on a matted floor, and a ration of fish, rice and vegetables which, to him, are more palatable and wholesome. It is the misfortune of the British or American mill owner that his standard calls for higher-priced materials than the Japanese, that is all."

"Such advantages as Japan enjoys as a result of her depreciated yen may be short-lived," writes the special correspondent of the *London Spectator*,* "but there will still remain permanent elements in her industrial fabric which will make her competition increasingly formidable for an indefinite period. One of these, of course, is the standard of living in Japan. To call it a low standard begs the question. It is Japan's standard, a standard with which she is satisfied, and it should be described less as low than as simple and inexpensive. Measured in terms of contentment it would be hard to say that the Japanese worker lives on a lower standard, or leads a less agreeable life,

* December 15, 1933.

than an English worker. Japanese labor is certainly not sweated or oppressed. Without any such stimulus the average Japanese works hard and takes an interest in his job, and with a thoroughness which a competent observer acquainted with both countries sometimes misses in Lancashire. For better or worse, and in some respects no doubt it is for better, the average Englishman does not think of trade and industry as the chief business of life. The average Japanese and Chinese do, and the result is that the factory and the office in Japan or China is animated by a kind of convinced determination which is absent or deficient in Western countries."

This "convinced determination" has been noted and emphasized—so far as Japanese industries are concerned—by such trained and unprejudiced observers as Messrs. Sansom and Kermode, attached to the British embassy in Tokyo. In their latest report to their government they say: "One cannot escape the impression of a rare unity of purpose and concerted effort. Such reflections as these may seem out of place in an economic report but it is difficult to understand the position and the prospects of Japan as a modern industrial state without appreciating the national spirit which shapes her activities. The industrial growth of Great Britain, and even of more deliberately organized states, has been haphazard in comparison with the development of Japan, which has been the result of a policy aimed at making the Japanese empire an economic unit as completely self-contained and self-supplying as physical limitations would permit.—The assistance given to industry by the state in terms of money is of comparatively modest dimensions; and the principal form of government help is probably protection by import tariff. Apart from such measures, however, the Japanese Government is not

backward in taking positive steps to direct the course of industry and trade by legislation. Thus in pursuance of a declared policy of 'rationalization' a law for the Control of Staple Industries was enacted in 1931, by which the competent Minister of State is empowered under certain conditions to force a minority of persons engaged in a staple industry to participate in an agreement made by the remainder for the control of production or sales," the Minister usually exercising his authority to prevent overproduction and to increase the price of exports instead of decreasing it. "In 1931 also, amendments were made in the laws governing Manufacturers' Guilds and Export Guilds. These guilds are composed principally of small-scale manufacturers and traders, and the changes in question were made, to quote an official memorandum, 'in order to hasten the process of rationalization.'"

"Rationalization" is a word more common among the English-users of Japan than anywhere else in the world; corresponding to the frequency of the use of its Japanese equivalent. This is because the process it denotes is so much to the fore. "Rationalization" is used in Japan to denote the application of carefully reasoned processes to every branch of industry, including, of course, sales programmes. Nine pages are devoted to it in the current issue of the Japan Year Book, from which a few citations may be useful in illuminating some of the secrets of Japan's industrial success.

"Rationalization, like one's ideal, can never be complete. The standardization of equipment, machinery, tools, implements, etc., and the simplification of merchandise are known to form the basis of the technical side of the rationalizing process. It enables producers to reduce the costs of production through homogeneous mass production, econo-

mizes expenses for the sellers by relieving them from carrying unnecessarily large stocks, and also by facilitating their transactions; while the consumers, too, are greatly benefited by being able to buy cheaply and make more accurate selection. For these reasons many countries have each a special organ devoted to this purpose of standardization and simplification. In this country, a Board to investigate the standardization of industrial arts was established as early as 1921, and efforts have ever since been made to determine the best standards for any industry and to disseminate knowledge of and encourage the adoption of the standards thus determined. With the establishment of the Rationalization Bureau, the work of this Investigation Board was brought under its jurisdiction. The number of standards so far fixed by the Board is 106. The result of their use and dissemination has been very satisfactory, the most conspicuous case being in Government works. The Yawata Iron Works, which hitherto manufactured 657 kinds of articles has limited their number to 120 in conformity with the principle of homogeneous mass production. As a result, not only has the amount of steel manufactured there increased considerably, but the coal-consumption per ton of steel has been reduced, contributing to a great reduction in production costs. It may be added that the Board is a member of the International Standardization Society, thus contributing to the standardizing movement among nations."

Rationalization in Japan has been so successful that Dr. Arno S. Pearse, for many years General Secretary of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, with headquarters in Manchester, agrees with Mr. Moser of the United States in the view that no cotton-mills anywhere are better organized and managed than in Japan.

For example, Dr. Pearse comments on the absence of hedging—the protection of an investment or speculation by taking some offsetting risk. “It was a great surprise to me,” he writes, “that not one of the big combines and very few, if any, of the financially weak mills hedge their cotton purchases. I was assured time after time that it is quite a common occurrence for these combines to have thirty thousand or fifty thousand bales and at times even eighty thousand bales unhedged.” By this practice, uncommon in England, they reap handsome, often enormous profits from purchase of raw materials when the market is right.

Again, the Japanese method of mixing raw cotton of various staples so as to produce yarns or fabrics of various grades to meet the tastes and requirements of the countries to which they are shipped impressed Dr. Pearse as “an art of which the Japanese mill managers are justly proud.” “It is a secret jealously guarded by all mills,” writes Mr. K. K. Kawakami in *Foreign Affairs*.* “The protection of the various materials in the mixture varies to harmonize with the local conditions of the purchasing countries. The Japanese mills endeavor to produce what the purchasers want, and not what they think the purchasers should like. That is why Japanese cotton goods have won new markets.”

That is one reason, but it is not the main reason. The main reason is to be found in efficient management and the use of down-to-the-minute equipment. This has already been emphasized. It is driven home by President Tsuda in a comparison with England. England has fifty million spindles, Japan some eight million, or only sixteen per cent. Yet in 1933 Japan outdistanced England in cotton exports! The subject has become so important that the next chapter will be devoted to it: Japan and England.

* April, 1934.

Recapitulating the factors in Japan's industrial success, we may strike out: as false: *inferior goods, sweating, and dumping*. We have left: *up-to-date equipment; scientific management, including sales management; government supervision*; and, above all, *hard-working, skilful, and contented operatives*.

After the foregoing conclusions had been reached and written, the writer came across an article by M. J. C. Balet in *Le Monde Nouveau* which strikingly confirms them: "People do not work and sell at a loss for long," says Monsieur Balet, "and especially do not do so deliberately. To speak of Japanese dumping is nonsense. Not only does Japan not sell at a loss in relation to internal prices, but in fact her export prices are no lower than those of the internal market. Moreover, her industrialists receive no subsidies. Japanese commercial success has much simpler causes, such as:—(1) The urgent necessity, first, of living; and, next, of assuring the future of a prolific race crowded into a poor and small archipelago; (2) A great national ideal; served by an unequalled discipline and will; (3) A marvelous sense for the assimilation and adaptation of the most perfect scientific processes."

Using "low" solely in the sense of "inexpensive," the French authority goes on to define the term *social dumping*, which has recently come into use in the world-wide attempt to explain Japan's trade expansion. "All these causes," he says, "will be insufficient to explain Japan's extraordinary success if we forget that besides all kinds of dumping (the work of men) there is also a *social dumping* (the work of centuries) which favors some countries to the detriment of others. This arises from the difference in living-standards among different peoples. Generally, nations with low standards are behind high-standard nations with respect to

science, production, and commerce. But let us suppose that a nation, while keeping a low standard of living, raises itself to a parity with the first nations of the world in power and civilization. In industrial and commercial competition it will then have a superiority equal to the difference in the living-standards. Such is precisely the case of Japan, a case without precedent in history. It is in this social dumping (which, however, grows less and less as the Japanese living-standard gets nearer that of the nations which have been its model) that the fundamental reason for Japanese expansion must be sought."

Another French authority, Mr. Fernand Maurette, visited Japan in the spring of 1934 to observe industrial and labor conditions on behalf of the International Labor Bureau (at Geneva), of which he is vice-director. "I must say," he is reported to have said, "that my impressions have been very good. I have seen many factories, have observed conditions in them, and have discussed problems with competent government officials and labor leaders. I have found a very good spirit in the factories and among the workers. Japanese labor organization and the rationalization in the factories are impressive, but still more impressive, I have found, are the Japanese workers. Active, enthusiastic, happy and efficient, they are very intelligent people, and I consider them to be the most valuable capital in the Japanese nation. However, Japan's commercial expansion has raised the question of the Japanese standard of living. Western people do not know how the Japanese workers live. The cost of living is cheaper here, but I do not see any low standard of living. And it is this fact—the high level of the Japanese worker and his living standard—that must be explained abroad more frankly and clearly by Japan."

PART TWO

ORIENTATION

XI

JAPAN AND ENGLAND

¶ Nara and the Shoso-in, a repository of Japanese classical arts and crafts — The plebeian art movement — A present day revival: Kanebo "service stations" — How England's Industrial Revolution was promoted by invention — "A coincidence of exceptional circumstances" not found today — A comparison of textile efficiencies — The British-Japanese economic conference — British journals on Lancashire — A great industrialist speaks out — Coal, iron, and steel

CHAPTER XI

JAPAN AND ENGLAND

A JAPANESE writer tells us that Nara, his country's earliest permanent capital, was laid out on a grand plan made by skilled engineers in an age when English London was nothing but a group of rude dwellings huddled on the banks of the Thames. While now much shrunken in size, the little city is still a place of quite irresistible charm, containing among many treasures the most remarkable museum on earth, known as the Shoso-in.

When, in the middle of the eighth century A. D., the Emperor Shomu died, he dedicated the contents of his Nara palace to the Deity of Boundless Light, the Vairocana Buddha. To the devotion and energy of his widow, the Dowager Empress Komyo, we owe the fulfilment of this dedication vow. Her deed of gift—the corner-stone, as it were, of the foundation of Shoso-in—is now among its most valued possessions. In tribute to her dead lord the Dowager Empress beautifully wrote :

Nine and forty days have now elapsed, but each day my grief grows deeper and sadness weighs ever heavier on my heart. To supplicate the Earth or to cry out to Heaven brings me no solace. I have therefore resolved, by the performance of good deeds, to give succor to His august spirit. To this end, and in obedience to the will of His late Majesty, these His relics—that in truth are national treasures—I donate to the Todai temple by way

of offering to the Buddha Vairoçana for the repose of the Emperor's soul. May these gifts, I humbly pray, aid its progress, so that the carriage of His spirit may speed on its way to the Temple in the Lotus World! May He there always enjoy heavenly music, and may He finally be admitted to the Sacred Hall of the Buddha of Light!

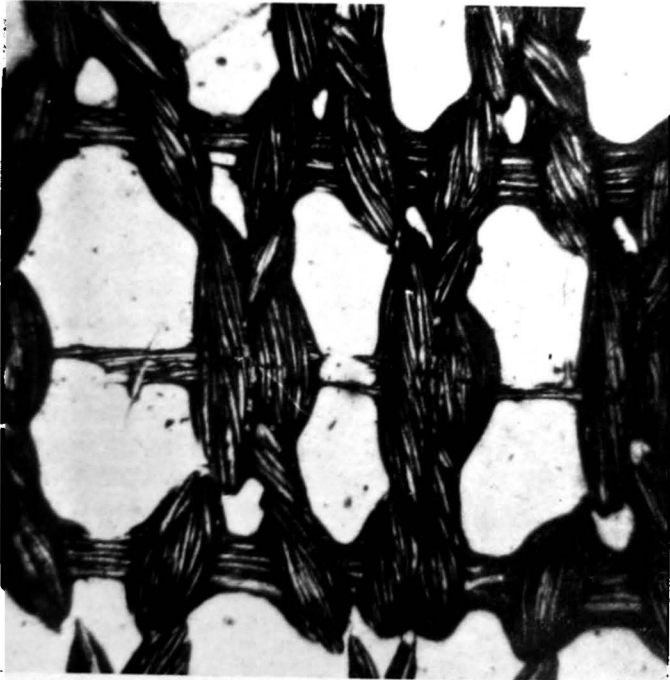
Then follows, according to Sir Percival David, who provides this translation,* a detailed and carefully prepared inventory of the precious relics; and the document, stamped with 489 imperial seals, concludes with the signatures of five grandees of the court, and with the date, the 21st day of the 6th month of the 4th year of Tempyo-Shoho, namely, July 22, A. D. 756.

Shoso-in, the wooden storehouse in which all these priceless objects were housed, originally consisted of two separate structures, but later the space between them was so built over as to form a continuous building 108 feet long and forty-eight wide, supported on forty wooden pillars at a height of nine feet above the ground, the total height from earth to ridge-pole being thirty-nine feet. It is constructed log-cabin fashion, of triangular cypress logs crossed at the four corners of each of the three sections, the ends of the logs protruding. Age has blackened these logs to the color of ebony, and storms have planed at least an inch from their ancient surface. Ventilation is automatic; the weather does the work. During the rainy season the logs expand so as to keep out the moisture, while in dry weather they contract, so that air enters and circulates. Doors were not pierced through the partitions, nor were any windows cut in the walls. A verandah surrounds the building, and from this the visitor passes first into the central section,

* In vol. xxviii of "Transactions and Proceedings" of the Japan Society, London.



The old Shoso-in at Nara.



Weave of an ancient Textile as revealed by Microscopy.

(See p. 74.)

and then comes out to enter the other two. For nearly twelve hundred years this marvelous museum has stood untouched by fire and unharmed by earthquake or the wars that have waged around it, its treasures protected from molestation only by little strips of rice paper slipped through the hasps of its three doors and stamped with the Emperor's seal. A Japanese poet has sung,

What a country!
 Even the inflammable stands intact,
 Even the wooden treasury does eternally stand!*

Additions were made to the contents of Shoso-in from time to time, the most important being the private treasures of the Todaiji monastery, in A. D. 950. But the furnishings of the Emperor Shomu's palace still remain its chief treasure, and constitute its chief interest. Many museums contain ancient objects of beauty reclaimed from the earth by the spade, but where is there another like this one at Nara? — deliberately filled with multitudinous furnishings from an imperial palace twelve centuries old; all of them untarnished and perfect; so that, by grace of a long dead royalty, the court life of eighth-century Japan can be reconstructed in minutest detail.

Professor Y. Oshima, President of the Imperial Household Museum, has counted 5,645 items in the Shoso-in. "Each item may, and often does," he says, "consist of a large number of objects. For instance, there are in the collection two large *karabitsu*, containing canopies, banners, flags, weapons, metal ornaments, etc. These are counted as two items, but the boxes contain 1,102 separate objects! Take another category, the gems and semi-precious stones.

* Translated by Dr. A. Matsuoka in "Shoso-in," Japan Society, New York.

How many of these would the average visitor consider there are in the Shoso-in? A hundred or two, perhaps. There are no less than 60,090 perfect specimens. In addition, there are three large wooden cases filled to overflowing with imperfect and slightly damaged gems, so numerous that they are not computable, and are measurable only by weight. How, then, can we say how many objects there are in the Nara Repository?"

Among many lessons, Shoso-in would seem to teach this:

A hundred years before Alfred the Great was born, the Japanese imperial family and their retinue had their rice served in small covered cups of stone ware, with *céladon* glaze; ate their fruit from deep dishes of white agate; poured water from golden ewers; played chess on boards of rich lacquer, using men of white jade and red coral; burned incense in censers of bronze inlaid with jewels; kept this incense in small boxes of Paulownia wood with gold lacquer decorations; wrote with camel's-hair brushes having delicate bamboo handles, which lay upon rests of prettily carved coral; employed plates of nephrite to rub down sticks of Chinese ink; arranged flowers in slender, long-necked vases of bronze with a purple patina; used for pillows silk-covered bolsters with cotton and having designs embroidered on them in low relief; carried long, straight, two-edged swords rivaling those of Damascus; kept their writing materials in boxes of colored or gold lacquer; saw their faces reflected in mirrors of polished metal, having the back *repoussé* and chiseled in elaborate designs; kept these mirrors in cases lined with brocaded silk; girdled themselves in narrow leathern belts, ornamented with plaques of silver or jade; and played on various musical instruments, from harp to viol and flute, not only beautifully

fashioned but exquisitely inlaid with gems.* Other and harsher objects, such as armor and saddles and spears, were models of artistic beauty. "The blades of the swords and spears and lances maintain their glittering brilliance; the Sutras look as if they were written but yesterday; the silks, the brocades, the tapestries, glow resplendent as they did when they graced the Nara palaces and temples twelve centuries ago."

While many of the objects in Shoso-in are of exotic origin, — some from as far away as Persia, — by far the majority were made or embellished in Japan. Today the old repository lies fallow, holding precious seeds from which there might spring a renaissance of beauty in this machine-ridden world. No other country has such a treasure-house of models for the redemption, by beauty, of all manner of utilitarian goods; no other country, it may be repeated, has a people so apt for such worthy tasks.

This fact derives chiefly from that plebeian art movement which originated with the most popular of Japanese heroes, Hideyoshi, the Taïko. The son of a humble peasant, he made himself master of Japan; America itself, with its roster of men who climbed from log cabins to the White House, has nothing to surpass him. When he rested after his wars he built palaces of pleasure within his castle walls at Osaka, and on Peachtree Hill near Kyoto. In the decoration of these palaces, as Dr. Anesaki says,[†] Hideyoshi's artists succeeded in creating "an over-mastering impression of the whole past of the Japanese race, with all its passions and ideals—a sort of gigantic race memory expressed in designs and colors as bold as they were free, as gorgeous as

* Description adapted from Brinkley's "Japan, Its History, Arts, and Literature," vol. i, pp. 148-149.

† "Art, Life, and Nature in Japan," ch. v.

they were beautiful. — In the third month of the year 1598 the hero gave a wonderful garden party during the feast of cherry blossoms. He placed screens of gold and pink and green along the entire length of the street that led from his palace to the garden, and he closed in the entire garden with curtains of gorgeous brocade, all the extravagances only serving to please the hero's sense of his own greatness. Five months later he was dead. The palaces of the 'Assemblage of Pleasures' had earlier been pulled down by Hideyoshi himself; the palaces on the Fushimi Hill were destroyed only fourteen years after the founder's death by order of the dictator who supplanted his dynasty," namely, the first Tokugawa shogun.

But the destruction of these palaces and the dispersal of their decorations and decorators throughout the empire spread the appreciation and practice of art among the common people as nothing else could have done, seeing that they idolized—and indeed still idolize—this groom who had made himself master of princes.

The plebeian art movement gravitated naturally to Kyoto as its center, since that city had from of old been the seat of Japanese culture, and was now destined by this new movement to apply art to objects of everyday use in a way that deserves emulation. Inspired by the great realistic artist, Okyo, the cotton manufacturers of those days cut stencils from his patterns and those of his pupils that revolutionized the dyeing of the commonest clothing, while bronze casters beautified even kitchen utensils with "delicately sculptured translation in relief" from Okyo's irresistible sketches. He is now held to be one of the great national geniuses, as Fenollosa says,* this designer whose patrons were the silk weavers and bronze casters, the em-

* "Epochs of Chinese and Japanese Art," ii, 170.

broiderers and lacquerers of Kyoto, the potters grouped at the foot of Arashi-yama, the merchants who found a hungry market for their beautiful utilities all over Japan.

It seems pertinent to recall here the words of a famous art critic quoted at the beginning of Chapter IV. "Never have the craftsmen of any people found so many things upon which to exercise their skill, or developed such skill in the exercise. In the vicissitudes of Japanese history the development has suffered interruptions, but with each restoration of peace art has revived with amazing promptness and vigor. In the eighth century at Nara, in the ninth and tenth at Kyoto, in the thirteenth at Kamakura, and in the seventeenth over all Japan, art responded to the sunshine of peace and prosperity."

Is it not time for another revival of art as applied to the commonplace?

For textiles, the Kanegafuchi mills answer Yes. They have begun to devote their most skilled craftsmen and some of their finest machinery to the production of exquisite fabrics, in silk, cotton, and rayon, with a view not chiefly to profit, but to a world-wide demonstration of Japanese classical art and of modern technique. Japan has not yet lost its ancient skill. While the demand for cheap and tawdry goods has had a devastating effect, skilled technicians are still to be found not only in the textiles, but in lacquer and pottery, who can produce goods that stand comparison with the work of old masters. "Kanebo,"* as the big factory system is called for short, has managed to get permission to copy certain Shoso-in fabrics, and, in spite of their peculiar weave, has proved that they can be re-

* An abbreviation of "Kanegafuchi" and "boseki," the former being a place name and the latter Japanese for "spinning." The first mill of the system was a spinning-mill at Kanegafuchi.

uplicated by modern methods. These new fabrics are exquisitely beautiful. Not only Shoso-in designs, but many others of distinguished beauty are at disposal of the Yamashina silk mill near Kyoto, a member of the Kanebo system.

To introduce such goods to the world, so-called "service stations" are being opened. At Osaka and Tokyo one may already see the latest products of the specialized looms. Next year the Tokyo station will be housed in a seven-story building on the Ginza. It is planned for these stations to belt the world. Cities that will have them include New York, Buenos Aires, London, Lyons, Berlin, Cairo, Mombasa, Sourabaya, Shanghai, Tientsin, and Seoul.

Besides showing Japanese classical textiles produced by modern methods these stations will exhibit Kanebo's latest and most fashionable fabrics. The management realize that in order to maintain their present enviable position the mills must be constantly on the alert to catch the world's fancy with novelties. Service stations will therefore exhibit products so new that they will not as yet have reached the market. Not only so, but criticism will be sought, directly from consumer to manufacturer, in order to keep step with the times.

In Chapter V brief reference was made to the beginnings of the Industrial Revolution in England, when cotton displaced wool. Although it took English industrialists about a century to become reconciled to the necessity of changing over from old-style to new, when they did make up their minds to the change something like a miracle happened. Never in all history has such an astonishing series of inventions so dovetailed together with such amazing results.



“New styles to suit every taste!”

In 1738 John Kay devised a *fly-shuttle* that adapted his cottage loom to cotton yarn. This so enhanced the demand of weavers for cotton yarn that the domestic spinning industry could not keep up with the looms until 1764, when James Hargreaves literally stumbled on the *spinning-jenny*. Entering his cottage near Blackburn, his back bent with bundles of yarn he had been laboriously collecting for his loom, he stumbled over the old-fashioned spinning-wheel at which his wife sat at work. Noticing that her spindle, although now thrown into an unwonted upright position, kept on revolving, he conceived the idea of a spinning-machine with numerous upright spindles. This materialized into a machine so simple that children could and did operate it, thus introducing child labor into the new cotton industry. The first jenny, working eight rovings in a row, multiplied the power of the old hand-wheel eight times. When, in 1770, this machine was patented, the number of its spindles had been doubled. Soon it had twenty or thirty, and afterwards a hundred, making possible the establishment of the first spinning-mill, at Nottingham. To this town came also Richard Arkwright, formerly a barber, who developed a *roving machine* capable of supplying the now numerous jennies with ample material. In 1773 the first piece of genuine British calico was made from Arkwright warp by horse-power. This inventor, the barber who became a knight, next moved to Cromford, where on the banks of the Derwent he set up an extensive water-power factory. The mills moved to the rivers, the cottagers became operatives, agriculture was abandoned for industry. About 1780 Samuel Crompton combined the Hargreaves and Arkwright inventions into a spinning-machine so effective that it was called a *mule*. It was now high time for the loom to be improved so as to keep up with the spinning machines. In

1787 a Kentish parson, Edmund Cartwright, patented a *power loom* at first worked by a bull, later by steam. Steam had been harnessed by James Watt to the *steam engine* (first patented in 1769), which transferred factories from riversides to coal-fields, or the "black country." With Sir Humphry Davy's invention of the *safety lamp* for miners in 1815, England was well started on her way to the manufacturing and commercial supremacy of the world.

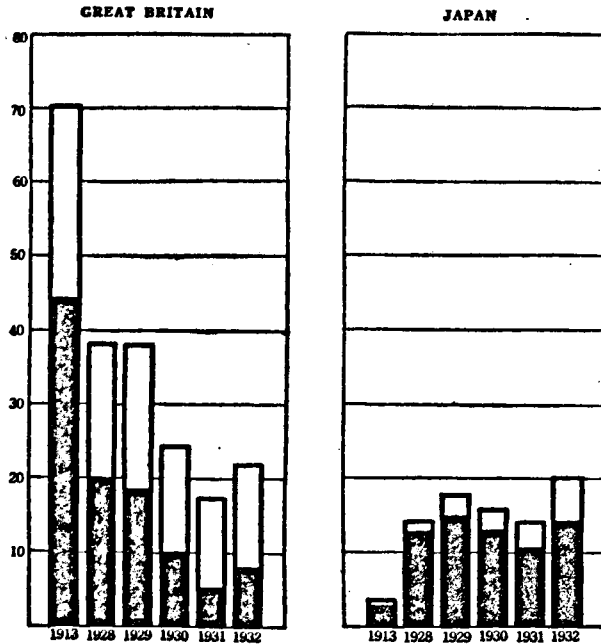
It was in 1815 that the continent of Europe was at last delivered from widespread and long-continued wars by the defeat of Napoleon Bonaparte at Waterloo. England's Industrial Revolution had so augmented her wealth that in that year her exports amounted to £ 58,000,000 as against £ 17,000,000 in the first year of Napoleon's fame, 1793. She had an enormous advantage over the torn battlefield nations, which now had to begin to repair their devastated fortunes as best they might. In doing so, they were forced to look to Britain, which, by the astonishing series of inventions just recounted, had ushered in an era of unexampled prosperity for herself—and, for the entire world, the Machine Age.

Besides her supreme resources in the brains of her inventors, Britain possessed valuable raw materials in iron and coal mines of such quality, quantity, and close concentration that the French writer Michelet tersely summed up the "tight little island" as "a chunk of iron and coal."

A living French writer, André Siegfried, says pointedly in his brilliant book on "England's Crisis" that her economic supremacy coincided with the reign of the steam-engine, beginning in 1815 and ending in 1914.

Siegfried's book, first published in English in 1931, discloses the present plight of industrial England, traceable to two principal causes: (1) British coal and British steam-

EXPORTS OF COTTON CLOTH
(In millions of square yards)



Courtesy of *Nippon-Kokusei-Zue*
(1933 edition) by Messrs. Yano and Shirasaki

Black indicates exports to Asiatic countries; white, to all other countries.

engines no longer preponderate in the world's energy, and (2) British conservatism has crystallized again into the same dead inertia that so long impeded the arrival of the epochal prosperity now lost. Nowhere in his book does Siegfried mention Japan. He quotes King George V as crying "Awake, England!" while he was still Prince of

Wales, and reveals a Lancashire threatened with collapse before Japan burst on the scene.

Not until 1933 did Japan's cotton exports exceed England's.* True, Japan's trade had been steadily growing, but England's traditional resistance to change had for at least a decade before that so slowed down her own progress that her doom was already sealed as an industrial competitor unless she could bring herself to accept the stern conditions of a new economic age and adapt herself to them.

Siegfried, who, as his British translators say, "is actuated by genuine affection and admiration" for the country he so relentlessly criticizes, repeats again and again that England's success in the past "was due to the coincidence of a variety of exceptional circumstances," and that her fatal habit is to "look abroad for the causes of her difficulties—always they are the fault of someone else.— Her instinct is to try to restore the conditions which suited her, instead of revising her own standards and adapting them to a world in which they are now out of place."

England is still a chunk of iron and coal, but modern transportation facilities make iron and coal a common possession. Besides, coal is no longer the sole source of power. Petroleum and hydro-electric energy dispute the field. The Diesel engine and the dynamo challenge the steam-engine.

As to out-of-date methods, let us make the comparison with Japan suggested by some of Siegfried's figures.

"There are 700 spinning and 1200 weaving companies in Lancashire!"

In Japan there were 60 members of the Cotton Spinners' Association, which includes weavers, on December 31, 1933.

* During that year England exported 2,000,000,000 of square yards and Japan 2,100,000,000.

"The 700 managers of these spinning companies and the 1200 managers of these weaving companies, and Heaven knows how many others besides, are naturally afraid of reorganization, as its first effect would be to abolish a great many of their executive posts."

Japan has no such problem, as it has long been efficiently organized, with a consequent reduction in overhead.

"English manufacturing costs are among the highest in the world."

Japan's are among the lowest, and that without the "sweating" and "dumping" with which she is unjustly charged.

"In 1930 the Lancashire cotton operatives refused to run eight looms at once, and the dole was there to back them up."

In Japan the operatives frequently run thirty looms each, and there is no dole.

The British dole is an aftermath of the Great War, for which England made heroic and long-drawn-out sacrifices, entitling her to the gratitude of all liberty-loving peoples. And Japan now has the advantage which England enjoyed at the beginning of her own Industrial Revolution: Japan's main competitor is exhausted by war. Such considerations are only additional reasons for England to summon all her strength in a supreme effort to face the struggles of a new age.

Instead of that, what do we find? We find a British-Japanese conference assembling in London for the purpose of reaching a give-and-take agreement similar to that reached by India and Japan a month or two earlier, and the Lancashire men taking the amazing stand that they will not

negotiate at all unless Japan agree to include in the scope of the negotiations not only the component parts of the British Commonwealth, about one-third of the markets involved, but the other two-thirds as well!

Britain is apparently the only country which does not realize that she stood to gain far more from the conference than Japan did, yet she submits at the outset terms that no country would accept.

Before these terms were proposed the *Manchester Guardian* had pointed out the probable difficulty in securing an arrangement enforceable in the British Commonwealth alone. In its annual commercial review of January 27, 1934, it said: "If we had complete financial and industrial control of our colonies and dependencies something might be done, but as we have no control, how can Japan and Lancashire determine the proportion of goods which each shall send to our colonies or to any other particular country? If it cannot be done, why waste time discussing it? Why admit our fear of Japan by pretending to negotiate with her? Why give her goods a cheap and world-wide advertisement by admitting that they are competitive with Lancashire goods? Though we may have no control over our colonies, why is no attempt being made to get preferential treatment with them over Japan?"

And then Lancashire insists on a self-denying ordinance on the part of Japan applying to the entire world, and breaks up the conference when this demand is rejected.

Lancashire in taking this attitude set itself in dogged resistance to the advice of intelligent British journalism. The London *Economist* said that it passed understanding that the cotton men of Lancashire should think it possible to force, under pretext of stabilizing trade, a unilateral export restriction on the Japanese cotton industrialists. It

emphasized the absurdity of blaming the low yen exchange rate, and declared that the only way left for Lancashire was to improve its productive structure. The *Times* insisted on a reorganization of the British cotton industry, and was joined in this demand by the Labor organ, the *Daily Herald*, which added that the British Government must be artless indeed if it thought that Japan would transfer gladly, and without compensation, the markets she has acquired in the world by her own efforts. Finally, Mr. J. L. Garvin writes in the *Observer*: "The world around us has portentously changed, and in some decisive ways we must change with it if the nation and the Empire are to remain safe, strong, and confident. After the National Government was formed the electoral uprising in 1931 made a tremendous impression upon opinion abroad and at home. That effect is as completely exhausted as though it had taken place a hundred years ago. Since then stronger and mightier things in Europe, America, and Asia alike have worked upon human imagination. Every single aspect of British affairs needs to be looked at in a new light."

As already indicated, every British industrialist familiar with conditions in Japan at first hand holds similar views. Especially impressive just at this time are those of Sir Harry McGowan, chairman of Imperial Chemical Industries, Ltd., as expressed in a speech at Birmingham shortly before the ill-fated London Conference assembled.

"If Japanese prices are lower than ours because Japanese industries are more efficient or better organized," he said, "it is no use wasting our time in idle complaint. We must improve our own methods. Protection is no substitute for inefficiency." He believed the time was ripe to express to Japanese industrialists the desire of British industrialists to come to understandings with them over as wide a field

as possible. He took the view that unless some statesman-like attitude was adopted toward the present clash of interests, conditions in the next year or so were likely to become acute. He did not think there was any necessity for this. Japan had a population increasing at the rate of a million a year. This reasonably entitled her to a share in the world trade, possibly a growing share. Part of this addition might have to be at the expense of British industry for the time being, although a revival of world trade would quickly release the large volume of potential demand for goods which would follow from the desire of the peoples of the world for an ever higher standard of comfort. "There is room for both us and the Japanese to do business in meeting this increasing demand." Imperial Chemical Industries, he continued, were getting in touch with their opposite numbers in Japan in an endeavor to make arrangements for them to retain a share of the Japanese market, and for the control and direction of export trade in competitive markets on a mutually satisfactory basis. Negotiations were proceeding now in respect of certain Japanese goods exported to this country with a view to effecting a control of volume and selling prices. He recommended this policy to all manufacturers in England who were prejudiced by the exports of Japanese goods.*

England has meant more to the welfare of humankind than any other country of Christendom. The whole world is concerned in its rejuvenation. Its loss as a dominating influence at international council tables would be a loss in sanity, square dealing, and practical idealism that the world cannot afford. Unless its statesmen are strong enough to resist Lancashire and heed such voices of reason as those just quoted England herself must suffer.

* *Glasgow Herald and London Morning Post*, Jan. 29, 1934.

If it is too late to salvage the textile industry, perhaps the gifted young technicians that are coming out of Cambridge and the scientific schools will turn their attention to coal and iron, of which the country possesses such an excellent and abundant supply, possibly unequaled in the world. But here, too, Siegfried shows the necessity of reform.

The heavy industries, especially coal, iron, and steel, continue to use equipment which is frankly out of date. The coal industry works many pits which, technically, must be classed amongst the most antiquated in Europe. There is comparatively little mechanical extraction: wooden pit-props are still used, and the utilisation of by-products, so important today, has progressed very slowly. Antediluvian coke ovens still function, and at most only about 25 per cent. of the coal is washed mechanically, whereas in Germany the figure is 80 per cent. and in France 85 per cent.

We find the same obsolete methods in entire branches of the iron and steel industry. Apart from certain ultra-modern works constructed during the War, the majority of the blast furnaces are still of very mediocre capacity in comparison with up-to-date practice; while the steel mills require decided remodelling if they are to be run on modern lines. One receives a general impression of worn-out equipment, in spite of certain remarkable exceptions. In the nineteenth century the engineers of the world came to England to learn the latest technical methods, but today they go to America or Germany, never to Durham, Northumberland, or South Wales.*

Enjoying such a close proximity to the European continent, England might find there and throughout the entire world a profitable market for high-grade machinery if she would but reorganize her heavy industries scientifically and thus recover her former prestige as the world's best machinist. That she is not blind to her opportunities appears

* "England's Crisis," Siegfried, pp. 58-59.

from the following dispatch, printed in the Japanese papers after the foregoing words were written :

London, April 13 (1934)—The greatest attempt at industrial reorganization yet launched in Great Britain is contained in a draft five-year plan for the reorganization of the British iron and steel industry, made public here today.

The plan will give the Iron and Steel Federation complete control over the industry throughout the Empire and empowers it to regulate imports through the application of quotas in order to make the industry independent of tariffs before the expiration of the five-year period.

The scheme, which is voluntary and free from State control, seeks to recover Britain's lost world markets by means of an export levy on home sales and the reorganization of production by eliminating wasteful competition and encouraging amalgamations and plant-modernization.

Japan's new place as a world power compels her to a new orientation. The moment is highly critical. How Japan will face toward the other powers from now onward is of vital importance not only to England but to the world. If the writer may do so without presumption he would like to suggest that the moment is propitious for England to make some gesture genuinely significant of the friendship she undoubtedly still feels for Japan. In matters of trade she follows Runciman rather than McGowan, and that is perhaps a momentary necessity, due to Mr. Runciman's presidency of the Board of Trade. But Japan feels aggrieved by her course, and some of us can get Japan's point of view. Cannot British diplomacy undertake to repair some of the hurt wrought by British trade policies?

The ties between Japan and England have been strong. One of the first British representatives in Japan, Sir Harry Parkes, started the country on its industrial advance by suggesting the first railway. As Japan lacked the necessary

funds, another Englishman, Horatio Nelson Lay, placed a loan for railway building—of a million pounds—on the London market. British engineers built this first road, connecting Yokohama and Tokyo, with British materials. This was the beginning of a long friendship in matters of trade.

Sir Harry Parkes was succeeded in the diplomatic service by representatives who not only discharged their special functions well, but who found time to apply themselves assiduously to a study of Japanese culture. From Sir Ernest Satow and Mr. A. B. Mitford (afterward Lord Redesdale) down to Sir Charles Eliot and Mr. G. B. Sansom it has been British scholars that have best made Japan known to the Western world. W. G. Aston, J. H. Gubbins, B. H. Chamberlain, Captain Frank Brinkley and James Murdoch must certainly be added to the list.

Great Britain was the first country to remove the ban of extra-territoriality by the agreement of 1894, effective in 1899. In 1902 the Anglo-Japanese Alliance was formed, to be twice renewed, and only renounced at the Washington Conference of 1921.

The beginning of the rift between the two countries dates from the undertaking of the great naval base at Singapore. Lord Lytton and his Commission did much to widen it, and Mr. Walter Runciman has done more.

At the 1933 conference of the Institute of Pacific Relations—an organization that has done a great deal to improve international understanding—Professors Y. Takaki and K. Yokota of the Tokyo Imperial University advanced "Some Considerations on the Future Reconstruction of Peace Machinery in the Pacific." In a nutshell, this paper (which may be obtained from the Japanese Council of the I. P. R. in Tokyo) proposes a security pact of the Pacific.

to be brought about, if possible, by the powers having the largest stake in that area. It is highly documented, and repays careful study.

The present writer has made essentially the same suggestion in "Japan—Whither?" He now finds it advanced in the newest English book on Japan, an excellent little manual in the Modern States Series by F. C. Jones, who puts the case pungently :

A war in the Pacific would profit nobody, except possibly Soviet Russia, and no means should be left untouched to avert it. The British Commonwealth of Nations, with immense interests at stake in the area affected and with a sincere desire for peace, should, while not omitting such measures of defence as may be necessary, bend all its efforts to remove the existing tension. The policy of the British government up till now has been one of extreme caution, and rightly so, for of all the States who are members of the League of Nations, it is upon Great Britain that the consequences of any action at the behest of that body would chiefly fall. The present state of international relations in Europe makes it the more necessary for Great Britain to seek a peaceful solution of the problems of the Far East and of the Pacific. This can never be done by attempting to treat a powerful and growing nation, convinced of the justice of her cause, and rendered desperate by economic ills for which she sees no remedy save the one she has taken, as an outcast and a criminal.

In 1921, when a situation had arisen in the Far East very similar to that which exists today, the menace of war, as freely mooted then as it is now, was removed for the time being by the Conference of Washington. There is a great deal of truth in the Japanese contention that events in China since then have created a state of affairs which the Powers did not foresee. If this is so, the remedy lies, not in one nation doing as it pleases, nor in a rigid adherence to the *status quo*, nor yet in submitting the question to an organization, the majority of

JAPAN AND ENGLAND 227

whose members have no direct interest in Far Eastern or Pacific questions, but by convening another Conference of the Powers who have a stake in that vast region and by endeavoring to arrive at a *modus vivendi*. The objects should be, not to sit in judgment on anybody, or to go back over the events of the past two years, but to take the situation as it exists today, and formulate a new series of agreements. Japan, despite her bold front, would probably be willing to attend such a Conference, for although she is not so near financial or economic collapse as some have averred, she is in no condition to face an armaments race or a war. For that matter, neither is any other Power, a fact which would be greatly in favor of the success of a new Pacific and Far Eastern Conference. This might be held at Washington, but the initiative in suggesting it could well be taken by the British Government.

XII

THE U. S. A. AND THE U. S. S. R.

¶ Theodore Roosevelt's Japanese policy — Five principles — Saving the South Manchuria Railway — Two ambassadors speak out — F. D. Roosevelt's recognition of Russia — Will Russia fight Japan? — Will the United States recognize Manchoukue?

CHAPTER XII

THE U. S. A. AND THE U. S. S. R.

THEODORE ROOSEVELT was an omnivorous student of foreign affairs, he had an unusual endowment both of foresight and of plain common sense, and he became prominent in public life just when the United States, by taking the Philippines, became a Far Eastern power. Add to this his association ever since Harvard days with certain high-grade and well-informed Japanese, and the reasons become plain why he gave special attention to his Japanese policy, and why it is worth special attention today. Not because Theodore Roosevelt formulated it, but because it was based on such extensive knowledge and was so wise and so far-sighted, the present writer believes that it will probably become, some day, the permanent American policy. For, contrary to an opinion prevalent in Japan, the United States has not followed a consistent Far Eastern policy.

Theodore Roosevelt's Japanese policy seems to have had five principles :

1. *Respect.* In his "Autobiography" he wrote - "The Japanese are one of the great nations of the world, entitled to stand, and standing, on a footing of full equality with any nation of Europe or America. I have the heartiest admiration for them. They can teach us much. Their

civilization is in some respects higher than our own." After the people of Sendai had presented him with a beautiful sword, he wrote to their messenger, Dr. D. B. Schneder: "I have just your feeling about the Japanese nation. As for their having a yellow skin, if we go back two thousand years we will find that to the Greek and Roman the most dreaded and yet in a sense the most despised barbarian was the white-skinned, blue-eyed and red or yellow-haired barbarian of the North—the men from whom you and I in a large part derive our blood. It would not seem possible to the Greek or Roman of that day that the northern barbarian should ever become part of the civilized world—his equal in civilization."

This was at the same time (June, 1905) that he spoke the words with which this book opens, saying of Japan: "We should treat her courteously, generously, and justly, and we should keep our navy up and make it evident that we are not influenced by fear."

Like Theodore Roosevelt, Franklin D. Roosevelt was Assistant Secretary of the Navy before becoming President. This gives him an equal familiarity with naval problems. He resembles his illustrious cousin in at least one other respect: he is largely his own cabinet. As everybody knows, 1936 is the year in which another naval conference will be held, to determine the future relations of the Japanese, British, and American navies. The Philippine Islands have just been accorded independence, a fact profoundly affecting naval issues in the Pacific. Is it not an auspicious time for one of Japan's best men to visit Washington and discuss with the President in person the coming conference? Such a discussion would of course be entirely informal, but that would be nothing against it. In fact, informal discussions are likely to be more effective than others.

THE U. S. A. AND THE U. S. S. R. 233

2. *Courtesy* is respect expressing itself in action.

Forthright though he was, Theodore Roosevelt did not believe in that "shirt-sleeve diplomacy" of which some American politicians have bragged. Although opposed to the mass immigration of Japanese laborers, he would never have branded them in a statute as "aliens ineligible to citizenship." In the autobiographical passage above quoted he said: "I cannot too strongly express my indignation with, and abhorrence of, reckless public writers and speakers who, with coarse and vulgar insolence, insult the Japanese people and thereby do the greatest wrong not only to Japan but to their own country. Such conduct represents the nadir of underbreeding and folly."

3. *Candor*. Courtesy does not necessitate insincerity. On the two delicate questions of the navy and immigration Colonel Roosevelt was always outspoken, though in a way that could give no offense. In an informal letter from his country home, Sagamore Hill, he once told of a conversation he had just had on these subjects with two distinguished Japanese.*

Aoki and Admiral Yamamoto were out here yesterday at lunch. Aoki is a singularly cool and wise old boy. I am afraid he is much more so than his fellow countrymen. Yamamoto, an ex-Cabinet Minister and a man of importance, evidently had completely misunderstood the situation here and what the possibilities were. I had a long talk with him through an interpreter.

He kept insisting that the Japanese must not be kept out save as we keep out Europeans. I kept explaining to him that what we had to do was to face facts; that if American laboring men came in and cut down the wages of Japanese laboring men they would be shut out of Japan in one moment; and that Japanese laborers

* Bishop, "Theodore Roosevelt and His Time," ii, 64-65.

must be excluded from the United States on economic grounds. I told him emphatically that it was not possible to admit Japanese laborers into the United States. I pointed out to him those rules which Secretary Wilson quoted in his memorandum, which show that the Japanese Government has already in force restrictions against American laborers coming into Japan, save in the old treaty ports. I pointed out that under our present treaty we had explicitly reserved the right to exclude Japanese laborers. I talked freely of the intended trip of the battleship fleet through the Pacific, mentioning that it would return home very shortly after it had been sent out there; at least in all probability.

As everybody knows, Roosevelt's ultimate solution of the immigration problem was the far-famed Gentlemen's Agreement. This, he says in his "Autobiography,"* "worked admirably and entirely achieved its purpose.— Unfortunately, after I left office, a most mistaken and ill-advised policy was pursued towards Japan, combining irritation and inefficiency."

Regarding the world-cruise he writes :†

In my own judgment the most important service that I rendered to peace was the voyage of the battle fleet round the world. I had become convinced that for many reasons it was essential that we should have it clearly understood, by our own people especially, but also by other peoples, that the Pacific was as much our home waters as the Atlantic, and that our fleet could and would pass at will from one to the other of the two great oceans. It seemed to me evident that such a voyage would greatly benefit the navy itself; would arouse popular interest in and enthusiasm for the navy; and would make foreign nations accept as a matter of course that our fleet should from time to time be gathered in the Pacific, just as from time to time it was gathered in the Atlantic, and that its

* p. 395.

† pp. 563, 568-9.

THE U.S.A. AND THE U.S.S.R. 235

presence in one ocean was no more to be accepted as a mark of hostility to any Asiatic power than its presence in the Atlantic was to be accepted as a mark of hostility to any European power.—The most noteworthy incident of the cruise was the reception given to our fleet in Japan. In courtesy and good breeding, the Japanese can certainly teach much to the nations of the Western world. I had been very sure that the people of Japan would understand aright what the cruise meant and would accept the visit of our fleet as the signal honor which it was meant to be, a proof of the high regard and friendship I felt, and which I was certain the American people felt, for the great Island Empire. The event even surpassed my expectations. I cannot too strongly express my appreciation of the generous courtesy the Japanese showed the officers and crews of our fleet; and I may add that every man of them came back a friend and admirer of the Japanese.

“The Big Stick” has been so often and so incorrectly associated with Colonel Roosevelt’s name that it is worth while to know exactly how he used the term. It first appeared in his correspondence while Governor of New York. His use of it in a public address occurred at Chicago on April 2, 1903:

I believe in the Monroe Doctrine with all my heart and soul; I am convinced that the immense majority of our fellow-countrymen so believe in it; but I would infinitely prefer to see us abandon it than to see us put it forward and bluster about it, and yet fail to build up the efficient fighting strength which in the last resort can alone make it respected by any strong foreign power whose interest it may ever happen to be to violate it.

There is a homely old adage which runs: “Speak softly and carry a big stick; you will go far.” If the American nation will speak softly and yet build build and keep at a pitch of the highest training a thoroughly efficient navy the Monroe Doctrine will go far.

The newspapers and the world at large have quoted only half the phrase, which of course gives an entirely erroneous impression of Colonel Roosevelt's character and policy.

4. "*The Square Deal.*" This phrase, a bit of Western slang denoting a fair dealing of the cards in a game of poker, is associated with Colonel Roosevelt's name as often as "The Big Stick." He himself accepted both phrases, to such an extent indeed that he uses them as the title of Chapter XII of his "Autobiography."

No better example of "the square deal" could be cited than the Roosevelt connection with the settlement of the Russo-Japanese War. It is now common knowledge that the American President was requested by Japanese officials "directly and of his own motion and initiative to invite the two belligerents to come together for the purpose of direct negotiations,"* and to keep secret the fact that he had received such a request. To the day of his death he scrupulously observed the desired secrecy, although widely and harshly condemned as an international busy-body.

Almost as important as his share in the Portsmouth peace was Colonel Roosevelt's magnanimity in restoring to Japan the South Manchuria Railway after she had turned it over to American control. This fact is little recognized, and was not known at all in its dramatic details until Count Kentaro Kaneko in 1932 published it in the "Memoirs of the Kemei-Kwai," Number Thirteen.

A few days after the Portsmouth peace was signed, Count Kaneko, then in America, read in the press that E. H. Harriman, an American railway magnate, was off for Japan. Shortly he was informed of the reason by the

* Tyler Dennett, "Roosevelt and the Russo-Japanese War," pp. 189 ff.

THE U.S.A. AND THE U.S.S.R. 237

President's cousin, Mr. Montgomery Roosevelt, who called on him and said :

"The matter is most important for your country. Mr. Harriman intends to approach the Japanese Government with a proposition that he take charge of the South Manchuria Railway, which has been ceded to Japan by Russia. Mr. Harriman considers that Japan's resources have been exhausted by the war, so he will offer to finance the repair and reconstruction of the line and undertake its management. After he has taken the whole charge of the South Manchuria Railway, he purposes to take over the Chinese Eastern Railway from Russia, and eventually the Trans-Siberian Railway and combine the entire transcontinental railroad from Dairen to Moscow under one management."

Mr. Montgomery Roosevelt continued "with the utmost emphasis :"

"If you let Mr. Harriman take the whole charge of the South Manchuria Railway the full gains of your war with Russia will never be reaped by Japan. Therefore I strongly advise your Government to repair the Railway itself, and retain the management in its own hands."

Although Count Kaneko caught the point at once, he pointed out that Japan lacked the necessary funds.

"If your Government decides to manage the Railway itself," said Mr. Montgomery Roosevelt, "I can assist it financially. I have already consulted and obtained the consent of five New York banks. They are willing to advance thirty or forty million yen at 5½% for the repair and reconstruction of the Railway, provided the Japanese Government takes the Railway into its own hands. And those financiers ask only one condition: that is, that your Government buy the steel and rolling-stock from American factories."

On Count Kaneko's agreeing that the proposal was sound and reasonable, Mr. Montgomery Roosevelt suggested that he cable to find out his Government's views, but the Count said :

"I want to know what President Roosevelt thinks of the scheme. Have you consulted him?"

"I went to Washington yesterday and saw the President. He approved of the plan and promised to give it his full support," Mr. Montgomery Roosevelt replied.

Count Kaneko now agreed to consult Marquis Komura, who was still at Portsmouth, whereupon Mr. Roosevelt drew up in duplicate a memorandum of the amount, interest, and conditions of the proposed loan, each signing and keeping a copy.

A few days later Marquis Komura came from Portsmouth to New York and expressed to Count Kaneko his regret that the terms of the peace were not better. He added that the South Manchuria Railway, ceded to Japan by Russia, was of the highest importance for the future of Manchuria, but that the line was ruined and a great deal of money would be needed to repair it.

Count Kaneko produced his memorandum, whereupon Marquis Komura exclaimed :

"Now I can return to Japan with full satisfaction and a light heart. I may be criticized for the treaty, but if I have the money to rebuild the South Manchuria Railway, I can dare to report the results of the Peace Conference."

The two returned to Japan together, only to find that Mr. Harriman had won over Count Katsura, the Premier and also the Acting Minister for Foreign Affairs, who, after consulting the *Genro*, had agreed to a memorandum assigning to Harriman "the whole charge, management and repair of the Railway." Mr. Harriman, satisfied, had returned to America.

THE U.S.A. AND THE U.S.S.R. 239

Marquis Komura said to the Premier :

“If the management of the Railway is given to Mr. Harriman, the economic future of Manchuria will be in his hands and many troublesome matters will arise in regard to our policy. It is essential that the whole management of the S. M. R. remain in the hands of the Japanese Government.”

When Count Katsura asked where the necessary funds could be had, Komura replied :

“By sending a single telegram to New York I can obtain ample funds for reconstructing the Railway ;” whereupon Count Katsura, with considerable personal chagrin, cabled to Mr. Harriman that the Government did not agree to his scheme, and that their memorandum must be canceled.

Count Kaneko closes his interesting story as follows :

This proves, if proof were needed, that President Roosevelt thought the South Manchuria Railway should be then and always a Japanese railway, and used his good offices to that effect through his cousin. A few years afterwards, the New York bankers advanced three and a half million yen for the repair of the South Manchuria Railway, and the American manufacturers sold to the South Manchuria Railway Company the steel, rails and rolling-stock, with which the line was reconditioned.

5. *Intelligent Self-Interest.* In the transaction just recorded self-interest is so mixed with magnanimity that it is difficult to draw a sharp line between them. The purchase of rails and rolling-stock was a mere bagatelle; President Roosevelt, foreseeing Japan's power in Manchuria, felt that it would be to the best interests of the United States to have her friendship there rather than her rivalry and possibly her enmity. He was thinking of the future welfare of America, not of the present profits of American capital.

How could rivalry and enmity be avoided with American capitalists in control of the great railway artery?

This is only one instance, although a very striking one, of the value President Roosevelt attached to Japan's friendship. In the words of Professor Charles A. Beard,* he also sent an emissary to Tokyo who assured the Japanese Premier that the people of the United States were "so fully in accord with the people of Japan and Great Britain in the maintenance of peace in the Far East that, whatever occasion arose, appropriate action of the government of the United States, in conjunction with Japan and Great Britain, for such a purpose, could be counted upon by them quite as confidently as if the United States were under treaty obligations." "In fact it is a Japanese-Anglo-American alliance," blurted out a well-known Tokyo publicist on hearing, by an underground route, of this secret agreement. Such it was, at least while Roosevelt was in the White House, although the people of the United States knew nothing about it until Tyler Dennett, finding the document among the President's personal papers, made it public in 1924.

Like Franklin D. Roosevelt, Theodore Roosevelt was always a realist. He recognized Japan as the stabilizing power in Eastern Asia, and made the retention of its friendship the corner-stone of his Pacific policy. He discerned the economic interdependence of Japan and the United States, as emphasized in Chapter I and throughout this book, and desired to build up trade as the bulwark of peace. He had no illusions about China. If he were alive today there can be little doubt that he would second the pungent remarks of his friend Richard Washburn Child, formerly the American Ambassador to Italy, on the folly of war talk:—

"Asia's return to good order, her restored and ex-

* "The Rise of American Civilization," p. 498.

THE U.S.A. AND THE U.S.S.R. 241

panded communications, her peace from eternal and futile and silly revolution and corruption and disintegration and communism and intrigue, her population gone back to honest productive work—these are all dollars in the American pocket-book because they are dollars in the pockets of the Chinese, the Manchurians and the Koreans; purchasing power.

“If in the process Japanese immigration goes to the mainland to relieve Japan’s over-populated war-encouraging bursting-point, so much the better!

“Quarreling about who is to have the lion’s share of the purchasing power arising from order and peace and production on Asia’s mainland is quarreling about who shall put meat on the bones of a great future market and a restored civilization and an improved people. What we want is the meat—material, spiritual and humane—on the bare bones of a distressed mainland. So long as Japan is a friendly factor in putting fat on, rather than stripping those aching bones, we should be her co-operator.

“This is something that the President may well point out in private contacts with Congress. The ‘Open Door’ may be our traditional policy but there comes a time when we must ask ourselves whether it is better to quarrel over an empty platter or co-operate to put something on it.

“Conquest of territory? The world — just read the European press, which is trying to divert attention from the European war menace!—recognizes that Japan is ‘invading’ the mainland. The wise know that she is doing it for an outlet for her bursting population and to create a buffer between herself and what she considers the menace of disorder and communism and what she sees as a Russian giant at her back door.

“Let us be realists! Who will stop her? The League? It tried with a feather-duster.

"Any European power? On the contrary, they are in competition with each other not to do so.

"Will the United States leap into the breach and be the catspaw for powers shrewder than we are?

"We must remember that in this case every word to be worth a nickel must have fifteen million dollars worth of fighting ships behind it.

"When T. R. was presented with a huge petition to 'Free Korea' from Japan by sending notes, he said he would not read it unless the petition also asked for a sacrifice of several hundred thousand American lives and some billions of dollars.—

"Aside from the lack of a cause for war (with Japan), minding our own business, and the profit from our cooperation with Japan in building up order and purchasing power on the Asian mainland, and an adequate navy, will be the real guarantees of peace.

"Yet such is the touchiness of the subject that whispers go around in Washington about our new understanding with Russia being an 'alliance of force.'

"The President could not make such a treaty or bind us without our consent, even if he wished. Of course he has not even tried to do so. That this whisper should arise because we follow all the powers and nations in recognizing Russia is as absurd as to say that because we have an Ambassador in Rome we plan war on Egypt."*

By way of emphasizing the fact that recognition of Russia is not in any way a threat to Japan, President Franklin Roosevelt timed the withdrawal of the American fleet from the Pacific (whose presence there some Japanese had misinterpreted as veiled hostility) to coincide with Russian recognition. As Mr. William R. Castle recently

* N. Y. *American*, Jan. 13, 1934.



Mr. Wm. R. Castle at the Cornerstone Laying of the new American Embassy at Tokyo. Mr. Edwin L. Neville, Counsellor of the Embassy, is seated in front. Directly behind him is the late Viscount Shibusawa, who devoted the best years of his life to the promotion of Japanese-American friendship.

THE U.S.A. AND THE U.S.S.R. 243

pointed out,* recognition of one government by another "implies neither approval nor disapproval." It is done "in order that trade may be carried on with the least possible friction," and "that American citizens and American interests in foreign lands may be properly protected." "It was because the Soviet government at first was believed to be ephemeral and not the creation of the Russian people, and later because it was unwilling to live up to its international obligations that the American government for fifteen years and more refused to recognize it."

Presumably Washington has now decided that the Soviet government is not ephemeral, and that it will live up to its international obligations. Consequently Washington is trying to see that American trade may be carried on with the least possible friction, and that American citizens and American interests in Russia are properly protected. Those are the only implications of American recognition.

According to a well-informed Japanese writer,[†] Mr. Eiji Amau paved the way during his service as *chargé d'affaires* in Moscow to "the greatest achievements of Japanese diplomacy toward Soviet Russia in recent years:" namely, refusal by the Soviet government to participate in the Geneva deliberations over the Sino-Japanese dispute regarding Manchuria, and the Soviet's subsequent proposal to transfer to Manchoukuo the Chinese Eastern Railway, now called the North Manchuria Railway.

To the present writer it seems that these two achievements have not received the general recognition their importance warrants. Surely it was not an empty gesture for Russia to abstain from the Geneva deliberations. Had she

* *N. Y. Herald-Tribune*, quoted in *Japan Advertiser* of Mar. 19, 1934. Mr. Castle was once Ambassador to Japan and later the U. S. Under Secretary of State.

[†] Katsuji Fuse in *Contemporary Japan* for March, 1934.

desired to harass Japan that was her chance. Almost alone among the nations she refused to line up in a foregone condemnation of Japan as the League's bad boy. Her abstention from the dais of judgment is a pretty clear indication that she seeks the good will of Japan even at the cost of not figuring as a partisan supporter of China.

Even more striking was the assent to dispose of the railway. If Russia had designs on Northern Manchuria would she not retain this railway and strengthen it as a cardinal instrument? Instead of that she has offered Japan, through Manchoukuo, a considerable extension of the vast power embodied in the South Manchuria Railway, an extension not only commercially but strategically valuable. Even after a protracted deadlock over the price she consented to a reopening of negotiations.

This is not the attitude of a would-be belligerent.

The truth is, Soviet Russia has everything to lose and nothing to gain from war. Besides, the Russia of Tsarism or even of Leninism has vanished. Red propaganda has perceptibly diminished in consequence of admittance to the family of nations. The price of staying out of the family was too high. No nation can live unto itself, especially when its hand is raised against almost all other nations, and this lesson Russia seems to have learned. So for various reasons it is a fair guess that Soviet Russia will not provoke Japan to a war. Soviet Russia abhors the old régime of Tsarism, and if she stops to think, she really owes Japan a debt of gratitude for having dynamited it into oblivion. Of course, when two nations with opposed forms of government have such long lines of contiguous territorial interests as Russia and Japan have, points of friction are pretty sure to develop during their first years of contact; but watchful patience on both sides can keep

THE U.S.A. AND THE U.S.S.R. 245

these friction points from inflammability until at length they disappear altogether, as in the case of the United States and Canada.

When once the North Manchuria Railway is safely in the hands of Manchoukuo the chief source of Russo-Japanese danger will have vanished. It is to be earnestly hoped that this transfer will soon be effected.

Japan on her side desires to live on friendly terms with Russia. She is disquieted by the presence of twice as many troops on the Manchurian border as were there at the time of "the incident." She knows that it is not customary in Asia, as in Europe, to maintain armed frontiers, and wonders why Russia continues to transfer troops and munitions from European territory to the Far East. She remembers that a similar movement took place preceding the outbreak of the Russo-Japanese War of 1904-'5. She observes the great flying strength of the Soviet army, a thousand airplanes, of which four hundred are in the Far East; one-tenth of these latter being super-heavy bombers with a flight capacity of 2,500 kilometers, enabling them—theoretically—to fly from Vladivostok to Japan and bomb Tokyo, Osaka, and other Japanese cities and then return to their base. She is aware that in tanks and gases this army is as well equipped as any in Europe. Some Japanese think such facts ominous.

To the writer, the truth seems to be that Russia and Japan each suspects the other of aggressive designs, and therefore resorts to preparedness. But so long as neither takes the aggressive, peace reigns. Of course the danger zone is the frontiers, where some unexpected spark might start a conflagration.

Until 1936 the Hirota-Karakhan Agreement on fisheries and other troublesome questions remains in force; then it

will have to be revised. The interval would seem to be a peculiarly propitious time to appoint a Frontier Adjustment Commission. Should this Commission be appointed and achieve its objective, and the North Manchuria Railway be smoothly transferred to Manchoukuo, 1936 can be awaited with composure, in the hope that at that time a new and comprehensive agreement will lay the basis of a lasting peace.

Now that Manchoukuo is a *fait accompli*, the surest stabilizing contribution that could be made to the Far East would be its recognition. Russia herself seems strongly inclined that way, as indicated by her bargaining with the new State over the railway. Senator William E. Borah, long chairman of the United States Senate's Committee on foreign relations, is already said to have come out for it. The *Osaka Mainichi* of February 27, 1934, quoted him as saying: "When a friendly nation is created on the other side of the Pacific, and when efforts are made by that nation to perpetuate peace and order, the powers should recognize it."

Further, he is quoted to the effect that in case the necessity arises to revise the nine-power pact, Russia should be asked to participate. This reference, apparently incidental, to a revision of the nine-power treaty seems to imply an important suggestion.

A former chief of the Far Eastern division of the United States Bureau of Foreign and Domestic Commerce has written a book in which he has dared to express, from the American point of view, "Dangerous Thoughts on the Orient." He opens with a humorous account of a skirmish with a group of Americans that were "hot on Japan's trail." One of them, a capacious lady who wore on her bosom the

silvered motto *Pax* seemed to express the sentiments of the entire group when she exclaimed with fervor: "We ought to find some way to *hurt* Japan!"

She was fresh from Geneva, and was yearning for "sanctions," which may, after all, be only a sanctimonious name for reprisals.

Mr. Eldridge, the author of these "Dangerous Thoughts," is not unaware that some such "sanctions" might actually be attempted. He does not approve of them, either in the hands of the numerous American ladies who wear peace on the outside of their hearts or as a weapon of the League of Nations. He takes this stand although he frankly avows that Japan dealt lightly, in the Manchurian affair, with the nine-power treaty, the Versailles "settlement," and the so-called Kellogg Pact. But he thinks that her profounder mistake was made when she set her name to unreasonable documents; documents which, from the beginning, were impossible of fulfilment on her part except through surrender of her fundamental right of appeal to the first law of nature, self-preservation. Free access to Manchuria—denied by "the Young Marshal"*—he deems essential to Japan's self-preservation.

All of which deserves thought.

It is all very well to substitute for appeals to force the appeal to reason. In fact, there is no other hope for a war-torn world. But it is of utmost importance to apply every test to determine what really is reason, what really is reasonable, before the appeal is made.

One of the main dangers that threatens the world today is the temptation to set pen to paper because that seems the easy way out. It may be the deeper way in.

* See the author's book, "Japan—Whither?"

XIII

THE SANCTION OF THE BOYCOTT

¶ Suppressed desires find a vent — John Bassett Moore, Captain Boycott, and Elihu Root — China, habitat of the boycott — W. H. Taft at Shanghai — What caused the battle of Shanghai? — A Geneva debate — The Great Boycott is effective: for war — Mr. G. Ward Price to Lancashire

CHAPTER XIII

THE SANCTION OF THE BOYCOTT

SUPPRESSED desires to hurt displeasing foreigners may now vent themselves through the boycott, which has been lifted to the dignity of one of the sanctions of the League of Nations. True, the word itself is not used, but there could be no better definition of a boycott than "the severance of all trade or financial relations," "the prevention of all financial, commercial or personal intercourse," which is the exact language of Article XVI of the Covenant, wherein it prescribes punishment for those who offend it. True again, the creators of this new mode of warfare intended it only for their own official use, but the power of suggestion and the voice of authority are such that the sanction of the boycott has penetrated the universal intelligence, even the lowest, with power to act either on individual initiative or at the summons of the mob. So serious has been the result, even in enlightened America, that one of the greatest of international jurists, John Bassett Moore, sounds powerful warnings in *Foreign Affairs* for July and the *American Journal of International Law* for October, 1933. In the latter Judge Moore makes himself perfectly clear—

Where unregulated popular action is invoked to accomplish ends which the law either forbids or sanctions, no one who retains his balance is safe from the lynching

which chartered spite and emotional virtue may administer. By such conditions governments have been and may yet again be put in peril in their external as well as in their internal relations. Some time ago, when a sudden excitement arose over the conflict between China and Japan, and eminent champions of the boycott as a peaceful measure publicly advised its application to the latter country, an active movement was conducted through the mails by a group of individuals for the institution of such a campaign. While this agitation was in progress a person whom I know went to a well-known shop to buy a small piece of silk, with no thought of what its possible origin might be. But, as this transaction was about to be concluded, the cry reverberated, "What! buying a piece of Japanese silk?" and there was suddenly staged a near-riot, from which the innocent victim could only withdraw. Considering the antecedents, nothing could be more logical than such a scene; but it was mob-like, disorderly, irresponsible and oppressive, and such as even the laws of war do not tolerate.

Judge Moore further says—

No better exposition of the nature of the boycott can be found than that which is made by my former colleague, Mr. Garrard Glenn, now a member of the law faculty of the University of Virginia, in a recent article entitled "War without Guns." Setting out with Dr. Johnson's famous injunction, "Let us clear our minds of cant," and himself happily defining cant as the utterance of "an idealist who has ceased to analyze his own processes," he explains the meaning of the boycott with a dialectic force and wealth of illustration that demonstrate his comprehensive acquaintance with the records of human experience and expose the poverty of the "new thought." Recognizing the fact that trade itself may be and often is predatory, he reaches the conclusion that, by reason of employing methods of coercion which war itself employs, and by seeking the ends which war is designed to attain, "the national boycott, in and of itself, is war." He admits that this suggestion may be disagreeable if not offensive to some well-meaning persons; but he supports

SANCTIONS—THE BOYCOTT 253

his thesis with reasons that have not been answered. From time immemorial commercial non-intercourse has been regarded as a measure incompatible with friendly relations and provocative of war, and it consequently has often been adopted as an appropriate preliminary to a declaration of war. Nothing could be more inadvertent or more incongruous than the contemplation of it as a peaceful measure.

Little did those Irishmen think as they bedeviled Captain C. C. Boycott in County Mayo in 1880 that they were immortalizing his name. They were tenants on an estate administered by the Captain, and when he refused to let them name the amount of the rents they should pay, his "life was threatened, his servants were compelled to leave him, his fences torn down, his letters intercepted and his food supplies interfered with. It took a force of nine hundred soldiers to protect the Ulster Orangemen who succeeded finally in getting in his crops." The method rapidly spread in connection with the Captain's name, which has now become a household word throughout the world. But it was reserved for the League of Nations to ennoble it. In view of this crowning folly one recalls the sad words of that great friend of peace, Elihu Root, who said after a study of the Covenant that "if it is not very materially amended not merely in form but in substance, the world will before very long wake up to realize that a great opportunity has been wasted in the doing of a futile thing."

While the boycott received its name from Ireland, its native home and ancient habitat is China. Due to the family and guild systems the ancient Chinese could exert a powerful coercive effect through passive resistance. They used this weapon even against emperors that overtaxed them, and sometimes by means of it overthrew dynasties. As Remer says in his "Study of Chinese Boycotts" the

Western student finds the roots of the boycott so deep in Chinese history and so far spread in the Chinese community that he is likely to refer to its use as "instinctive" and as arising from the very nature of the Chinese. They are a practical people, as well as pacifistic. Boycotting takes less trouble than the ordinary form of warfare, and can be indulged in without personal risk.

The rise of nationalism has both widened and intensified its use. Chinese nationalism may be said to have had its beginnings with the Sino-Japanese War of 1894-'5. For the first time the Chinese showed consciousness of an outside world, and began to take note of it and of its dealings with China. In 1905 the unfair administration of the immigration laws of the United States provoked the first boycott against a nation. It was probably engineered from Washington by the astute minister, Wu Ting-fang. It has been described as discrimination against the goods of the United States because of the discrimination of the United States against the nationals of China. It did some good. When William H. Taft visited Shanghai in 1907 he said in a speech :

It is pleasant to note a great improvement in the last two years in the relations between the United States and China. In the first place, through the earnest efforts of President Roosevelt, the administration of the Chinese immigration laws of the United States has been much more considerate. The inquisitorial harshness, to which classes properly admissible to the United States under the treaty between the two countries were at one time subjected, has been entirely mitigated without in any way impairing the effectiveness of the law. *The boycott which was organized ostensibly on the ground of such harshness of administration proved in the end to be a double-edged knife which injured Chinese even more than Americans, and other countries quite as much.**

* Author's italics.

SANCTIONS—THE BOYCOTT 255

While this boycott lasted it cost Shanghai \$2,000 (silver) a day, and consumed many more thousands in the form of popular contributions for running expenses.

Six times between 1908 and 1927 the Chinese invoked their new international weapon against Japan, whose modern industrial methods were beginning to invade their home markets with disastrous results to medieval inefficiency. Pleased like a boy with a toy cannon, in 1927 they brought Britain to terms by it, this being their first important victory over a Western power since 1842. When Manchuria was occupied they promptly trained their new weapon on Japan, with terrific efficiency. In some places it was eighty per cent effective. The most violent methods were used, far exceeding in ferocity anything that had been done before. Administered by the Kuomintang at Nanking, it centred in Shanghai, where the Japanese not only normally do an enormous trade, but where they have huge investments in commercial and industrial enterprises. Besides owning and operating large mills themselves, they supply more than seventy per cent of the yarn for Chinese weaving mills, and these latter were so injured by the boycott that they petitioned Nanking for relief. They did not get it. Hordes of Chinese coolies were thrown out of work by the boycott, which they blamed on Japan. Idle and sullen, they roamed the streets. A Chinese newspaper printed an offensive item about the Japanese Emperor, and this the Japanese resented. Street brawls became frequent, culminating in an attack on five Japanese priests, one of whom died. At this point Japanese hoodlums took matters in hand, inflicting a bloody retaliation. This brought on the battle of Shanghai, which rendered 600,000 Chinese homeless, brought the trade of the great port to a vanishing point, put 200,000 laborers out of work, and shut down or de-

stroyed 900 factories and shops, this last item alone representing a loss of 170,000,000 Chinese dollars. Japan, of course, had been put to a huge expense, and for days the peace of the entire world hung on a hair-trigger. Yet nothing was really settled.

In spite of the truce of May, 1932, the anti-Japanese boycott goes on, and Chinese intellectuals quote the sanction of the League of Nations.

The Lytton Report was so voluminous that it is not surprising that the League could not give full attention to all of its details. Chapter VII contains a remarkably sound and fair treatment of "Japan's Economic Interests and the Chinese Boycott." It takes the view presented in this book as to industrialism being Japan's best answer to her population pressure, points to China as one of her best markets, but also emphasizes Japan's importance to China trade. The Chinese, however, have few investments in Japan, whereas Japan has heavy investments in China. "Nearly 50% of the total number of spindles operated in the spinning and weaving industry in China in 1929 were owned by Japanese. Japan was second in the carrying trade of China, and the number of Japanese banks in China in 1932 is put at thirty, a few of which are joint Sino-Japanese enterprises.—Japan's dependence on China is greater than China's dependence on Japan. Hence Japan is the more vulnerable and has more to lose in case of disturbed relations."

"The Great Boycott," as the one that began in 1931 is called, reached the floor of the League of Nations and caused extended discussion. Perhaps the key speeches for the principals were those delivered in November, 1932, by Mr. Yosuke Matsuoka for Japan and Mr. Wellington Koo

SANCTIONS—THE BOYCOTT 257

for China. Two paragraphs from each may be quoted. Mr. Matsuoka said :

Although the armies of China number in all over two million men, few of them are organized or intended for the defence of the country. In coping with alleged injustice on the part of foreign Powers, a method other than armed resistance has often been adopted. This is the boycott—a form of hostility contrary to commercial treaties or treaties of amity. Its results are often more protracted, worse, and more difficult to deal with than what is recognized as war. It is warfare of an insidious character.

Our people in China have been tortured for many years by this practice, which included the cutting off of even daily provisions. Many have been brought to ruin. Many of our industries at home, as well as in China, have been seriously injured, some actually destroyed. If it were a spontaneous and natural thing, due to the dislike of us by those who buy our goods, we would have less to complain about, but it is an institution inspired and organized by the Kuomintang and even Government officials. It is utilized as an instrument of national policy to secure abandonment by a foreign Power of its treaty rights. The Powers of the world have outlawed by treaty the resort to war with arms. I would ask the Council why the boycott, when it assumes an official or semi-official character, should not be condemned by the League of Nations and outlawed by it.

On the same day Mr. Koo rejoined :

In the view of the Chinese Government, the vigorous application of the boycott against Japan is entirely necessary, the more so as redress by the League requires time. The experience of the past fourteen months appears to have justified its opinion. Not only has the Japanese Government not yet fulfilled its engagements under the Council resolutions of September and December last by withdrawing the Japanese forces within the so-called South Manchuria Railway Zone, but on the contrary has permitted them to continue their operations until, today,

practically all the Three Eastern Provinces have been occupied by them.* Nor has the League of Nations during all this long period as yet been able to find an effective way, either of preventing the continued aggravation of the situation there, politically and militarily, by the Japanese troops, or of enforcing its resolution requiring their promised withdrawal.

To deny China the use of boycott against such Japanese military aggression as has been going on in Manchuria for over a year would be, in our opinion, the denial of a legitimate and peaceful instrument of defense. Moreover, in the present economy of the world, the adoption and application of prohibitive tariffs, quota systems and exchange restrictions is a generally approved practice. If such measures are favorably countenanced today as legitimate measures of self-defence against economic encroachments, is there not greater justification, then, for the employment of the boycott, which is in all its essentials a measure of similar character, as an instrument of legitimate defence against military aggression?

In this speech China acknowledged for the first time that the Chinese Government supported the boycott. It had taken this weapon out of the armory of the League and was wielding it on its own account. The shrewd attempt to railroad the boycott into the company of tariffs and quota systems and trade restrictions collides with the obvious fact that they do not appeal to force, and the boycott does. Mr. Koo risked his whole argument on the untenable claim that the boycott is a "peaceful instrument."

Nowhere is it less peaceable than in South China and the countries adjacent thereto. In Siam, for example, 10% of the population are Chinese, chiefly merchants, and their use of the boycott is ferocious. Such is also the case in the Straits Settlements and the Nederland Indies.

* For a discussion of the Sino-Japanese dispute concerning Manchuria, see the author's "Japan—Whither?" and "Manchoukuo, a Bird's-Eye View."

SANCTIONS—THE BOYCOTT 259

In spite of all this, the real effectiveness of the Great Boycott to achieve China's ostensible purpose is debatable. If one looks at the accessible figures alone, its effectiveness can hardly be questioned. Monthly exports from Japan to Central China dropped from \$6,000,000 monthly at the beginning of 1931 to less than \$100,000 early in 1932. But the accessible figures do not tell the whole tale. One distinguished member of the Japanese Parliament informs the writer that in his judgment an enormous increase in smuggled goods—by sea to Dairen and thence overland—has equaled if not exceeded the decline in legitimate entries. But of course there are no records, so the question remains in the air. It is certain, however, that the smuggling in of Japanese goods is enormous. The case seems analogous to American bootlegging, out of which huge fortunes were made, while the government lost the revenue.

Interior Chinese industry has undoubtedly profited from the Great Boycott. The Lytton Report is clear on this point, declaring that "another feature of this boycott, as of previous ones, is the wish not only to injure Japanese industries, but to further Chinese industries by stimulating the production of certain articles which have hitherto been imported from Japan. The principal result has been an extension of the Chinese textile industry at the expense of the Japanese-owned mills in the Shanghai area."

The Lytton Report also mentions the violent methods used, "such as the throwing of a bomb into the compound of a coal dealer suspected of having handled Japanese coal, and the sending of letters to storekeepers threatening to destroy their property unless they stopped selling Japanese commodities. Some of the letters reproduced in the newspapers were signed the 'Blood and Iron Group' of the 'Blood and Soul Group for the Punishment of Traitors!'"

Dr. Remer concludes his study by branding the Chinese boycott as a "blundering and awkward weapon." "It presents the difficulties which are characteristic of Chinese passive resistance in general. It is negative; it leaves the initiative with the opposition. It is slow; it depends upon continued pressure over a considerable period of time. It is costly; it brings losses to the Chinese nearly as great as to those against whom it is directed.* It is uneconomic; losses fall upon many who are not directly involved in the dispute and upon many whose influence over policy is negligible. It is not as well adapted to the modern, highly organized, national state as is war."

Dr. Remer also cites the murderous names of the boycotting groups, such as the "Shanghai Bloody Group for the Extermination of Traitors," the "Iron Blood Group," the "Blood and Soul Traitor Extermination Corps," and the "Skull Corps for the Punishment of Traitors." He also cites the oath said to have been taken by teachers and students in Nanking in the early stages of the Boycott—

By the blue sky that watches over me, by the bright sun that shines on me, by the mountains and rivers of my country, by the sacred tombs of my ancestors, I swear with the warm blood and with utter sincerity that for the rest of my life I shall never use Japanese goods. May Heaven punish me should I retract my decision or change my mind.

Everything may be summed up by saying that the Great Boycott has thus far proved ineffectual for its ostensible purpose, but highly effectual as an international irritant, a provocation to war. Indeed, if war be "contention by force" the boycott is only war in disguise. That it

* See the speech of W. H. Taft at Shanghai, quoted on page 254.

SANCTIONS—THE BOYCOTT 261

should receive intelligent Western support as a means of peace passes the writer's understanding.

Mr. G. Ward Price, the brilliant English journalist already cited (in Chapter V) has presented to his London readers a realistic British view of the Sino-Japanese situation after studying it at first hand :

We want to get Japan out of our Empire and foreign markets. To do that we must help her to find another outlet somewhere.

Her natural market lies literally at her door. It is China.

She is shut out from it by two factors, the anti-Japanese boycott and the chronic civil war in the interior, which has impoverished the Chinese people.

We ought to use our influence to get the anti-Japanese boycott in China lifted.

Then we and the other Powers whose industries are threatened by Japanese competition should join in pacifying China. Even the Lytton Commission stressed the urgency of that task.

When we have thus revived the purchasing power of those hundreds of millions of Chinese who for years have been able to buy nothing, it will absorb not only Japan's export production, but a great deal of our own as well. With one-quarter of the world's population, China has less foreign trade per head than any nation.

Let us waste no more time on figments like "Chinese territorial integrity."

Restore peace and prosperity to China, and the current of Anglo-Japanese competition, now foaming angrily in its confined channel, will spread out, smoothly and profitably, like a torrent entering on a thirsty plain.*

The restoration of peace and prosperity to China is a large order. It demands the efforts of every nation having a stake there, and the nation most concerned is Japan. Her

* *London Daily Mail*, June 15, 1933.

government has never opposed aid to China that is not extended for selfish purposes or that does not result in making "confusion worse confounded" through strengthening the sinews of the local war-lords. Japan knows a hundredfold more about China than any of the Western nations, and if they took her into their counsels they would profit by it. So would China. The present situation hurts everybody, most of all China.

XIV

HIROTA LOOKS AT HIS WORLD

¶ The Kyushu Spirit— Liberal contacts
— Korea, Peking, London, Washing-
ton, The Hague, Moscow— Thoughts
on coming home— Colleagues

CHAPTER XIV

HIROTA LOOKS AT HIS WORLD

JAPAN'S Minister for Foreign Affairs stepped into office almost two years to the day after "the incident" of September 18, 1931, when Japan took her stand in Manchuria. With General Araki as War Minister and Count Uchida as Foreign Minister the new State had been set up and maintained in the face of an almost world-wide opposition, focussed at Geneva. Count Uchida, now tired of the strain, recommended a younger man to succeed him, and soon General Araki stepped down and out, so that Koki Hirota had the opportunity, *if* he also had the ability, to turn over a new leaf in Japan's foreign relations.

Hirota, the son of a humble stone-cutter, was born in Kyushu in 1878. "The Kyushu Spirit" is the theme of one of Lafcadio Hearn's admirable lectures. Like the present writer, Hearn once taught in a government school in Japan's southern island, and came to appreciate the fact that nowhere does Japanese patriotism burn with a purer or intenser flame. When Hirota was sixteen Japan conquered China, only to be robbed of the fruits of victory by the Tsar and the Kaiser, backed up by France. Little wonder that the high-spirited and talented lad joined the *Genyosha*—"Black Sea Society"—one of the most ardent of the secret patriotic orders that help make Japanese history. Its leader was the famous reactionary, Toyama,

who today, although nearing eighty, is still the chief of the *ronin*.

From his boyhood this son of the Fukuoka stone-cutter has submitted the direction of his life and ideals to no outside influence, however strong, but, with singular independence, has insisted on captaining his own soul. While still a student he deliberately disciplined his will in the Zen school of Buddhism, learning "to scorn delights and live laborious days" so as to strengthen himself for the future. Japan's humiliation by Russia, Germany, and France determined him to dedicate this future to diplomacy.

After graduating from the Tokyo Imperial University in politics and law, young Hirota failed in his examination for the foreign service, only to attract the attention of Enjiro Yamaza, of the Foreign Office, who sent the young "failure" as a minor clerk to the Japanese Consulate at Seoul. In Korea he studied so diligently that he not only prepared himself for another examination, but began those studies of China that resulted in making him today a great Chinese authority. He also met Katsuji Debuchi, until recently and for years Ambassador to Washington, from whom he first imbibed liberalism.

Succeeding in his second examination, Hirota went to Peking, then to London. Marquis Komura was so impressed by his poise and sound judgment, as well as by his knowledge of China, that he predicted: "That young man will some day be Foreign Minister." Ambassador Kato, one of whose secretaries Hirota became in London, was no less impressed. Both of these men were broad-minded Liberals.

From London Hirota proceeded to Washington, where he served as secretary first under Baron Shidehara and then under Mr. Debuchi. On returning to Japan he again served

under Shidehara, who had become Foreign Minister, and in connection with Japan's recognition of the U. S. S. R. studied Russia with the same diligence he had devoted to China.

The next rung in Hirota's steady climb was the Ministry to the Hague, where for three years he spent his indoor leisure in making himself Japan's chief authority on Russia, and his outdoor leisure in breeding a new tulip, which bears his name.

In 1930 he was promoted to be Ambassador to Moscow, where he won such fame in connection with the Agreement mentioned in Chapter XI as to put him in line to fulfil Marquis Komura's prediction.

Now that Hirota is Foreign Minister his views are important not only because of his position but also on account of his extensive—and intensive—experience, his independent character, and the liberalism which he came to share with the great Liberals he knew in his youth.

"Before I became Foreign Minister," he says,* "I served as Minister at the Hague and later as Ambassador to Moscow. Holland is a stable and restful land, while Soviet Russia is a country still in the test-tube. It was lucky to be stationed in two countries where conditions differed so, offering chances of comparative study.

"The rich lessons I drew from the people of the Netherlands are remembered with interest today as I contrast conditions in that restful land with those in Japan. As everybody knows, Holland is just the size of Kyushu, but as an economic power it holds its own with Europe. Although its population is but seven million, it has large Pacific colonies. The people are industrious, and acknowledge no superiority in Britain, France, or Germany. When I came

* In *Chuo Koron*.

to realize how the country was progressing lying snugly among the great Powers, I often compared it with Japan, and could but feel our geographic disadvantage.

"Holland is rich in admirable statesmen. Most of the State Ministers do not own motor-cars; some of them ride bicycles between home and office. Dutch statesmen are so frugal and lead such an inconspicuous life that they are objects of national admiration. There is no gap between the statesmen and the people at large. — The whole nation is united at all times and keeps fit to cope with any crisis. It is no wonder that during the sixteenth and seventeenth centuries the Dutch set sail to wield the world's sea-power. I learned many a lesson from the Netherlanders that I recall with deep interest today as I study the conditions in this country.

"I stayed two years in Soviet Russia as Ambassador, and studied conditions in the Soviet Union. It is a mistake to judge the Soviet Union as an 'ism' or from the figures on the two Five-year plans. Figures and 'isms' are abstract, and they don't tell the truth. One has to see things for oneself. In order to understand Russia it is necessary to remember that it is a vast country, representing a sixth of the land area of the world and a population of 160,000,000. We must consider, too, the changing history of the people.

"The new Russia, which came into being with the 1917 Revolution, is called the 'Union of Soviet Socialist Republics.' We should remember, however, that Sovietism is an old Russian system, and that what is new about the new Russia is the combination of Sovietism with Socialism, the latter being a new factor in the government of Russia. How this combination will work out is still in the test-tube.

"Slavs are characterized by docility. The Romanovs

ruled over them with pressure, and that political principle has not been displaced under the Soviet regime; the Red Guards wield great power. In the ideology of orthodox Marxism, armaments doubtless have no place in a national government, but Soviet Russia has a gigantic army.

“With the ascendancy of Joseph Stalin the guiding principle of the Soviet Union has become a single State socialism, those advocating the Bolshevization of the world (such as Zinovieff, Bukharin, and others) having gradually lost influence. This amply proves that the Soviet Union is not being governed according to Marxist principles only. The leaders of the Soviet Union today are all guided wholly by the thought of founding the State on the soundest possible basis. Recent conversions of Japanese communists are in truth due to their effort to conform to the changed attitude of the Soviet. My basic conception of the future of the Soviet Union is that it will undergo diverse changes in its guiding principles and political views. Whether or not the conceptions originating in the brain of Karl Marx while he was brooding in a London lodging-house can be applied in practice is a question raised by the present condition of the Soviet Union, where every effort is being made to further national industrialization. Perhaps it is safe to say that some industrial organizer will come to control the entire system in Soviet Russia, where, eventually, an industrial feudalism will be founded. While the leader of any given branch of industry will not be permitted to manipulate its management to suit his own personal requirements, it is only natural that those long engaged in managing any one branch will ultimately wield the real power of control.

“China offers an interesting contrast to Russia. It is a nation based on the family system, as all Oriental countries

are. Politicians and soldiers are grouped together regionally, and the general public doesn't concern itself in the political conflicts of the soldiers and the political partisans. It is different in Russia, where everything is interwoven in a State system, the whole country being a mechanized and co-ordinated unit, in which one cog cannot be removed without damaging the whole controlled economic system.

"The unit of Western civilization is, so to speak, transversely knit, while that of Oriental civilization is joined vertically. For example, fires used to be called 'the flowers of Yedo.' The old capital of Japan was so frequently afflicted with conflagrations that the people came to regard them stoically as bursts of red bloom. And in those olden days each house had its own well and an individual outfit for fighting fire, and there were also devices calculated to prevent its spread. But with the advent of the Western system of water supply, together with gas and electricity, the people did indeed come into the enjoyment of many conveniences, but the defect of the Western system appeared in the great earthquake and fire of 1923, in the Tokyo-Yokohama district. Tokyo had become a town of pipe and wire. Once the pipes and the wires were severed, the disaster grew to such proportions as would have been impossible in the days of the Tokugawa shogunate. In like manner, we must realize that under the dominance of the Western system in all fields of human activity, the influence of political and economic changes will be felt simultaneously over a wide area, so that results would be catastrophic if a big hitch occurred anywhere in the system.

"In November of 1932 I was ordered back from Moscow. Returning, I examined Japan with no little concern. The first thing that deeply impressed me was the fact that the young men of this land are all high-spirited and at the

same time have very sharp eyes. Their eyes looked as if they were on the point of challenging one to a quarrel. I concluded that this might be due to the fact that they have so little chance in society, politics, finance, and the social world, because of the narrowness of the land and its dense population. I thought to myself that the youth of Japan cannot cherish high hopes under present conditions, and that their future must have the attention of statesmen. I feared that unless they are given more hope they may prove a stumbling-block in the path of our national progress.

"Looking about among ourselves, as regards both internal affairs and foreign relations, I find that the signs point to a revision of the system of limited liability companies in the economic field; drastic cuts in administrative expenses; a readjustment of the system of parliamentary government in the political field; and economic and political co-operation between Japan and Manchoukuo so as to ensure peace and order in the Far East.

"To achieve these objectives, we must thoroughly study present conditions, and then in order to carry out the needful readjustments we must depend on new groups of able men. In the field of diplomacy alone we are in urgent need of such great men as the late Marquis Jutaro Komura, signer of the Russo-Japanese Peace Treaty of 1905; the late Minister Enjiro Yamaza, one of the great Komura's chief lieutenants; and the late Count Komei Kato, Ambassador to the Court of St. James and later the Premier of Japan.

"The Manchurian conflagration all of a sudden broke out on the night of September 18, 1931, but we know that nothing occurs without due cause, and the consequences are vast and diverse. Japan is expected to undertake the duty of developing Manchoukuo into a sound State, and we must

acquit ourselves of this duty. Our diplomatic policies toward China, Soviet Russia, the United States, and Great Britain must all be co-ordinated with our Manchurian policy. We cannot think otherwise. From Britain and the United States, where public opinion is strong, we must seek nation-wide understanding. Japan has nothing to fear or to be nervous over. What we call 'the emergency' is merely the friction caused between the inside and the outside at the time when the nation is making a forward movement.

"The secret and the ideal of politics should be not so much to advance straight toward one's goal as to bring about the readjustments best suited to the situation. Never make haste, but go steadily and slowly, aiming to progress step by step. The people must refrain from abstract arguments and give themselves to a course that will achieve practical results."

Mr. Hirota once remarked to the writer with a pleasant smile that did not in the least disguise his obvious earnestness and sincerity, "I never even think about a war between your country and mine." On the eightieth anniversary of the signing of the first Treaty—with Commodore Perry—he said:

"When Commodore Perry came to our shores in the summer of 1853, he found Japan in complete seclusion from the rest of the world. His arrival afforded an opportunity for Japan to abandon the policy of national isolation she had pursued for the past two hundred years, and to join the family of nations, throwing her doors open to intercourse with the whole world.

"In the four-score years that have passed since then, the cordial and friendly relations between our two nations have been maintained in unbroken peace and have continued

to improve, in spite of occasional strains ; and it is a matter for hearty congratulation that the foundation of our national friendship, true to the spirit of that first Treaty in which ' a perfect, permanent, and universal peace, and a sincere and cordial amity ' were pledged, is increasing in strength and solidity.

" It is my firm conviction that our two countries, close neighbors across the Pacific, are bound to co-operate economically and culturally, and that this continued co-operation must powerfully contribute, as in the past, to the peace and prosperity of the entire world."

Economic co-operation was stressed by Mr. Hirota's colleague, Ambassador Debuchi, at the Japan-America Society's Tokyo dinner in his honor when returning from his post at Washington. " Economic relationship," he said, " is the master-key to a real comprehension of the friendly intercourse between America and Japan. The United States is the best customer of Japan, about one-third of our total foreign trade being with America. At the same time, Japan is the third best customer for American goods, surpassed only by Great Britain and Canada. By far the greatest part of our raw silk is purchased by America, while more than one-fourth of the American export of raw cotton is shipped to Japan. Raw silk and cotton together constitute approximately two-thirds of the entire volume of trade between us, but no duty is imposed on either article. It follows, therefore, that we are not serious competitors in trade, what little rivalry there may exist being limited to the remaining one-third. Of this one-third, moreover, it will be revealed on close scrutiny that we are rivals only in a few minor articles, amounting to scarcely ten per cent of the total."

In his reference to " ten per cent of the total " His

Excellency was emphasizing the remarks of Prince Tokugawa in a radio address broadcast from Boston a few days earlier. "Where there is ten per cent of competition," said the popular "Ambassador of Good Will," "there is ninety per cent of mutual interest.—The United States is Japan's best customer. You buy from us more than any other country, more even than China, our near-by neighbor. You buy nearly forty per cent of all the goods we ship abroad, and your purchases of our products are steadily increasing. The reverse is also true. Japan is your best customer on the Pacific and your greatest customer in the Far East. We buy more goods from you annually than all the rest of Eastern Asia combined. We are your second-best customer in all the world, only the British Empire buying more. — Japan purchases from the United States every year thousands of motor-cars, tens of thousands of bales of cotton, hundreds of thousands of gallons of oil, large quantities of lumber, much machinery and many other things, The number of fast ships, American and Japanese, plying the Pacific Ocean between our great sea-ports and yours is constantly increasing. In spite of the present depression, this commerce continues, and after it is ended, it will go forward again.

"As a result of Japan's industrial development, the United States has lost some trade in manufactured cotton goods in the Orient, but for every dollar you have lost in that industry, you have made nine in supplying Japan with raw cotton. There again is the proportion of ten to ninety."

As Mr. Hirota looks out on his world he sees the economic relationships of Japan and America as second in importance only to a stable East, and surely America will recognize that a stable East is essential to its trade.

XV

CHINA AND MANCHOUKUO

Q Flying over the new State—The soy-bean and other crops—Current travelers—Independence—Amazing progress—The Emperor and his Premier—"The Collapse of a Civilization"—China's strong man and Japan—William R. Castle's views—Japan serves notice

CHAPTER XV

CHINA AND MANCHOUKUO

FROM the preceding chapter it is evident that Japan's Minister for Foreign Affairs agrees with the great army leaders such as Generals Araki, Hayashi and Masaki in placing the development of Manchoukuo at the very basis of Japan's diplomacy. Let us take a bird's-eye view of the new state.

Seen from the air in the spring-time, central Manchoukuo is a vast patchwork quilt of many colors, due to a variety of soils and to various stages of cultivation. A freshly plowed field is quite black; those adjoining it may be brown or yellow or even mauve. They are as distinctly marked off from one another and as variously shaped as the patches of an old-fashioned "crazy quilt." Here and there lie small rectangles of pale green, sometimes bordered with trees, sacred to the dead. Bright rivers meander like streams of quicksilver, mountains loom on the dim horizon. Everywhere move the blue-smocked farmers, plowing or planting or hoeing, and so intent on their work that they do not look up as the airplane roars over. Descending, and viewing them at close quarters, an observer familiar with China is immediately impressed with their well-fed appearance, the sleekness of their mules and oxen, the well set-up gear of their farms. The contrast is striking, and wholly favorable to Manchoukuo. These farmers seem well content.

They make a fair living on fertile soil, unmolested by bandits wherever the South Manchuria Railway exercises its benevolent despotism, and relieved by the new government from oppressive taxes. As to who rules and advises in the new capital they do not care a fig so long as they reap the fruits of their toil. A vast amount of humbug has been written about their being "unalterably Chinese," with the implication that they live in a state of unrest. Unlike the Koreans, they are voluntary immigrants to another land, and if they think about China at all it is probably with a sense of relief in having escaped from it. However, well informed observers find that their easy tolerance of Japan's influence in the new State is not shared by the small minority comprising the mercantile, political, and militarist elements, many of whom have lost their jobs.

The crops grown by Manchurian farmers range from the soya bean and *kao-liang* ("red grain") through millet and maize to wheat, rice, tobacco, and even cotton. The annual rainfall is only about twenty inches, three-quarters of this scant supply falling during June, July, and August. Irrigation is not practised, but northern Manchuria is well adapted to it, and it will be introduced. In partial compensation for natural drouth "dry farming" is utilized, thus conserving the underground moisture obtaining in southern Manchuria.

The new Empire is somewhat larger than France, Italy, and Germany combined. More than a quarter of its land is arable, and more than half of this is still uncultivated. First comes the soy-bean, taking up thirty per cent of the cultivated land, and constituting about seventy per cent of the world's supply. It was first introduced to Europe by Japan after the Russo-Japanese War, and now has a large sale there, especially in Germany. It has been called "the



Young Farmers of Manchoukuo.

world's universal provider." A German scientist has declared that it contains all the food elements essential to healthy growth, and that it is the only seed that does. The nutritive value of one pound of soy-bean flour is equal to that of two pounds of meat plus a quarter of a pound of wheat flour. Besides, it is extremely cheap, its cost being only about one-thirtieth that of beef. It is the second most important food-stuff of the Far East. Bean curd is eaten at almost every meal in China, Korea, and Japan. The oil is a good substitute for lard, butter, and oleomargarine. Besides being used as salad dressing and for cooking, it has many industrial uses, "ranging from cosmetics to explosives." We use it daily in enamel, varnish, linoleum, paint, and celluloid. The films we see at the movies may be made from it. It appears also in toilet soap and face lotions. Dried, the beans produce "soy," the basis of Worcestershire sauce, together with coffee, cheese, and milk substitutes. Dried bean-cake is used for breakfast foods as well as for stock feed. Scattered over South Manchuria stand hundreds of factories, ranging from those driven by donkey power to big establishments operated by electricity. New ways of extracting the oil by chemicals are being introduced. By such processes more oil is obtained, and the residue is not in cake form, and is more easily used as a fertilizer. The bean and its products did much to relieve the food shortage in Europe caused by the World War.

Kao-liang, the next crop, befriends the bandits for which Manchuria was formerly famous, as it grows to such a height as to hide them — leading the South Manchuria Railway to issue recent orders forbidding its growth near their line. It is a tall pale cane which grows its dark-red grain in thick clusters, providing abundant "provender for both man and beast." Sorghum molasses and the heady

liquor known as *sumshu* are also made from it. Mixed with peas, it makes noodles. The stalks are almost indispensable to the peasants as fuel, and are even used as building material and for mat making.

Kao-liang takes up twenty-five per cent of the farmed land of Manchoukuo, millet seventeen, and Indian corn, or maize, nine. Wheat runs maize a close race, being indeed the main agricultural product of northern Manchuria. As for tobacco, experts of foreign tobacco companies have said that if the plants were properly cultivated and cured they might rival Virginia leaf.

Manchuria rice-growing is only half-a-century old. Upland rice is of inferior quality, but that grown in river bottoms is excellent. Along the banks of the seven great rivers there are vast areas convertible into rice fields.

Among minor agricultural products are hemp, Indian mallow, the castor bean, the sugar beet, the potato, and perilla. Wild silk may become highly profitable. Orchards produce five thousand tons of fruit annually, chiefly apples and pears. Grapes, peaches, and cherries also thrive.

Mineral products, such as coal and iron, have been mentioned and assessed in previous chapters.

Bandits were so long and so genially tolerated under Chinese rule that a Chinese proverb ran, "Manchuria produces two crops, soya beans and bandits." The Japanese have a strong preference for beans. Since "the incident" of September 1931 bandits have been reduced from 300,000 to about 40,000. Although these continue to make trouble, banditry has been done away as a serious hindrance to the functioning of the new State, or as a menace to commerce and transport, except in remote regions. The new government takes control of all arms and ammunition, gives work to the unemployed, and is organizing self-protection associations.

CHINA AND MANCHOUKUO 281

Results are reflected in the increased number of travelers and immigrants. During a recent month, out of a thousand white travelers presenting passports there were 765 White Russians, 233 Soviet Russians, 214 Americans, and 201 Englishmen. During 1933 20,000 Japanese migrated to the Kwantung Territory and about as many into Manchoukuo itself. During the first seven months of that year (no statistics being available for the remaining five) nearly 200,000 fresh farmers came up from China, and they are still "coming strong," so that the labor supply is abundant.

In the year that has elapsed since the writer's last visit progress has been amazing. Schools now number 8,442, of which eight are high-schools, nineteen kindergartens, thirty-two normal, sixty-seven vocational, 131 secondary, and 8,185 primary. Air-lines now amount to 4,375 kilometers, all opened since "the incident." Nationally maintained motor roads have been constructed to the amount of 3,681 kilometers, at a cost of ¥2,103,632, and 271 cars maintain a bus service over them. Nearly 2,000 kilometers of other roads have been built, with sixty-two cars operating over them, in addition to old-fashioned vehicles. Plans are now under way to construct sixty-two new national highways, on completion of which Manchoukuo will be radically different. The overleaf map shows the railways built, building, and projected. An observer for the *New York Times* reports that the modernization of laws, courts, and prisons is proceeding so rapidly that Japan plans to surrender her extra-territorial privileges in less than two years. She has already encouraged the setting up of an Empire, which she certainly would not have done had she intended to annex the country. Even before this event (March 1, 1934) the Japanese Emperor settled the question in the words of an Imperial Rescript: "Now Manchoukuo having

JAPAN'S ADVANCE



MILEAGE OF MANCHURIAN RAILWAYS :

Manchoukuo State Railways	1,860
South Manchuria Railway	660
Chinese Eastern, or North Manchuria Ry.	1,020
TOTAL	3,540

The railways building and projected in Manchoukuo will add 2,500 miles every ten years until the total is 15,000.

Two important new lines are just finished. One links Hsinking and Kirin with Korean ports, cutting the time between Hsinking and Tokyo from 65 hours to 35. The other describes a crescent from Harbin to Tsitsihar through "the Manchurian granary," and will connect with the Trans-Siberian road at the Amur river.

of late been founded, Our Empire deems it essential to respect the independence of the new State and to encourage its healthy development, in order that the sources of evil in the Far East may be eradicated and an enduring peace thereby established."

The development thus far has without doubt been healthy. The first budget—that for 1932-'3—amounted to M ¥ 113,308,000 and affected a saving of M ¥ 29,297,000, with a proportionate decrease in taxation. Military expenses were cut from 80% of the total to 30%. The audit at the end of the first fiscal year showed a net surplus of M ¥ 18,000,000. The budget for the current year has been set at M ¥ 149,169,000, an increase amply justified, and significant of the general progress.

Improvement in public finance could not have been effected without a reform of the banks. Chang Tso-lin and his son "the Young Marshal" had flooded the country with such a deluge of unsecured paper money that the actual billions in face value have never been determined. "The first step taken by the new government," as the *New York Times* reports, "was the organization of the Central Bank of Manchoukuo, with a paid-up capital of \$ 30,000,000 silver. Japanese and Manchurian financial experts then toiled for months over the books of the various banks of issue which had been controlled by the ousted war-lords, and finally worked out an equitable ratio valuation for the retirement of all outstanding notes. During the first year of its existence the new Central Bank retired and destroyed \$ 84,000,000 of the old depreciated currency. At the end of its first year of business it declared a 6% dividend and showed deposits of \$ 97,000,000, or more than \$ 26,000,000 in American money. Net profits for the first year of operation total \$ 513,225 and domestic exchange operations

reached the astonishing total of \$454,000,000. The highest figure for outstanding loans was \$124,000,000, and the bank now has \$122,000,000 of its own notes outstanding. These notes have always been maintained at par by a specie reserve ranging between 57% and 67%. The bank now operates 115 branches scattered over the three Manchurian provinces and Jehol, and is continually extending the scope of its operations."

Foreign trade for 1933 was as follows, in thousands of yen:

	<i>Exports</i>	<i>Imports</i>
Japan	¥ 172,667	¥ 312,099
Korea	30,254	25,912
China	55,210	79,811
U. S. S. R.	12,917	7,569
Hongkong	6,213	8,004
British India	1,080	14,703
Nederland Indies	4,044	3,323
Great Britain	8,792	7,141
France	2,545	778
Germany	66,357	10,454
Belgium	280	1,298
Netherlands	5,910	424
Italy	1,847	1,747
U. S. A.	7,414	28,995
Others	<u>47,689</u>	<u>12,289</u>
TOTAL	¥ 423,219	¥ 514,547

A fair way to test the Open Door question in Manchoukuo is to compare American trade last year with that of the year before. In spite of his refusal to recognize the new State, Uncle Sam's business climbed from 22,756,000 yen to 36,409,000 in 1933. Only three other countries had an increase: Italy and the Netherlands a small one, while

CHINA AND MANCHOUKUO 285

Japan's was of course huge, and America's came next.* Germany, Great Britain, China and the U. S. S. R. fell off notably. France may be expected to show a large gain in future, due to the large investments recently made in joint enterprises through the agency of Monsieur d'Olivier. If recognition involves only protection of nationals and promotion of trade (see page 243) it is difficult to see why it should be longer withheld, as Manchoukuo now fulfils the conditions on which it was accorded to Russia. That this view is beginning to be held will appear from the following extracts:

Manchoukuo exists. It may exist by the grace of Japan, but it is a country, and it has a government. If Japanese influence is dominant in Manchoukuo, what of United States influence in Cuba? What of our policy of ignoring Grau San Martin, and recognizing Mendieta and sending him immediate material aid? We're in no position to question the political morality of other governments. Nor is that question pertinent to recognition. The Stimson policy was one of unmitigated meddling. The sooner Secretary Hull ditches it the better for our foreign relations.—*Philadelphia Record*, February 26, 1934.

The government of the Emperor Kang Teh is certainly not the first that has come to power with the help of the armed forces of another nation. It is in many respects the most stable and efficient that any portion of

* "The principal commodities which we export to Manchoukoo are flour, iron, steel, machinery and automobiles. Cotton goods constitute the largest single item in value imported into Manchoukoo, most of which comes from Japan. Two years ago I traveled for 2,000 miles through Manchuria without once finding a highway worthy of the name, except in the leased territory of Kwantung where the Japanese had built a hard-surfaced road between Dairen and Port Arthur. But with the modernization of the country which followed Japan's entry Manchoukoo has perfected a comprehensive system of state highways. American manufactured tractors are being extensively employed."—Ashley E. Holden in *Seattle Times*, Nov. 27, 1933.

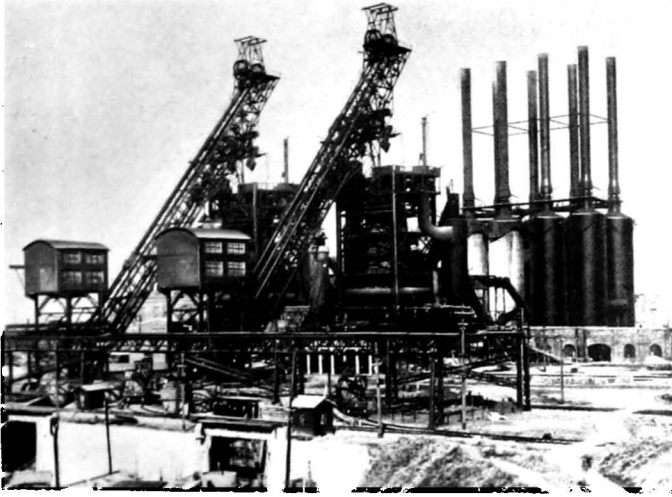
China has enjoyed for a long time past. If the primary function of a government is to maintain order and to assure to its peaceful and law-abiding citizens safety of person and of property, there is good reason to believe that Manchoukuo will rate very high in this respect.

The more realistic foreign policy reflected by our recognition of Soviet Russia, and the subsequent curtailment of the naval force we maintain in the Pacific, points to the early recognition on our part of the Manchoukuo Government, to be followed by participation through trade and investment in the economic development of its territory. — *New York Journal of Commerce*, March 5, 1934.

We're looking for foreign trade; heaven knows we need it. We recognized Russia chiefly to get more trade. When we're invited into Manchoukuo, when we're the only nation the new Emperor mentions by name as being wanted there with salesmen and machinery and engineers — isn't recognition a low and easy price to pay? We think it is. — *New York Daily News*, March 2, 1934.

Opinion, it appears, is changing in regard to the empire of Manchoukuo, the belief growing that a stable state even under the influence of the Japanese may prove more conducive to Far Eastern peace than one torn by strife, overrun by bandits, subject to no organized control. Order has been established in Manchoukuo within the past two years; the parent country, China, is in a condition of chaos worse than in a thousand years. The United States will gain nothing by backing China as opposed to Japan in a matter that is no affair of the Western world. — *Beacon*, Wichita, Kansas, March 1, 1934.

Manchoukuo is located in one of the richest regions of the world, with abundant natural resources of every kind. It has a population of more than 30,000,000 and millions of immigrants are every year seeking opportunity for peace and prosperity within its borders. The government of Pu-Yi, with the assistance of Japan, has already brought for the first time to much of the territory, schools, good roads and good public service. The United States



The Anshan Iron Mines in Manchoukuo.



Sakurajima Iron Works at Osaka.

CHINA AND MANCHOUKUO 287

will be standing in its own light if it longer refuses to grant diplomatic recognition to Manchoukuo. — *Atlanta Constitution*, March 1, 1934.

Industrial Japan is busily preparing to reap a harvest from the new highways Manchoukuo is building, by supplying them with automobiles. The Kuhara interests are opening a factory in Yokohama equipped to turn out motor-car parts sufficient for ten thousand cars. It expects to sell these parts to motor-car companies in Japan and Manchoukuo, including the Ford Motor Company. The concern has a capital of ¥ 10,000,000 and is known as the Jidosha Seizo Kwaisha, its two component firms being the Nippon Sangyo Kwaisha and the Tobata Imono Kwaisha.

Another Yokohama plant is the assembly factory of the Jidosha Kogyo Kwaisha, with a capacity of a thousand cars. The Nippon Sharyo Kwaisha, which has hitherto specialized in motor-trucks, will expand its plant so as to produce a hundred passenger cars a year. The Tokyo Gas-Denki Kwaisha will follow suit, increasing its output of passenger cars from 300 to 500 a year. The Toyoda Loom Company and the Aichi Watch Company have combined to form the Chukyo Jidosha Kwaisha, specializing in private cars, with a capital of a million yen. The Japan-Manchoukuo Motor-Car Company (Dowa Automobile Industrial Company, Limited) will assemble a thousand cars in its first year of operation. Other firms planning to compete in the Manchurian motor-car market are the Mitsubishi Shipyards, the Mitsubishi Airplane Works, the Kawasaki Dockyards and the Kisha Seizo Kwaisha.

Altogether, it is estimated that a thousand Japanese-made cars will be marketed in Manchoukuo during 1934, and fifteen hundred in Japan.

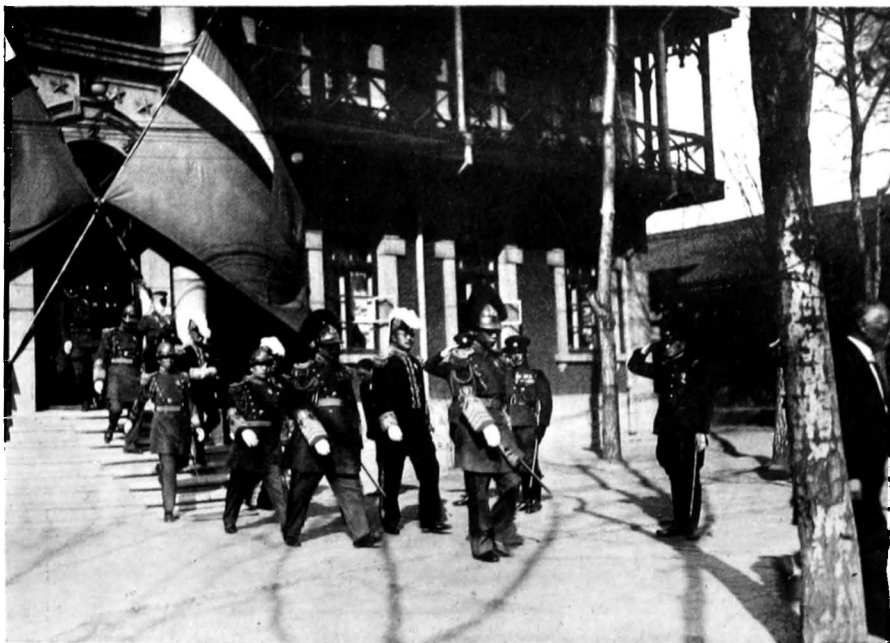
Kenneth Allman, writing on this subject in the Shang-

hai *Observer*, speaks of Manchoukuo as "a country in which, through its geographical features, a virtually unlimited number of cars can operate as soon as the roads are made fit for them. Either Great Britain or America could undoubtedly supply the demand. Perhaps many of the manufacturers are looking forward to the opportunity, as the 'Open Door' policy is presumably in full force, but will they be able to compete in price? From what we have seen in other industries, it may safely be presumed that they will not, hence there is no advantage in the 'Open Door,' over which there has been so much political cant. In any event, to sell cars you must have your agents on the spot. You need all the assistance that consular bodies and official trade organizations can give. Of these the Briton and American are from the outset virtually deprived, because our politicians and their handling of the League of Nations machinery have succeeded in isolating Manchoukuo, and in consequence given to Japan a golden opportunity for the firm establishment, without competition, of any business they like to undertake in a new country. Nothing more calculated to assist Japan in Manchoukuo could have been devised than the isolation policy pursued. By the time European and American statesmen wake up to this fact it will be too late. Japan will firmly establish herself in a new market which ultimately may become almost as great as that of China."

The two most interesting personalities in Manchoukuo are, as they should be, the Emperor and his Premier. Indeed, no other ruler in the world can compare with Pu-Yi in respect of a dramatic career. Think of this last living link in the long golden chain of the most brilliant dynasty in all Chinese history, thrust when but three years old on the Dragon Throne at Peking; on the very day of his im-



The Emperor Kang Teh.



The new Emperor just after his Enthronement.

(March 1, 1934)

perial uncle's strange death; thus enthroned by his great-aunt, the scheming "Old Buddha," who herself strangely died the next day; wrenched from that throne when but five to make way for a republic, to which as he grew older he became loyal in spite of its dastardly treatment of him; imprisoned in the Forbidden and forsaken city of his ancestors but befriended there with the tutelage of two superior men, a Chinese* and an Englishman;† becoming so enamored of English history that he took to himself the name of the great King Henry, dubbing his young wife Elizabeth: banking to ride a bicycle; whirled back on the throne and off again; escaping at long last from a satanic "Christian" general to Japanese sanctuary with the aid of his English tutor; and now, by this last turn of the wheel of his most fickle fortune, enthroned in the land of his fathers!

The present writer met the young ruler in the spring of 1933 at Hsinking. He was not at all as he had been pictured. Instead of slim frailty one saw an athletic young man of twenty-seven, slender from daily tennis; instead of solemnity one found geniality, and behind their smoked glasses the "windows of his soul" revealed depths of both sense and sensibility. They are the eyes of a student, who just at that time had been poring over text-books in Japanese and Russian, in which he hoped to become as "easy" as he already was in French and English. He is also a deep student of Buddhism and a systematic student of politics. He asks me to sit down and take a cigarette; lights one for me. I congratulate him on the growing prosperity and tranquillity of his country; on its improvement since I saw it ten years before; on his great opportunity. He says his

* Now his Premier, Chêng.

† Now Sir Reginald Johnston, author of "Twilight in the Forbidden City."

first task is good roads, and I quote Kipling, "Transportation is civilization." He asks how often I have visited China, and I tell him four times. My impressions? "Steadily worse!" He assents emphatically, and asks what I think the chief difference is between China and Japan. On this question being passed back to him he says that Japan respects her own history and cherishes her national ideals, whereas many Chinese run after strange gods, such as communism. He becomes animated as he describes the callousness of China's leaders to the woes of her helpless people; the perfidious turning of Chinese diplomats to one country after another with false statements and false promises, and their success in hoodwinking the Powers, including America. He mentions, although without rancor, his own mistreatment, recalling the philosopher Dr. Hu Shih's statement that it was "a disgraceful proceeding, which will go down in history as the most unsavory act of the Chinese Republic." He declares that the only reason his dynasty did not enforce its rights was that, unfortunately unlike Japan, it was unarmed. Adverting to my experience years ago as a teacher of Japanese students, he asks during what years of the Meiji Era I served; "and what kind of boy, pray, was General Masaki?" He grows most animated at the mention of his own English teacher, Sir Reginald Johnston; his sensitive face glows with gratitude and affection. On the conversation turning to tennis he says he plays to refresh himself every afternoon when his day's work is done, and on learning that Ellsworth Vines lives in my own "home town" treats me as a person of importance! The main impression he makes is that of *race*. He is visibly the heir of China's two greatest Emperors, Kwang Hsi and Chien Lung. Sir Reginald Johnston says that his most noteworthy characteristics are "his readiness to listen to new ideas, his

tolerance, the voracity with which he devours the newspapers and his immeasurable advance in familiarity with the social and political worlds of both East and West."

Sir Reginald's opinion of Premier Chêng is equally well worth quoting. "He is undoubtedly one of the most learned and accomplished men of his generation in China, and is also perhaps the most distinguished of living Chinese poets. He could have been one of the richest men in China today had riches been his goal. His belief is that the establishment of a sound and enlightened government in Manchuria will hasten the revival of China, and that reunion between the two will come about when China has ceased to be the prey of self-seeking politicians and ruthless and grasping militarists. It is, indeed, conceivable that the existence of a well-administered, tranquil, contented and prosperous Manchuria on the borders of China might constitute a constant stimulus and incitement to Chinese statesmen and people to aim at an equally high standard of well-being and efficiency for their own country. Self-respect and considerations of 'face,' if nothing else, would compel them to make strenuous efforts in that direction."*

"The Collapse of a Civilization" is the significant and unexaggerated title of a book on China written by the American scholar Mr. Nathaniel Peffer to bring home the truth to his fellow-countrymen. "It is actual break-up from within," he says; "dissolution." The lieutenants of Yuan Shi-kai, who was defeated in his attempt to restore a monarchy, "were succeeded by an upstart rabble—exception being made for a very few. These were generals without either new or old education, who had risen at a time when there was no administrative machinery above them to give them pause and when one could follow one's

* *English Review*, June, 1932.

voracious impulses with impunity. They enlisted their own armies without the authorization of superiors, levied taxes as they pleased and without conscience, gleaned the districts in which they were stationed like a plague of locusts. The lesson which China has taken to heart from the West with greatest success is that of killing large numbers of men," her own men, in senseless and ceaseless civil wars waged for loot. "It is the only aspect of Western efficiency which China has adapted successfully to its own use."

The only rift in the black clouds that hang over China appears in the North, and wherever the army of Chiang Kai-shek happens to be moving. Since Manchoukuo has become a tranquil and prosperous reality, and since Japan has proved her professions by promoting its independent integrity, hope seems to have awakened in the North. The ruling influence there is Huang Fu, who heads the provincial government and is also the personal representative of Chiang Kai-shek. Huang Fu has had extensive diplomatic experience, as Mayor of Shanghai, the international city; as Chinese Minister of Education; and also as Minister to Germany. The width of his experience is further suggested by his two books, "The World after the War," and "The Washington Conference." Huang Fu accepts Manchoukuo as a *fait accompli*, and does not reject the hand of amity held out by Japan. A realist, he perceives that the welfare of China and Japan alike can only be promoted by friendly understanding, as even a glance at the map must show. Besides their unseverable geographic alliance the two nations are bound together by traditional ties rooted deep in the past, and now in this new economic age neither can prosper as it should without the other.

Real friends of China have no better course open to them than to support Chiang Kai-shek and such of his repre-

sentatives as Mr. Huang Fu. It says much for them that they are both close friends of Mr. Hirota's. Their policy is the only hopeful policy in the torn and riven China of today. "The ascendancy of Chiang Kai-shek," says the *London Times*, "is founded partly on the man and partly on circumstances. Chiang got his start years ago at Canton from the Russians, who found him forceful and persistent to a degree rare in his fellow-countrymen. The Russians had their own axe to grind, and hoped to use Chiang as an instrument to revolutionize China in accordance with their ideas. The Cantonese movement northward in 1926 was successful largely owing to the driving power of the Russians behind it. Chiang commanded the troops and became a national figure. When it became evident that the movement was being utilized by the Russians to establish Sovietism, Chiang had the temerity to turn on the Russians and oust them." Steadily since that time he has shown himself the one strong man in China, whether by his relentless military drives against the devastations of the Communists in the South or by his constructive governmental policies in the North. He favors a *rapprochement* with Japan, but is too good a politician to say much about it at home.

Mr. William R. Castle, already cited (in Chapter XII) as a high American authority on the Far East, was Under Secretary of State during the Hoover-Stimson administration, and can therefore hardly be suspected of undue prejudice for Japan. Americans should heed his words. "Americans," says Mr. Castle, "are inclined to be a little sentimental about China, to generalize about Chinese gratitude toward the United States without having an adequate basis for the generalizations. In the days of active foreign penetration of China the United States seized no territory as concessions. It was John Hay who proclaimed and put

through the policy of the Open Door, a policy which meant that no nation should be given special trade advantages at the expense of any other nation; a policy which was a great safeguard to China because it meant that no nation could wring from the Chinese privileges which really infringed on Chinese sovereignty. It was Charles E. Hughes who, at the Washington Conference in 1922, negotiated the treaties by which the various nations promised to respect the territorial and administrative integrity of China. At times of flood and famine America has poured out assistance in almost unlimited amounts. As a result of these things the average American believes that all Chinese are grateful to the United States, that whatever may happen to others, Americans are safe in China. Nothing could be more erroneous. Some Chinese are grateful; but the vast mass of the people do not differentiate between Americans and other foreigners, and are not in the slightest degree interested in what we have done for the nation. The politicians—those who know and understand—think of past favors as an earnest of more favors in the future; and if these favors are not forthcoming, they are merely contemptuous.

“It would be wrong wholly to blame China for this attitude. The Chinese detest the condescension of Western nations, and are willing to endure it only so long as they profit by it. They represent an ancient civilization which was producing magnificent works of art when our ancestors were barbarians, or, at the best, nomads. The impact of the Western world on this civilization, so utterly different from ours and in many respects so much more self-contained, so much better balanced, has so far—with striking individual exceptions, of course—only created a class which adapts to Chinese uses the political trickery of the West. Furthermore, until China is criss-crossed with a network of railroads

CHINA AND MANCHOUKUO 295

and highways it cannot be a unified nation.* There is no common denominator. The North is ignorant of the South, and neither obeys the middle. Civil war destroys any possibility of unity. Different war-lords control different sections of the country and seldom pay much attention to Nanking. Yet the government in Washington, like other governments, persists in the error of thinking that since the fall of the monarchy it can treat with Peiping or with Nanking as it can treat with Paris. But China is not a nation in the sense that France is a nation.

“With all its protestations and evidences of friendship to China, the United States has not failed to look after its own interests. We have extra-territorial privileges like the others. Americans in China are tried in the United States court for China. We have had troops in China ever since the Boxer troubles in 1900, and it is certainly no exaggeration to say that the presence of these troops has saved many an American life.

“Before the trouble between China and Japan the Chinese were actively negotiating for the abolition of all extra-territorial rights since the date of denunciation, and the United States would be very foolish to give them up except as part of a general international arrangement. There is a great deal of loose talk about the requirement of extra-

* Trained observers on the ground warn the West, however, that the Chinese in the “grandiose railway and other plans are putting the cart before the horse. How can any big national schemes prosper when so much of the country is against the Government, when the law of the land does not prevail, when most of the provinces are dominated by war lords? Construction of railways would benefit agriculture and commerce, but it must be remembered that they are wanted primarily for strategic reasons.” So with highways. “The main motive behind the construction of the majority of the roads is military strategy. Roads cost money, and money is provided from provincial funds in order that the local war lord may more conveniently dominate his province.”—China correspondent in *London Times*, Feb. 10, 1934.

territorial jurisdiction as being an anachronism in this modern world, as being direct interference in national affairs and therefore contrary to the spirit of the post-war peace treaties. This is theoretically true. There seems little reason to cling to the rights in Morocco or even in Egypt. We surrendered them years ago in Japan. But in China the situation is different. When China becomes a sufficiently unified nation to enforce justice in all its parts and when the system of jurisprudence is such as to insure justice as it is understood in the Western world, including equal treatment in the courts of aliens and nationals, as is supposedly the case in all modern nations—when that time comes, the United States should join with the rest of the world in relinquishing voluntarily and gladly all extra-territorial rights. Until that time comes, doing so would be unfair to our own citizens. It would be a gesture which the Chinese would interpret as weakness, not as generosity.

“The Manchurian trouble is too recent to enable us to evaluate the different steps in American policy. That mistakes were undoubtedly made is only natural and human, but there also can be no doubt that the main stream of American policy was correct. The Department of State was not unconscious of the tribulations of the Japanese in Manchuria, of the long series of unprovoked attacks on Japanese rights. It did not ignore the truth that Manchuria, because of its proximity and the fact that it must always be an indispensable source of supply to Japan, stood in a very special relationship to the Island Empire. But it did most earnestly believe that the relationship could better be advanced through peaceful measures. It deplored the dominance of the military in Japan, a dominance that meant a virtual breakdown of civil government, so far as the making of policy was concerned, that ignored any treaty obliga-

CHINA AND MANCHOUKUO 297

tions which, in the eyes of the army, were contrary to the immediate interests of the Empire.

“The situation was different for the Department of State. The League of Nations had taken jurisdiction of the dispute at the beginning, but wanted the United States to co-operate. The United States was clearly involved through the terms of the Nine Power Treaty guaranteeing the political and administrative integrity of China and through the terms of the Kellogg pact renouncing war as a national policy and promising to seek peaceful settlement of disputes. Co-operation was difficult because America was determined to take no measures which might lead to war. — As one looks back over the kaleidoscopic events of the last two years it is very easy to criticize the separate steps taken, but it is not easy to criticize adversely the main line of American policy. It would undoubtedly have been wiser to insist at the very beginning that China and Japan institute direct conversations. But that is to look backward. At the time, the world was all too ready to listen to the protestations of China that in such conversations it would have no chance. It is clear now that China would have retained a shadowy sovereignty over Manchuria, it certainly was not clear then that without such conversations China stood to lose everything. But nobody appreciated the determination of the Japanese military leaders; nobody realized the impotence of the Japanese government in the face of the military. What the American government wanted — its only purpose in everything it did, alone or in conjunction with the League — was to preserve the post-war treaties, which seemed the only indication of progress toward a stable world. Therefore, and for that reason only, America protested against the successive Japanese movements when they were clearly in contravention of the treaties — move-

ments, in many cases, which the Japanese government had solemnly promised would not be made.* The press of the United States was far more bitter than was the Department of State, but the press was dealing in facts of the moment, was not looking ahead. The President always counseled patience. He knew that another world war was a stupid and immoral way to settle a local war.—

“It is very much to the credit of the Japanese government and suggests that a calmer spirit is abroad in the land that there was little or no excitement when the United States recognized the Russian Soviet government. The Russian government had published documents of a sensational character alleged to have been sent by the Japanese representative in Manchoukuo to his government in Tokyo. Nobody outside of Moscow knew the reason for this very provocative act. If the documents were forgeries their publication looked like an incitement to war; if they were genuine the Russians were flaunting in Japan's face the fact that their spy system was active and efficient. President Roosevelt happened to choose the moment of publication of these documents to suggest to President Kalinin that an envoy be sent to Washington to discuss recognition. It would not have been strange if the Japanese had believed this to be a declaration that in case of war the sympathies of America would be with Russia. Fortunately the Japanese Ambassador had already warned his government that Russian recognition was imminent. Evidently, also, the more sober people in Japan realized that the very fact of the coincidence of dates proved that the recognition had no slightest connection with the Far Eastern situation.—

* These promises were made in good faith. Inconsistency arose from the fact that the military arm of the Japanese government is under the Constitution responsible only to the Emperor in times of national emergency.—Author.

CHINA AND MANCHOUKUO 299

“Trouble with Japan would be a crime against civilization. — Japan is assimilating what it wants of Western civilization. Western ideas of legal justice, for example, have really taken root in this Oriental soil. America has never regretted giving up extra-territoriality. There is, therefore, no reason for a clash of ideas and ideals which without an earnest attempt to understand the other on the part of both nations, might lead to serious misunderstandings. In every other way the paths of the two nations lie parallel. Each needs the support and the faithful friendship of the other. For self-interest and the support of world decency and progress each must be forbearing without surrendering its conscience or its ideals.”*

The only irreconcilable differences between Japan and foreign powers concern Manchoukuo and China, and even these are irreconcilable only with certain “principles” of the Lytton Report. For example, Principle 7 declares that “the government in Manchuria should be modified in such a way as to secure, *consistently with the sovereignty and administrative integrity of China*† a large measure of autonomy designed to meet the local conditions,” etc.

Mr. Hirota, in speaking on foreign relations before the Diet on January 23, 1934, significantly quoted the Imperial Rescript handed down when Japan decided to withdraw from the League of Nations, as cited on page 283. This Rescript mentions the independence and healthy development of the new State as an essential policy of the Japanese Empire.

Japan has never been known to back down from an Imperial Rescript.

Again, Principle 10 of the Lytton Report declares that since the conditions enumerated in that report “cannot be

* N. Y. *Herald-Tribune*, Jan. 21, 1934.

† Author's italics.

fulfilled without a strong central government in China, the final requisite for a satisfactory solution is temporary international co-operation in the internal reconstruction of China, as suggested by the late Dr. Sun Yat-sen."

In concluding his speech before the Diet Mr. Hirota used words that ought to be pondered abroad: "We should not forget for a moment that Japan, serving as the only corner-stone for the edifice of the peace of East Asia, bears the entire burden of responsibilities. It is this important position and these vast responsibilities in which Japan's diplomacy and national defense are rooted."

Stripped of diplomatic verbiage, these words seem to oppose "international co-operation in the internal reconstruction of China," as suggested by the Lytton Commission. However, subsequent statements of the Foreign Office would seem to bear out the two following conclusions.

While the Japanese government is pledged to the open door for trade in Manchoukuo, it has no intention of seeing its ally revert to its former unenviable status. This would be to open the door to war.

And while the government has declared again and again that it has no intention of trying to interfere with the rights of other nations to carry on *bona fide* business in China, it does seem to have served notice that Japan and China must settle their differences between themselves, and that China must not be embarrassed by such "international co-operation" as it has suffered from in the past when the motive was primarily one of selfish exploitation.

XVI

CONCLUSIONS

¶ Japan and Rudyard Kipling—Japan's unique advantages—Owen Young's forecast—Japan and America—Condescension and ignorance—Nerve when pluralized

CHAPTER XVI
CONCLUSIONS

AT LEAST one general conclusion seems clear; that Japan's industrialism is here to stay.

Industrialization is Japan's best and perhaps only answer to her most acute problems, and she is committed to it so thoroughly that there is no turning back.

This is a new fact for the world to consider, and some parts of the world think it ominous. But whether the rest of the world likes it or not, it is a fact that has to be reckoned with. What a way we have come from Kipling's oft-quoted rhyme about the white man who tried to hustle the East! The East is now hustling the white man.

One recalls certain other words of Kipling's, notably a passage in his charming letters, "From Sea to Sea." "Japan is a great people," he wrote from Kyoto in the eighteen-nineties. "Her masons play with stone, her carpenters with wood, her smiths with iron, and her artists with life, death, and all the eye can take in. Mercifully she has been denied the last touch of firmness in her character which would enable her to play with the whole round world. We possess that—We, the nation of the glass flower-shade, the pink worsted mat, the red and green china puppy dog, and the poisonous Brussels carpet. It is our compensation."

Kipling pronounced judgment too soon. We know now that Japan *has* "the last touch of firmness." But

must she pay for it by falling victim to the hideous contagion of pink worsted mats, red and green chinaware, and poisonous Brussels carpets?

Japan should cling to her priceless inheritance of good taste.

She has taste to a degree unknown elsewhere among industrial nations. For a while there were signs that she might lose it. In fact, the danger is not yet overpast.

Another priceless inheritance is the skill of her artisans.

Taste and skill: if Japan conserve these, and turn them to account in her new mills, she can impart to her goods a distinction that will make them unique in the markets of the world.

Why not, then, make quality rather than quantity her main industrial ideal?

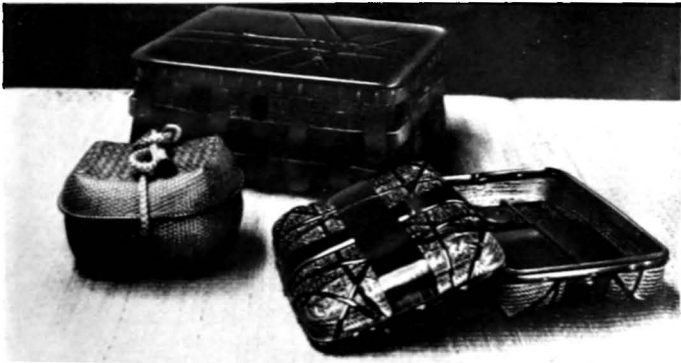
If she do this steadfastly, she will not only prosper—because the whole world *can* be taught to respond to the appeal of beauty, no matter what cynics may say—but she will have made an invaluable contribution to the universal civilization of the future.

At present Japan is encountering world-wide hostility through swamping the markets with cheap commodities of every description. They are not inferior commodities; they hold their own with almost all rivals. But why not make them still better? Why not make them beautiful?—at least with the touch that puts aspiration into every endeavor, even into the making of mass goods.

Does this sound far-fetched? Nobody that knows him has ever accused Kaju Nakamura, M. P., of impracticality. On returning from a recent trip round the world—his sixth—he said in a public address in Tokyo that everywhere he found Japanese goods swamping the markets; that this was creating world-wide hostility; that in his judgment Japanese



Making Cloisonné



New and perfect Lacquer-ware.

exporters should charge higher prices, "thus at one stroke making more money and fewer enemies."

If for these higher prices Japan adds an extra touch of fineness, adds her own distinctive elegance, the aim for which the present writer is contending will be at least half-way attained.

There is a thoroughly practical reason for considering such a policy as this,—if Owen D. Young be right in his masterful forecast of the course of world trade. Writing in the *New York Times Magazine** he says:

I think it is inevitable that international trade in manufactures will grow less.

All objects of trade may be roughly divided into three layers. At the bottom are raw materials. Immediately above and superimposed on them are manufactured necessities, and on top of the two are luxuries. My belief is that the world trade of the future will take place principally in the bottom and the top layers, and that the middle layer of manufactured necessities will diminish in volume.—

The extent to which there will be an international trade in luxuries depends upon the economic well-being of the world. In the last analysis it depends upon the development and refinement of taste plus the power to buy. Then, too, there is the gradual transfer from the third group—of luxuries—to the first group—of raw material necessities. Coffee, tea, fruit, tobacco, are being treated as necessities. As such they may be grown over wide areas, but without refinement. As luxuries, they can be produced only in those countries which nature has provided for them. All tobacco is not a luxury; there is no substitute for the cigars of Havana. All wines are not a luxury; there is no substitute for certain wines of France. So we shall see, I think, a great increase in international trade in the field of raw material and—particularly if the world is prosperous—in that of luxuries.

* Reprinted in the *Pole Star Monthly*, Tokyo, Feb., 1934.

As to the middle layer, I think each country will increasingly develop the manufacture of its own necessities. It will do so partly as a matter of national defense, that it may be self-contained. It will do so partly to employ its people and make them more productive in their own interest. It will do so partly because its own economy resulting from this machine age will be improved. As a consequence we must look, I think, for barriers to be set up against the importation of manufactured necessities as rapidly as each country can produce its own.

The writer believes that this is a correct forecast, and therefore entitled to grave attention, in Japan of all places.

The argument, reduced to its simplest terms, runs thus: Ordinary commodities will disappear more and more from the channels of trade, as they come to be produced locally. Japan has a unique capacity to produce ordinary commodities in an extraordinary way, that is, to convert them into "luxuries." The trade in luxuries will grow in proportion to the development of taste, plus the power to buy. Japan should step up from "ordinaries" to "luxuries" while the stepping is good, as there can be little doubt that taste will be increasingly developed, and also the power to buy.

Further, in Japan's case *silk* should be substituted for Mr. Young's tobacco and wine. Other countries can produce artificial silk, but there is really no substitute for the natural silk of Japan. More and more she should take over the weaving of it, weaving it with that taste and skill in which she is unapproachable, until Japanese silk-weaves become as indispensable to world markets as Havana cigars or French wines.

It seems hardly necessary to quote what Mr. Young says about raw materials. It seems self-evident that "no spirit of isolation, no political policy of isolation, no disturbance of peace even, can for a very long period or to a very large extent impair the movements of the raw materials

of the world. As consumption increases and domestic fabrication tries in each country to keep up with it, the business of international trade in raw materials not only will continue but will grow."

This takes care of Mr. Young's own country, the United States, a vast storehouse of materials. Stored there is twenty per cent of the world's wheat, forty per cent of its coal, fifty per cent of its copper, nearly sixty per cent of its cotton, more than sixty per cent of its steel, and over seventy per cent of its oil. "Nowhere and at no time has civilization seen anything like this position relative to other countries," says the Encyclopædia Britannica.

Japan has this vast storehouse to draw from.

It is a fair presumption that when America recovers from the present depression she will become more even than now the purchaser of Japan's luxuries.

Thus a reciprocal trade between Japan and America seems as if fore-ordained of the gods.

For the production of "luxuries" — the term is not satisfactory — Japan has a superabundant supply of hydro-electric energy. Instead of being exhaustible, like coal and oil, it renews itself inexhaustibly.

Unless enormous inventive devices improve the quality of her iron and coal supplies (including those from Manchuria) Japan cannot and should not hope to compete *in trade* in many of the heavy industries with more favored countries such as England and the United States. But she can import economically all of the metallurgical raw material necessary to her own manufacturing requirements. Even from a military point of view, say Moulton and Ko,* self-sufficiency in metallurgical production does not appear to be a vital necessity.

* *Op. cit.*, pp. 468-9.

In the event of a war with China or Russia, there would be no difficulty in procuring by sea from Europe and the United States the iron and steel products required. In case of a war with the United States, it would be possible to import iron and steel products from Europe, either by way of the Trans-Siberian Railway or by sea. Similarly, were Japan to engage in war with a Western European country, iron and steel products could be obtained from the United States or other European countries. The problem would be a naval one, of maintaining shipping connections. It would seem that if iron ore has to be brought from sources as far distant as the Philippines, Singapore, the Dutch East Indies, and Australia, the danger of the interruption of supplies by the enemy navy would be approximately as great as the danger of being cut off from finished products of iron and steel. Only in the event that Japan should wage war simultaneously with Europe and the United States would complete independence in the matter of iron and steel products be of vital importance.

The author does not share the opinion so generally held abroad that Japan is bent on wide wars of conquest. He believes that the recent adventure in Manchuria was practically unavoidable, and that it was essential to Japan's very existence to maintain its rights there. If those rights had not been maintained Japan could hardly have survived industrially. Further, the writer *knows* that the Japanese army had it within its power at one time to seat itself in the saddle of rule, and that it withstood the temptation, thus maintaining Japan's parliamentary system, with its basis of manhood suffrage. He would not characterize Japan, therefore, as essentially militaristic. He sees the Japan of today not as subject to a military caste on the one hand or to a money-grubbing caste on the other, but as a unified family, a busy human ant-hill; the industrialists bent on making a living for all concerned, and the military forces

protecting them in it. But of course Japan has a wider intelligence than that. "Live and let live" seems to be one of its international watchwords. The nation is wise enough to perceive that it cannot live well itself unless its neighbors live well too, and this gives it an intense but certainly a pardonable concern in good order in Asia. But there should be no mistaking one point: Japan has the will to live, and the power.

The events of the last few years have revealed that Japan has this power.

He either fears his fate too much,
Or his deserts are small,
That dares not put it to the touch,
To gain or lose it all.

Japan put everything to the touch in Manchuria, and won. The event, instead of turning the national head, has sobered it. There is a new national dignity. The swagger of adolescence is past. Japan comes of age.

As yet, the West does not realize this. Japan has a right to complain of "a certain condescension in foreigners." It has been a good-natured condescension, the sort accorded by adults to a bright boy, but it has been condescension. Japan is now full-grown. The growth has been like that of Jack's beanstalk, which is some sort of excuse for the foreigners, but the growth, while fabulous, is no fable.

The sooner Japan's full-grown stature is recognized the better for everybody concerned. With that "ruthless and intelligent pertinacity" which Lowes Dickinson—"the most civilized mind in Europe"—divined as belonging to Japanese character, this youngest of the full-grown nations has capped all its other achievements in the mastery of Western civili-

zation by mastering the technological processes of the most favored nations and also their high secret of effective colonial administration, until now they can no longer question that "last touch of firmness" which makes Japan fully their equal.

Besides getting rid of this "certain condescension," a flaw in our manners, should we not tighten up some of our thinking? Loose thinking has much to answer for in the field of international relations, and no thinking is looser than that which assigns to the Japanese the divine attribute of the Unknowable, or the Inscrutable. Here Lowes Dickinson is a far wiser guide than Lafcadio Hearn. Hearn knew feudal Japan. He could not transport himself backward into feudalism, but the Japanese have since come forward into modernism—on the run. What seemed to Hearn inscrutable or unknowable derived chiefly from himself; or, rather, from the fact that he, a modern westerner, was living in a bygone society, to which he was helplessly alien, in spite of his profound and beautiful sympathy. Dickinson, with his keen scientific mind, cut through Hearn's hazy and romantic mysteries with the single lucid observation that feudal Europe had not been essentially different from feudal Japan. Barring a few strange customs—strange on each side—they were very much the same. Now that Japan has wholly emerged from feudalism, and her people have taken on the modern mentality, as they have done pretty thoroughly, there is little more difficulty for an American to understand them than to understand Frenchmen or Germans. China is still feudal. Why lump all orientals together as beyond comprehension, as being "not of like passions as we are"? One may borrow an ingenious and helpful idea from Dr. A. J. Brown,* changing the single word "Jew" in the famous protest of Shylock, and get a pat set of questions:

* "Japan in the World of Today," p. 13.

Hath not a Japanese hands, organs, dimensions, senses, affections, passions ; fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same summer and winter, as a Christian is ? If you prick us do we not bleed ? If you tickle us do we not laugh ? If you poison us do we not die ? And if you wrong us shall we not revenge ?

Ignorance, based on a false assumption, together with a certain condescension, are two barriers to a proper understanding of the Japanese by peoples of the West. If we will to understand them, we can. If we stop condescending to them, we shall find them our equal friends.

Perhaps the chief trouble with the Japanese themselves *vis-à-vis* their big neighbor across the Pacific is nerves. This is a case where pluralizing a good word spoils it. Nerve is an admirable quality, defined by the Concise Oxford dictionary as "coolness in danger." The Japanese are celebrated for it. The same unimpeachable authority defines nerves as "exaggerated sensitiveness."

Esthetic sensitiveness is another priceless trait of the Japanese. Without it they could not have developed their delicate arts and crafts to such an exquisite degree of perfection, or their unique tea ceremony, or their skill in flower arrangement, or their dainty poetry, or a thousand-and-one other things that delight beauty-lovers in every part of the world. Without it they could not have developed the most polite manners of any people on earth ; for good manners are based on consideration of others, and consideration depends on fine sensibilities. Esthetic sensitiveness never reached a higher attainment than in the far-away Fujiwara epoch of the Lady Murasaki and Prince Genji.

Six hundred years or so later came the Tokugawa

régime, which indeed saved Japan's life by barring out the predatory powers of the West, but which on the other hand did hurtful things to the Japanese spirit during the two centuries and more of its rule. In order to keep things exactly as they were and therefore within the firm grip of the Shogunate this régime adopted extraordinary expedients, including—according to Okakura-Kakuzo—the most perfect system of espionage ever devised. A fundamental principle of the Tokugawa policies was suspicion, the whole Japanese Empire, so long as this Shogunate lasted, being a huge nest of spies. “From the highest to the lowest, all were entangled in a subtle web of mutual espionage.” For the indiscreet, death lurked just around the corner. A personal illustration of the natural outcome of such a system came under the observation of one of the members of the Perry Expedition. Great drops of perspiration were noticed rolling down the neck of a kneeling native interpreter, without apparent cause. On inquiry it was learnt that he suffered agonies of terror from the imagined descent on his bare neck of the icy blade of the Tokugawa executioner, ubiquitous and tireless.

In view of such a system as this, which began during Shakespeare's time and lasted through the American civil war, the wonder is that resiliency and recovery have been so swift. Within the observation of the writer the people have made perceptible progress in coming out from the Tokugawa mentality. Only a folk of peculiar vitality and flexibility could have achieved such a rapid rebound. If their critics still find them on occasion unduly suspicious, or supersensitive, the historical explanation is clear. They will some day entirely outgrow the inevitable results of a by-gone system of government which, with all its faults, saved the life of their nation. And the sooner they outgrow it

the better. The "war scares" that flare up on that side of the Pacific recurrently and without any sufficient reason are unworthy of such a great people.

In justice, however, it must be conceded that the recurrent suspicions of America's intentions arise partly from the Japanese assumption that America knows as much about them as they know about America. If this assumption were correct some of the "sell-the-paper" absurdities of the American yellow press or the jingoistic animadversions of congressmen might deserve to be taken seriously. But the assumption is incorrect. If Japan is sensitive—let us repeat it—America is ignorant. Time can cure even ignorance. As an American friend of Japan wrote to the author,

If they can put up with our stupidities in the form of prejudices and if we can arrest our tendency to over-resent certain actions taking the form of what we consider insults, or at least insolences, it may be possible for us both finally to arrive at a degree of mutual esteem and comprehension that will permit us both to advance to the fulfilment of our respective destinies. We both should deeply consider these "imponderables," which, as Bismarck recognized, are more powerful than army corps or massive artillery. . . . We do admire the Japanese, we do respect them, we do earnestly desire that they should achieve what they feel is their destiny. If we knew them as thoroughly as we know the English, the French, or any European people, diplomats and writers could and would bring about a satisfactory settlement of all differences. But we are ignorant. The removal of that ignorance should be the first duty of all good Japanese and of all good Americans. Assuming that the Japanese do not lust for war with America, and knowing that we do not at all want war with them, it does seem at least possible that the jingoes in both countries might be restrained long enough to let each people learn more, and thereby better understand each other.

As regards trade rivalry, weighty words already quoted from Sansom and Kermodé's official report to the British government on "Economic Conditions in Japan" seem worth repeating in this final chapter:

No good, but possibly much harm, can come of ascribing the successes of Japan in foreign trade to unfair methods. This report would fail in its purpose if it did not bring out the fact that those successes have been obtained by a deadly combination of low wages, good workmanship and favourable exchange.

The Japanese must on their side be brought to perceive that "the effect of Japanese competition in overseas markets," as these same writers say, "is disastrous." Self-preservation being the first law of nature, Western peoples are merely responsive to that law in erecting what may at times seem to be unfair trade barriers. These are not necessarily permanent; they may be lowered after due negotiation. In this perilous time of economic transition—before trade conditions have had time to adjust themselves in a new economic world as different from that of yesterday as the airplane is from the horse—there would seem to be need for far-sighted mutual concessions, much patience, and an exercise of the rare ability to get the other man's point of view. Not that the other man is necessarily right. One recalls what the wise old Negro once said in his sermon: "Every question, my friends, has three sides—your side, the other man's, and the right one."

The answer to a problem, the unknown x , can be found only as the value of both factors is understood.

This means that there should be more economic conferences. That way lies safety.

APPENDIX

APPENDIX A

THE TREND OF THE FOREIGN TRADE OF JAPAN

By N. KAWASHIMA

Translated by H. Masaki from the "Kokusai Chishiki," January, 1934, and kindly revised by Mr. Kawashima for this volume.

One often sees statements that Japan's foreign trade has in recent years increased enormously. But at best this increase is quantitative. Even disregarding the fall of the yen, recent totals fall far below that of 1929; but when converted into gold, they indicate that the trend of Japan's foreign trade has been downward, just as in other countries, especially in 1930 and 1931. The two following years showed some recovery.

Again, the idea prevails that Japan's foreign trade shows a marked increase after each and every war. Generally, however, this is merely an increase in figures shown in yen during high price levels or during periods of a depreciated currency. On taking into proper account the rate of foreign exchange or the price index of Japan, we realize that our foreign trade was not much benefited by the Russo-Japanese War or the World War, and, furthermore, that it is generally influenced by the economic trend of the world at large.

Note: Japan's minister to Greece, an expert in the statistics of commerce, marshals an array of figures to support the very interesting thesis set forth in his opening words.

APPENDIX A

(TABLE A)

STATISTICS OF THE ABSOLUTE FIGURES OF EXPORTS
AND IMPORTS

(Re-exports and -imports are included)

YEAR	EXPORTS <i>million yen</i>	IMPORTS <i>million yen</i>	TOTAL <i>million yen</i>
1903	290	317	607
1908*	378	436	815
1913	632	729	1,362
1918†	1,962	1,668	3,630
1922	1,637	1,890	3,528
1923	1,448	1,982	3,430
1924	1,807	2,453	4,260
1925	2,306	2,573	4,878
1926	2,045	2,377	4,422
1927	1,992	2,178	4,171
1928	1,972	2,196	4,168
1929	2,149	2,216	4,365
1930	1,470	1,547	3,016
1931	1,147	1,235	2,382
1932	1,410	1,431	2,841
1933	1,861	1,917	3,778

As shown in this table, our foreign trade increased tremendously after all wars. But this was due either to the sudden rise of prices or to the fall of the yen. For example, the increase in 1918 may be attributable to the former, and that in 1925 to the latter.

* Russo-Japanese War, 1904-'5.

† World War, 1914-'18.

APPENDIX A

319

(TABLE B)

STATISTICS OF EXPORTS AND IMPORTS,
CONVERTED TO GOLD

YEAR	RATE OF EXCHANGE	EXPORTS	IMPORTS	TOTAL
		<i>million yen</i>	<i>million yen</i>	<i>million yen</i>
1903	\$ 49.81 (gold)	290	316	606
1908	49.50	375	432	807
1913	49.52	627	724	1,351
1918	51.47	2,025	1,721	3,746
1922	48.48	1,383	1,839	2,422
1923	48.94	1,420	1,944	3,364
1924	42.10	1,527	2,073	3,600
1925	40.93	1,881	2,110	3,991
1926	47.00	1,927	2,239	4,166
1927	47.55	1,894	2,072	3,966
1928	46.57	1,842	2,041	3,883
1929	46.19	2,007	2,070	4,077
1930	49.49	1,460	1,536	2,996
1931	48.87	1,124	1,210	2,334
1932	28.13	795	807	1,602
1933*	20.25	741	764	1,505

* Rate of Exchange of yen to gold dollar in 1933 is fictitiously calculated by medium of rate of exchange against the French franc.

These two tables reveal the following facts:

(1) Our exports were the largest, according to (A), in 1925, when the rate of the fall of the yen was the lowest, owing to the great earthquake; according to (B), in 1918, when the value of the yen was the highest.

(2) Our imports were the largest, according to (A), in 1925; according to (B), in 1926,—and the value of the yen fell in both these years.

(3) The total of our foreign trade was the largest, according to (A), in 1925; according to (B), in 1926, then 1929.

(4) Our foreign trade increased in ten years (from 1903 to 1913) by 120%, according to both tables, and in the subsequent ten years (from 1913 to 1923) by 150%. The Great War might have

APPENDIX A

benefited our trade, but the foreign trade of the later ten years (1923-'33) has been much affected by the world depression since 1930, and the foreign trade in 1933 showed an increase, according to (A), of only 10%, but a decrease, according to (B), of 55%, compared with 1923.

(5) According to (B), the total of exports and imports in 1933 showed an increase of only 11% over that in 1913, while the total trade of 1913 showed an enormous increase—about sixfold—over 1893. (This year, the one preceding the outbreak of the Sino-Japanese War, yielded a total trade of ¥ 179,000,000. The rate of exchange was then 62.12, hence the actual value was ¥ 223,000,000.) Thus our foreign trade was not much benefited by the European War, but thereafter suffered much from the effect of the world depression.

(TABLE C)

STATISTICS OF EXPORTS AND IMPORTS,
IN TERMS OF PRICES

(Assuming that the price in July, 1914, was 100)

YEAR	PRICE INDEX	EXPORTS	IMPORTS	TOTAL
1888	42	157	155	312
1893	47	192	187	379
1898	67	243	415	663
1903	82	354	387	741
1908	99	382	440	822
1913	105	602	694	1,296
1918	203	967	821	1,788
1923	210	690	943	1,633
1925	212	1,088	1,314	2,302
1928	140	1,096	1,220	2,316
1929	175	1,228	1,255	2,483
1930	144	1,021	1,074	2,095
1931	121	948	1,021	1,969
1932	128	1,101	1,118	2,219
1933	143	1,301	1,341	2,642

Note: According to the investigation of the Bank of Japan, prices in July, 1914 were 126, if those in October 1900 be assumed as 100.

The following facts may now be noticed:

(1) According to (A) and (B), the total of our foreign trade was the largest in 1925 and 1926, when the rate of the fall of the yen was the largest, while according to (C), it was the largest in 1933 and next in 1929, the year when the yen was about to be stabilized.

(2) It is generally considered that Japan's foreign trade increased in a marked degree in 1918 (affected by the European War), but the increase was only 39% over the total in 1913, while the increase in 1913 was 58% over the total in 1908.

(3) The increase of foreign trade in the five years' period from 1903 to 1907 (the Russo-Japanese War Occurred in 1904-'5) was 11%, while that in the same period from 1898 to 1903 was 12%, hence it is clear that the Russo-Japanese War likewise did not benefit trade as much as generally supposed. In the period from 1893 to 1898 (the Sino-Japanese War was in 1894-'95) the increase was 75%, but this was perhaps because our foreign trade increased chiefly as a result of our receiving an indemnity.

(4) The gradual decrease of the trade from 1929 to 1931 was largely caused by the recovery of the value of the yen and the measures taken against Japanese goods by other countries actuated by the world depression. And it should be noted that the decrease could not be balanced by the fall of prices in Japan and that if the value of the trade is estimated in gold, the rate of decrease was larger than in other countries in that period. The value of our foreign trade in 1933 estimated in gold was not very large, but, if estimated on the basis of the price index, it was much larger than in 1931 or 1932; even larger than in 1929. This was due to the fact that the rise of prices in Japan had been slower in proportion than the fall of the yen.

(TABLE D)

STATISTICS OF THE PER CAPITA VALUE
OF JAPAN'S FOREIGN TRADE

YEAR	POPULATION	EXPORTS	EXPORTS	EXPORTS	EXP.
		in absolute figures	per capita	in terms of the price ind.	
	<i>millions</i>	<i>million yen</i>	<i>yen</i>		
1878	34.9	26	0.74		
1883	37.0	36	0.97		
1888	39.6	66	1.67	157	3.96
1893	41.4	90	2.17	192	4.64
1898	39.8	166	3.79	248	5.65
1903	46.7	290	6.19	354	7.58
1908	49.6	378	7.63	382	7.70
1912	52.5	527	10.03	502	9.56
1913	53.4	632	11.85	603	11.35
1918	56.7	1,962	34.38	967	17.05
1922	59.5	1,637	32.95	795	13.36
1923	60.3	1,448	24.35	690	11.44
1925	62.0	2,306	37.75	1,088	17.52
1928	64.8	1,972	30.88	1,096	16.91
1929	65.7	2,149	33.14	1,228	18.68
1930	64.5	1,470	22.79	1,021	15.83
1931	65.4	1,147	17.54	948	14.50
1932	66.3	1,410	21.27	1,101	16.61
1933*	67.3	1,861	27.65	1,301	19.33

* estimated.

The following facts should be noted:

(1) The *per capita* value of exports, taking the price index into account, was 4.64 in 1893 (the year before the occurrence of the Sino-Japanese War), and 7.58 in 1903 (the year before the Russo-Japanese War), hence the rate of increase in that decade was 85%. On the other hand, the exports *per capita* in 1913 (the year before the World War) were 11.35 and the increase in the

ten years from 1903 to 1913 was 50%. That is, the rate of increase in the ten years following the Russo-Japanese War was less than during the same period following the Sino-Japanese War.

(2) The exports *per capita* in 1922 were 13.36 (decreased to 11.43 in 1923 owing to the earthquake) and those in 1912 were 9.56, thus the increase was only 39%. Hence, the rate of increase of the foreign trade of Japan was not affected by the World War very favorably.

(3) Further, the exports *per capita* ten years after the War, i. e., in 1928, were 16.91, and the increase over those in 1913 (the year before the War) was 48%. On the contrary the increase in the same fifteen years' period from 1898 to 1913 was 101%. So the increase after the War was comparatively small.

(4) The foreign trade of Japan was benefited by the War to some extent, but, after all, the effect of the post-war depression appeared in the figures of 1922. Later, our exports and imports increased gradually, along with the recovery of world economic conditions until 1929, when the rate of increase was the highest. But since then the amount *per capita* gradually decreased, owing to the world depression and to the re-establishment of the gold standard. Since 1932 it has begun to increase, due to the fall of the yen caused by the re-embargo of gold.

(5) In short, the increase of the *per capita* value of our foreign trade was the largest just after the Sino-Japanese War, and then after the Russo-Japanese War. After the World War, it once got a high mark: in 1918. Then it remained almost the same, until the re-embargo of gold in 1932. Thus we realize that in the long run war has not advanced our foreign trade, except in case we have received indemnity, as was the case after the Sino-Japanese War. In other words, foreign trade, if estimated in gold or the price index, is not increased by war. In general foreign trade increases yearly, but its rate of increase is remarkable in times of peace; and although it increases suddenly after a war, it decreases again, being affected by the post-war depression, so that, after all, the rate of increase drops. Further, the trend of our foreign trade is much affected by the world's economic condition.

(TABLE E)

THE STATISTICS OF THE FOREIGN TRADE OF JAPAN,
INCLUDING KOREA AND FORMOSA

The inter-trade between Japan-proper and Formosa and Korea is generally neglected in the study of the foreign trade of Japan. The following table presents the statistics plus the above-mentioned "inter-trade." It will be noticed that the *per capita* value of Japan-proper increases by 5 or 6 *yen*, when "inter-trade" is taken into account.

YEARS	EXPORTS	EXPORTS <i>per</i> <i>capita</i>	SHIPMENTS from Jap. Pr. to Formosa	SHIPMENTS from Jap. Pr. to Korea	TOTAL	TOTAL <i>per</i> <i>capita</i>
1903	290	6.19	11	—	—	—
1908	378	7.63	21	24	423	8.53
1913	633	11.85	42	40	715	13.39
1918	1,962	34.38	71	117	2,150	37.92
1923	1,448	24.35	82	167	1,697	28.14
1925	2,306	37.75	130	235	2,671	43.08
1928	1,972	30.88	132	296	2,400	37.03
1929	2,149	33.14	140	315	2,604	39.63
1930	1,470	22.79	123	278	1,871	29.01
1931	1,147	17.54	114	218	1,479	22.61
1932	1,410	21.27		258		

APPENDIX B

SOME CONSIDERATIONS OF FACTORS WHICH DETERMINE
THE CONDITIONS OF LABOR IN JAPAN

By KAMEKICHI TAKAHASHI

Director, Takahashi Economic Research Institute

"Cheap Labor" as a factor affecting the cost of production has lately attracted much attention as a question of vital importance in view of keen trade competition among

countries with divergent standards or with different modes of living.

In order to ascertain whether or not a certain country employs "cheap labor" as a weapon for its international competition, a mere comparison of money wages prevailing in the respective countries would be an unsatisfactory method. Not only the so-called "real wage" but also the following points must be carefully examined and they should form the basis of our judgment on this question.

I. Factors which affect the living conditions of the farmers, and which in turn tend to determine the national level of wages of Japanese industrial labor :

- (a) The production *per capita* of agricultural labor.
- (b) The difficulties and obstacles which affect the efficiency of agricultural labor.
- (c) The amount of surplus population in rural areas.
- (d) Protective tariff and other forms of state protection of farm products.
- (e) Rent, taxes and other burdens on farmers.

II. The general living conditions of salaried men as well as small shopkeepers, which operate as a supplementary factor to determine the national level of wages.

III. The cost of raw materials, power production and machinery, and the current rate of interest.

IV. Tariff and other trade barriers set up by foreign countries which affect labor conditions in Japan.

V. Other factors :

- (a) Skill of laborers.
- (b) The balance of power subsisting between capital and labor in their wage bargaining.

VI. The international situation: Labor conditions in neighboring countries, especially in China.

The study of the above-mentioned points will show that the existence of so-called "cheap labor" in Japan is not the outcome of any wilful manipulation on the part of employers, but rather it is a natural result, arising from circumstances which can not be remedied to any great extent by the reduction of the amount of "exploitation." The real remedy lies in international adjustment of the balance between population and natural resources, thus affording opportunities of gainful occupation to the Japanese people.

**EXPORTS AND FOREIGN EXCHANGE OF JAPAN,
1929-1933**

	1929			1930			1931			1932			1933		
	EXCHANGE		EXPORTS	EXCHANGE		EXPORTS	EXCHANGE		EXPORTS	EXCHANGE		EXPORTS	EXCHANGE		EXPORTS
	Yen-\$	Yen-£		Yen-\$	Yen-£		Yen-\$	Yen-£		Yen-\$	Yen-£		Yen-\$	Yen-£	
	\$	a. d.	¥ 1,000	\$	a. d.	¥ 1,000	\$	a. d.	¥ 1,000	\$	a. d.	¥ 1,000	\$	a. d.	¥ 1,000
Jan.	40.608	1.10.554	181,669	49.286	2.0.268	146,004	49. $\frac{1}{4}$	2.0. $\frac{1}{4}$	105,395	35.972	2.1.108	70,582	20.711	1.2.758	107,399
Feb.	45.423	1.10.461	147,352	49. $\frac{1}{4}$	2.0. $\frac{1}{15}$	118,932	-	-	91,817	34.192	1.11.690	80,130	20.763	1.2.538	118,931
Mar.	44.670	1.10.085	167,483	-	-	135,911	-	-	96,215	32.144	1.9.231	101,018	21.158	1.2.635	144,915
Apr.	44.614	1.10.057	176,523	-	-	117,293	-	-	81,532	32.872	1.8.920	92,782	21.761	1.2.690	133,151
May	44.745	1.10.122	183,993	-	2.0.365	115,102	-	-	102,111	31.990	1.8.837	103,463	23.662	1.2.407	162,786
June	44.050	1. 9.775	159,929	-	2.0. $\frac{1}{4}$	98,949	-	2.0.337	100,336	30.351	1.7.918	101,768	24.990	1.2. $\frac{1}{2}$	162,689
July	45.215	1.10.357	188,213	-	2.0.365	117,294	-	2.0.349	103,416	27.466	1.6.521	110,789	27.986	-	158,718
Aug.	46.453	1.10.976	217,734	-	2.0. $\frac{1}{15}$	127,683	-	2.0. $\frac{1}{4}$	107,721	24.592	1.4.953	136,681	26.796	1.2.365	183,760
Sept.	46.918	1.11.209	190,716	-	2.0.360	130,682	-	2.1.672	100,733	23.484	1.4.223	140,746	27.165	1.2.158	181,606
Oct.	47.620	1.11.505	204,048	-	2.0. $\frac{1}{4}$	128,511	-	2.5.651	97,879	23.105	1.4.295	147,457	27.560	1.2.160	171,177
Nov.	48.535	1.11.892	171,641	-	-	117,475	-	2.7.282	77,052	20.630	1.3.093	151,856	29.895	1.2.109	163,626
Dec.	48.971	-	159,311	-	-	116,008	-	2.11.454	82,769	20.648	1.3.097	172,712	30.250	1.2.099	172,281
<i>Average & Total</i>	46.069	1.10.754	2,148,618	49.367	2.0.342	1,469,851	49. $\frac{1}{4}$	2.2.416	1,146,981	28.120	1.7.157	1,409,991	25.224	1.2.409	1,861,045

APPENDIX C

INDICES OF FOREIGN EXCHANGE, WHOLESALE
AND RETAIL PRICES

	Yen-£	Yen-\$	Wholesale	Retail
Dec. 1929	97.886	98.244	100	100
Jan. 1930	98.723	98.676	98.1	98.9
Feb.	98.903	99.055	97.1	98.0
Mar.	"	"	95.2	96.4
Apr.	"	"	94.1	95.5
May	99.120	"	91.6	94.9
June	99.157	"	87.6	91.9
July	99.120	"	85.2	89.3
Aug.	98.903	"	85.1	88.7
Sept.	99.088	"	83.4	87.7
Oct.	99.157	"	79.6	84.4
Nov.	"	"	78.5	82.4
Dec.	"	"	78.0	"
Jan. 1931	"	"	77.4	82.6
Feb.	"	"	77.6	82.7
Mar.	"	"	78.0	81.9
Apr.	"	"	77.1	82.8
May	"	"	75.2	81.2
June	99.007	"	74.2	78.2
July	99.054	"	74.3	78.4
Aug.	98.157	"	72.7	"
Sept.	104.436	"	70.8	77.9
Oct.	120.622	"	68.9	76.7
Nov.	127.258	"	69.1	75.6
Dec.	144.229	"	72.8	77.1

APPENDIX C

329

	Yen-£	Yen-\$	Wholesale	Retail
Jan. 1932	102.142	72.167	77.8	79.6
Feb.	96.371	68.596	78.8	80.1
Mar.	86.366	64.487	78.2	79.6
Apr.	85.103	65.947	75.5	78.8
May	84.765	64.177	73.9	77.4
June	81.026	60.889	72.7	75.2
July	75.343	55.101	73.5	75.4
Aug.	68.965	49.335	79.7	76.7
Sept.	65.995	47.113	85.4	80.1
Oct.	66.288	46.352	87.0	81.0
Nov.	61.398	41.387	92.9	83.4
Dec.	61.414	41.421	96.8	95.9
Jan. 1933	60.035	41.550	98.3	88.9
Feb.	59.140	41.654	95.2	87.3
Mar.	59.535	42.446	93.8	86.9
Apr.	59.759	43.656	92.7	86.5
May	58.608	47.470	93.5	86.1
June	58.986	50.134	95.0	84.8
July	"	56.144	95.2	85.2
Aug.	58.437	53.757	95.0	85.6
Sept.	57.597	54.497	96.6	87.1
Oct.	57.603	55.290	96.8	88.0
Nov.	57.395	59.975	96.0	88.4
Dec.	57.355	60.686	94.4	87.5

Note: Exchange index is taken as 100 at par. (From the Specie Bank Weekly).

APPENDIX C

I INDEX OF NOMINAL WAGES

(Reported by Mr. Hayashi, Bureau of Statistics)

	Report of the Bureau of Statistics (A)	Report of the Bank of Japan (B)
Oct. 1931	92	88.4
Nov.	93	88.5
Dec.	95	89.1
Jan. 1932	98	87.6
Feb.	99	89.4
Mar.	100	90.2
Apr.	97	87.2
May	96	87.0
June	97	86.8
July	94	86.2
Aug.	94	86.1
Sept.	95	86.5
Oct.	97	88.8
Nov.	100	88.7
Dec.	104	92.1
Jan. 1933	101	89.5
Feb.	101	91.0
Mar.	100	91.6
Apr.	96	88.5
May	95	88.1
June	96	88.4
July	94	87.4
Aug.	93	87.0
Sep.	94	88.6
Oct.	95	89.2
Nov.	97	89.5

Note: (A) Wage index as given out in the monthly Bulletin of Wages and Prices published by the Bureau of Statistics. (Taking the average in 1927 as the basis of 100.)

(B) Net wage index as given out in the Labour Statistics published by the Bank of Japan. (Taking the average in 1926 as the basis.)

APPENDIX C

331

II INDEX OF ACTUAL WAGES
 (Reported by Mr. Hayashi, Bureau of Statistics)

	A	B	C		A	B	C
Oct. 1931	100	100.0	155	Nov.	107	98.3	148
Nov.	102	101.2	156	Dec.	108	99.1	146
Dec.	103	100.5	154	Jan. 1933	103	94.8	142
Jan. 1932	104	96.5	149	Feb.	105	97.7	144
Feb.	104	97.5	147	Mar.	104	98.9	144
Mar.	105	98.6	148	Apr.	99	95.8	145
Apr.	102	96.0	148	May	99	95.6	145
May	102	96.3	149	June	100	95.9	145
June	104	97.3	148	July	98	94.9	145
July	101	96.6	149	Aug.	97	94.4	145
Aug.	101	96.5	148	Sept.	97	95.8	144
Sept.	101	96.0	148	Oct.	98	96.0	144
Oct.	104	99.4	150	Nov.	99	95.3	143

Note: (A) Based on indices of nominal wages compiled by the Bureau of Statistics (Table I) and indices of the cost of living compiled by the Osaka Asahi Shimbun. (October 1931 is taken as the basis of 100.)

(B) Based on indices of nominal wages compiled by the Bank of Japan (Table I) and indices of the cost of living compiled by the Osaka Asahi Shimbun. (ditto).

(C) Compiled by the Osaka Asahi Shimbun. (July 1914 is taken as the basis.)

APPENDIX C

REDUCTION IN WORKING HOURS AND INCREASE IN OUTPUT

	WEAVING		SPINNING		REELING		COAL MINING	
	Hours	Output per worker	Hours	Output per worker	Hours	Output per worker	Hours	Output per worker
	hours	100 yards	hours	bales	hours	kan		tons
1922	11	18	11	12	12	18		111
1923	11	20	11	13	12	19		104
1924	11	20	11	13	12	22		120
1925	11	21	11	14	12	23		124
1926	July 11 10	22	July 11 10	14	July 10 11	23		134
1927	10	25	10	15	11	24		140
1928	10	31	10	16	11	24		142
1929	10	35	10	17	11	24		150
1930	July 10 8.30	39	July 10 8.30	18	Sept. 10 11	26	Sept. 10	153
1931	8.30	49	8.30	20	10	27	10	181
1932	8.30	50	8.30	22	10	31	10	218

Explanatory Notes:

1. In weaving, spinning and reeling industries, the majority of the workers are women. Their working hours approximate the maximum working hours provided in the Factory Law. So the latter (the net working hours leaving out the legal recess hours) are assumed as the working hours in the above-mentioned industries.

2. The working hours at coal mines were not regulated by law and varied at each mine. Since September 1930 the ten-hour system (from the moment of entering the pit to that of leaving: so the time needed for going to and returning from the working place and for recess is included, as a consequence of which the net working hours are said to be about 5 to 7 hours) has been adopted for the labour in the pit, thus shortening the working hours by 30 minutes on an average.

3. The output per worker of weaving and spinning industries is the result of dividing the total of annual outputs of member factories of the Cotton Spinners' Association by the average number of employees (men and women).

4. The output per worker of reeling industry is the result of dividing the annual output from factories using machineries by the number of workers employed in that year.

5. The output per worker of coal in the result of dividing the total output by the total number of mine workers.

APPENDIX D

FUTURE OF JAPAN'S FOREIGN TRADE

Editorial in *Japan Times*, April 30, 1934.

The prevailing "economic boom" in this country is ascribable chiefly to two factors, namely, the resumption of activity in the munition industry which is accompanied by currency inflation and the favorable trend in the nation's export business, the latter element being due largely to the depreciation in the exchange value of the yen.

In order to maintain economic recovery, therefore, efforts should be directed to perpetuating favorable conditions in foreign trade. In this connection it is essential to reach amicable agreements with other nations for the stabilization of foreign exchange and for the solution of tariff questions. These indeed constitute the most important points in the foreign trade and diplomatic policies of Japan.

The world is gravely concerned over the remarkable advance of Japan's export business, and such apprehension is in some respect justified. The total exports from Japan, including reshipments to Taiwan and Chosen, registered an increase to ¥ 2,356,000,000 from ¥ 1,936,000,000 in 1932, and the imports from ¥ 1,936,000,000 to ¥ 2,467,000,000.

The volume of Japan's trade thus occupies at present at least 5 per cent of the total world trade, as against 3.5 per cent in 1930, 1.6 per cent in 1913 and only 1 per cent in 1900, a phenomenal expansion. The advance of Japan's foreign trade is still more remarkable should comparison be made with other nations.

Of the eight great trade nations of the world, only three, namely, the United States, Britain and Canada showed some increases in their foreign trade in 1933. The gain made by the United States and Britain is trifling, while that recorded in the trade of Canada reached about 6 per

cent. On the other hand, the international commerce of Belgium in 1933 suffered from a shrinkage of 5 per cent compared with 1932, while that of France registered a contraction of 6 per cent. The trade of Holland declined 14 per cent and that of Germany as sharply as 15 per cent.

Japan now occupies the fifth rank among the world nations in the volume of international commerce. It must be pointed out, however, that the world should acknowledge the fact that the advance of Japan's export business is a natural development. Industrial developments in an agricultural nation and the resultant expansion of its international trade apparently indicate a change in the structure of world trade. But we must know that this does not in any way signify an end to the foreign trade of the other countries. This fact has been proven by the world's experiences in the past many decades. It must be recalled that the industrialization of Germany in the long run rendered benefits to Britain, and we may well be convinced that the similar industrialization of Japan and the resultant expansion of her trade will ultimately benefit the European and American countries. This fact is already evidenced by Japan's imports having been increased in proportion to the advance in her export business.

An analysis of the figures for Japan's foreign trade shows that the pace of the "aggressive exports" has been markedly retarded in 1933. Whereas the quantity of exports of Japan in 1932 showed a striking increase of 25 per cent over the preceding year, it registered an expansion of only 10 per cent in 1933. A further slackening in the increasing foreign trade of Japan is expected in view of the fact that the expansion is a temporary phenomenon created by such abnormal factors as currency depreciation, cheap raw material and the prosperity of the munitions industry.

The world must know, however, that Japan will be able to maintain her trade position at 4 to 5 per cent of the world's foreign trade. In our opinion, potential factors which have caused the expansion of Japan's foreign trade will continue to occur, and nothing can very well prevent such increase. In order to meet this new situation created by Japan in the structure of world trade the nations must effect readjustment in their own foreign trade.

It will be of interest at this juncture to note that the ratio of raw silk exports to the total trade of Japan declined in 1933 to 20 per cent from 30 per cent in 1931, whereas the percentage of exports of cotton textiles increased from 18 per cent to 20 per cent within a similar period, the ratio of "finished cotton goods" being particularly striking. A marked gain was registered also in the outgoing shipments of "finished" silk and rayon goods. These facts speak eloquently for the intensive and extensive industrialization of this country.

The fact that markets for Japanese finished products have been greatly broadened also calls for profound attention. This expansion will be kept up further in view of the present trade policy based upon the fair principle of reciprocity under which Japan is attempting to get raw materials from the countries to which she sells her finished goods.

It is interesting in this connection to know that some economists in Germany opine that the nations should accept the remarkable advance of Japanese products as an inevitable development in world industry and commerce. This opinion will find reaction favorable to the position of Japan in the forthcoming Netherlands-Japan trade conference.

Notwithstanding the argument set forth in the foregoing paragraphs, however, we by no means advocate that Japan take an aggressive attitude in world trade. It is

urged that Japan should continue its moderate policies so that a new situation be created in the trade relations with other nations under which closer co-operation may be had for the solution of difficulties and for world revival from the prevailing depression.

APPENDIX E

LAW CONCERNING ADJUSTMENT OF TRADE AND SAFEGUARDING OF COMMERCE

“It has been decided to put into force as from May 1st, 1934, the Law concerning Adjustment of Trade and Safeguarding of Commerce passed by the Imperial Diet, and published in the Official Bulletin of the 7th of April.

“The promulgation of this Law has been made necessary, because there is a growing tendency in other countries to ignore the fundamental economic principle of ministering to one another’s wants and promoting through co-operative efforts the progress and prosperity of mankind—reflected in attempts to suppress importation of foreign goods by means of high tariffs, restriction of imports, etc. Particularly does there seem to be an increasing number of countries that are setting up barriers against Japan’s trade.

“This Law is intended to enable Japan to adjust her trade to this situation and to balance thereby her international payments, and, at the same time, to take, if necessary, appropriate measures for safeguarding her commerce.

“Of course, Japan has no intention to take any step likely to increase the present difficulties of the world. Rather, she hopes that there will be no occasion requiring the actual operation of this Law.”

The substance of the Law is as follows :

ART. 1. The Government, whenever they consider it

specially necessary so to do for the purpose of adjusting trade or safeguarding commerce in answer to the measures that have been, or are to be, taken by foreign countries, may, in accordance with the provisions of Imperial Ordinance and with the approval of the Tariff Investigation Committee, in respect of specified articles and during a specified period of time, impose on such articles, in addition to the import duties enumerated in the Import Tariff annexed to the Customs Tariff Law, import duties not exceeding in amount their value; or reduce, or exempt them from, import duties; or prohibit or restrict the exportation or importation thereof.

ART. 2. The Government may, as laid down by Imperial Ordinance, in respect of matters relating to the prohibitions or restrictions enforced in accordance with the provisions of the preceding Article, require reports or inspect books and other materials concerned.

ART. 3. Any person who exports or imports, or attempts to export or import, in contravention of the prohibitions or restrictions enforced in accordance with the provisions of Article 1, shall be liable to penal servitude or imprisonment for a period not exceeding two years or to a fine not exceeding ¥ 7,000; provided, however, that, in case an amount corresponding to three times the value of the articles in connection with which the aforesaid offence is committed exceeds ¥ 7,000, the fine shall not exceed three times the value in question.

Any person who, in contravention of Imperial Ordinance issued under the provisions of the preceding Article, fails to make reports, makes false reports, refuses to yield to the inspection of books and other materials or who obstructs the inspection by concealing books or documents, making untrue statements or in any other manner shall be liable to

imprisonment for a period not exceeding six months or to a fine not exceeding ¥ 3,000; the same shall apply as regards any person who makes any false entry in applications for permits or in other documents submitted to the Government in accordance with Imperial Ordinance issued under this Law.

ART. 4. In case a representative of a juridical person, or an agent, employee or other person connected with the business of a juridical or natural person commits, in connection with the business of such juridical or natural person, an act in contravention of the preceding Article, the offender shall be punished, and the fine mentioned in the preceding Article shall be imposed on such juridical or natural person.

ART. 5. The penal provisions of this Law shall apply also in respect of such acts as are committed outside the territory in which this Law is in force by a representative, agent, employee or other person connected with the business of a juridical person having its head office or principal place of business within the territory in which this Law is in force; the same shall apply in respect of such acts as are committed outside the territory in which this Law is in force by a natural person having his residence within the territory in which this Law is in force, or by his agent, employee or other person connected with his business.

SUPPLEMENTARY PROVISIONS

The date from which this Law shall come into force shall be determined by Imperial Ordinance.

This Law shall remain in force not longer than three years after its coming into force.

The penal provisions of this Law shall apply, notwithstanding the expiration of the period prescribed in the preceding Paragraph, in respect of acts committed within the said period and punishable under this Law.

INDEX

INDEX

- Administration Act of the Factory Act** 140
Aerial Research Works (at the Imperial University of Tokyo) 24
Aerial Council 24
Agriculture 7-8, 41, 119 ff., 156 ff.
Aichi Watch Company 287
Aikyo-juku 167
Akagi, the battle-cruiser 23
Airplanes 22-25
Allen, Dean quoted 6-8
Allman, K. quoted 287-288
Alloy 29-30
Amaw, Eiji cited 243
America and Japan 11-12, 95, 117, 231 ff., 273-274, 293 ff., 307, 311-314
America and Manchoukuo 284 ff.
Ammonia 56
Anesaki, Dr. M. cited 211
Anglo-Japanese Alliance 225
Angus, Dr. H. F. cited 161
Anshan Iron Mine 39
Araki, Gen. 265, 277
Architecture 31
Aristotle 113
Art in industry 71, 213 ff., 304
Artificial silk 121 ff. (see Rayon)
Asahi newspaper 24 ff., 62
Asahi Regular Air-line Society 24
Asahigraph 67
Asama Maru 18
Asano Ship-yard, Ltd. 17
Australia 108-109
Australian wool 108
Automatic loom 33 (see Looms)
Automobiles 20; for Manchoukuo 287 ff.
Automobile tires 57 ff.
Aviation 23 ff.; in Manchoukuo 23
Asuma Z. 24
Balet, M. J. C. cited 200
Bandits in Manchoukuo 280
Basic supplies 38 ff.
Beard, C. A. cited 240
Bicycles 21-22
"Big Stick" 235
Blue Stocking Club 174
Boiler, Takuma 35 ff.
Books and newspapers 60 ff.
Boots 57
Borah, Senator W. E. 246
Bosch of Germany 29
Boycotts 251 ff.
Bridgestone tires 57 ff.
Brinkley, F. cited 211, 225
Brown, Dr. A. J. cited 99, 311
Building material 27, 31-32
Bulbs 49, 73
Bungei Shunju 67
Byas, H. cited 161-163

Camera, high-speed 73
Canned foods 159-160
Cannery, floating 19
Canning 75, 159
Castle, W. R. cited 242 ff., 293 ff.
Cellophane 59, 75
Celluloid products 56-59
Cellulose 122-123
Cement 27, 56
Chamberlain, B. H. cited 186, 225
"Cherry" Express 8
Chang Tso-lin 283
Chiang Kai-shek 292-293
Chichibu Maru 18
Child, R. W. cited 240-242
Child welfare 135 ff., 180 ff.
China and Japan 12, 291 ff.; and America 295
Chinese Eastern Ry. 243 ff.

- Chugai Shogyo* newspaper 62, 128
 Chukyo Jidosha Kwaisha 287
Chuo Koron 67, 267
 Cinema 52 ff.
 Civil Law, revision in 1898 174
 Coal 40, 307 (see England)
 Colleges in Japan ix
 Colt, F. A. cited 95
 Comestibles 160
 Conferences 104 ff., 219 ff., 314
Contemporary Japan 66 and *passim*
 Control of Staple Industries, Law for 197
 Cost-Price Medical Treatment Association 144
 Cotton industry 10-11, 93 ff., 181 ff., 215 ff.
 Cotton Manufacturers' Association 94
 Cotton, world consumption of 96
 Courtship 179
 Crab cannery 19
 Cram, R. A. cited 31
 Credit of Japan 11
 Crown Prince, Birth of 38, 181
- Dai Nippon Bicycle Company 22
 Daido Electric Power Co., Ltd. 48
Daitokwan 68
 David, Sir P. cited 208
 Debuchi, K. cited 266, 273
 Decentralization of industry 163 ff.
 Dennett, T. cited 236, 240
 Depression 193
 Dickinson, Lowes cited 71, 309, 310
 Diesel engines 18, 43, 77
 Diet of the people 41, 195
 Dockyards list 17
 Dorfman, B. cited 120-121
 Dormitories 184-185
 Dowa Automobile Industrial Company, Ltd. 287
 "Dumping" 57, 194 ff., 200, 314
 Dunlop Rubber Compay, Far Eastern Branch 58
 Dutch and Japanese industry 106
 Dyes 56, 59, 75
- Earthquake, Great 11, 26, 136, 193, 270
 Earthquakes and architecture 31
 Economic interdependence with America 11, 95, 117, 273-274, 307
- Education viii-ix, 61; in Manchoukuo 281
 Eldridge, F. R. cited 246-247
 Electric bulb 49
 Electric light 47
 Electric railways 47
 Electrical goods 47 ff.
 Electrical industries 46 ff.
 Electrically motivated apparatus (heaters, irons and fans) 49
 Electro-chemical industries 49, 56 ff.
 Emigration (see Immigration)
 Emperor of Manchoukuo 288 ff.
 England and Japan 96 ff., 205 ff., 217 ff., 224 ff.
 England's industrial revolution 101 ff., 214 ff.
 England's resources 216, 223
 English language in Japan 63
 Export Silk Trading Law 128
- "Fact-Finders' Report" cited 181
 Factors in industrial success 189 ff.
 Factory equipment 33-36
 Factory Laws 137, 180 ff.
 Family system 135, 145 ff.
 Farmers 119 ff., 151 ff. (see Agriculture)
 Faust, Dr. A. K. cited 177, 180
 Fenollosa, E. F. cited 212
 Fertilizers 56
 Filatures 10, 115 ff., 182
 Films 52 ff., 59, 279
 Fish 19, 40 ff.
 Fisher, G. cited 133
 Fishery Experimental Bureau of Shizuoka Prefecture 42
 Fleisher B. W. cited 37, 109
 Food 19, 40-41, 195
 Foreign trade 10-12, 42-43, 49, 57-59, 95, 102, 106, 116-118, 123 ff., 192, 199 ff., 217, 220 ff., 263 ff., 314
 Forests 32
 Fruits 7, 159, 280
 Fuji Express 8
 Fujinagata Ship-yard, Ltd. (Fujinagata Zosen) 17, 20
Fujin Club 68
Fujin Koron 68
 Fujiwara, Ginjiro 60
 Fukuda, I. cited 141
Fukuoka Nichi Nichi newspaper 62

- Fuse, K. cited 243
 Fushun colliery 40
Fuzanbo 64

Gaiko Jiho 67
 Garvin, J. L. cited 221
Geisha 41, 178
 General Federation of Labor 138
 Gentlemen's Agreement 234
Genyosha 265
 Germany and Japan 191
 Glassware 56, 59
 Glenn, G. cited 252
 Goto, F. 163-164
 Great War (see World War)
 Greece and Japan 71 ff.
 Griffis, W. E. cited 34
 Gunze filatures 182

 Hakodate Dock Co., Ltd. 17
 Hamada, H. cited 18
 Hamaguchi ministry 193
 Harada, Dr. S. ("Labor Condi-
 tions in Japan") 137-140
 Harima Ship-yard 17
 Harriman, E. H. 236 ff.
Hasegawa 64
 Hayashi, Gen. 277
 Health Insurance Law 181
 Hearn, Lafcadio 65, 265, 310
 Hearn publishers 64
 Heaters 49
 Heavy industries 15 ff., 223, 307
 (see England)
 Hideyoshi and art 211
 Highways 25-26; in Manchoukuo
 281
Hinode 64
 Hirota, K. cited 245, 263 ff., 293,
 299-300
 Hitachi Seisakusho 20
 Hitachi Zosen 20
 Hitomi, Miss Kinue 178
Hochi newspaper 62, 68
Hokkai Times 62
Hokuryukuan 68
Hokuseido 64 ff.
 Honda, Dr. K. 28-29, 84
 Hsinking 289
 Huang Fu 292
 Humor 151 ff.
 Hurst, Sir G. cited 96-97
 Hydro-electric energy 47 ff.

 Ide, Mrs. K. cited 175-177
 Ikegai Engineering Works 18
 Il Duce 124
 Illiteracy x, 61, 159
 Immigration problem 65, 120 ff.
 234
 Imperial Aero Association 24
 Imperial Naval Dockyards 18
 Imperial Rescripts 61, 173, 281,
 299
 Imperial Universities ix
 "Inanium" 75
 India and Japan 100 ff.
 Industrial Revolution defined 166
 Inouye, J. cited 167, 192
 Inouye, K. cited 19
 Institute of Pacific Relations 161,
 225
 International Aviation Committee
 24
 International Labor Office 187,
 201
 Inukai ministry 167
 Invention Exposition 72
 Inventions 35, 69 ff.
 Inventions, British 215 ff.
 Inventors 69 ff.
 Inventors, British 215 ff.
 Iron 38-39, 307 (see England)
 Irons (electric) 49
 Ishibashi Brothers 57-58
 Ishikawa-jima Ship-yard, Co. Ltd.
 17

Japan Advertiser cited 37, 63, 138,
 163, 175
 Japan as export market of United
 States 12
 Japan as source of United States
 imports 12
Japan Chronicle 63
 Japan Electric Battery Co., 84
Japan in Pictures 67
 Japan-Manchoukuo Motor-Car
 Company 287
 Japan Motion Picture Company,
 Ltd. 52 (Nikkatsu)
Japan Times 63, 333 ff.
 Japan Tourist Bureau 67
 Japanese Spinners' Association
 103
Jiji newspaper 62, 142
 Jidosha Seizo Kwaiisha 287
 J O A K 51

- Jones, F. C. cited 167, 226-227
 Johnston, Sir R. cited 289 ff.
 Kadono, C. 37
 Kawasaki Sharyo 20
Kaga 23
 Kagawa, T. cited 146-147
Kahoku newspaper 62
Kaizo 67
 Kakizaki, Dr. C. 84
 Kamo, Dr. M. 89
 Kanegafuchi system 187, 213 ff.
 Kaneko, Count K. cited 236 ff.
Kao-liang 278 ff.
 Kato, S. cited 19
 Kato, Dr. Y. cited viii
 Kawakami, K. K. cited vii, 195, 199
 Kawasaki dockyards (Kawasaki Zosen) 18, 20, 135
 Kawashima, N. cited 317 ff.
 Kawase & Son 64
Kenkyusha 64
 Kennedy, M. D. cited 43, 174, 180
 Kikuchi, K. 65, 147
 Kipling, R. cited 308
 Kirin lumber 32
 Kisha Kwaisha 20
 Kobe Steel Works 18
 Kobe Steel Works Ltd., Harima Ship-yard 17
Kodansha 67
Kogyo Chosa 68
Kokumin newspaper 62
Kokusai Denwa 54-56
Kokusai Hyoron 67
Kokusai Chishiki 317
 Komura, Marquis 238 ff., 266-267, 271
 Koo, W. cited 257-258
 Kosakai, G. 64
Kosei 67
 K. S. Steel 29
 Kuni, Prince cited 24
 Kurata Hyakuzo 65
 Kurume 57
Kyo Bun Kwan 64
 "Kyushu spirit" 265
 Labor unions 133 ff.
 Lacquer 59, 75
 Lancashire and Japan 96 ff., 195, 218 ff.
 League of Nations 105, 226, 247, 251 ff., 297 ff.
 Leguminous plants 159
 Lighter industries 45 ff.
 Lindstrom, S. F. cited 50
 "Little embassy" 173
 Locomotives 20
 London Conference 219 ff.
 Looms 33, 94, 185
 Lytton Commission 225, 256 ff., 299-300
 McDonald, M. cited 65-66
 McGowan, Sir H. cited 221-222
 Machinery manufacture 34
 Magazines, Japanese 67-68
 Magazines, English 66-67
 Magnet Steel 28-29
 Manchoukuo: mines, 39; cotton 107; wool 108; immigrants 120; recognition of 246, 285 ff.; "incident," 255, 271, 296, 309; general view of 275 ff.; bandits 280; schools 281; beans 278-279; roads 281; railways 281-282; banks 283-284; independence 283; budget 283; foreign trade 284; Open Door 284; Emperor 288 ff.; Premier 289 ff.
Mainichi (Osaka) newspaper 62 ff., 246
 Manhood suffrage 136
 Mano, Dr. B. 83
 Marco Polo cited 113
 Marmalade 160
Maruzen 64
 Masaki, Gen. 277
 Masaki, H. 317
 Matches 56, 59
 Maternity protection, legislation for 181
 Matsuoka, Dr. A. cited 209
 Matsuoka, Y. cited 163, 257
 Maurette, F. cited 201
 May 15th incident 167
 Michelet cited 216, 218
 Micro-printing Process, Suzuki Universal 74
 Mikimoto, K. 78 ff.
 Mining Law 181
 Minors, relief of 181
 Mishima, T. 28
 Mitsuda, Dr. R. 83
 Mitsubishi Airplane Works 287
 Mitsubishi Co., 18, 77
 Mitsubishi Denki 20

- Mitsui Foundation 144 ff.
 Mitsui & Company Limited 18
 Mitsubishi Ship-building Co., Ltd.
 17
 Mitsui Ship-yard of Mitsui Bussan
 Kwaisha, Ltd. 17
 Miyata Works 22
 M. K. Steel 28
Mobo 53
Moga 53, 178
 Monroe Doctrine 235
 Monotype machine, Japanese 84
 Moore, Judge J. B. cited 251 ff.
 Moser, C. K. cited 194, 198
 Motion pictures 52 ff.
 Motion pictures camera 73
 Motor-cars 20; for Manchoukuo
 237 ff.
 Motor-car tires 57 ff.
 Motors 149
 Mukai-jima Dock Co., Ltd. 17
 Moulton and Ko cited 25-26, 307-
 308
 "Murasaki, Madame" 172, 311
 Mussolini cited 124-125
 Muta, Sanji cited 93, 134, 142, 163

 Nakajima, K. 164
 Nakajima, T. 28
 Nakamura, K. 304
 Nakasendo 10, 25
 Nakatsuchi, Y. 64 ff.
 Nara Age 172, 207 ff.
Narikin 133
 Naval aviation 23
 Navy, Japanese and American
 232 ff.
 Nederland Indies 106, 258
 Nerve and nerves 311 ff.
 News agencies 62
 Newspapers, English 63
 Newspapers, Japanese 61 ff.
 Newsprint 60
 New Symphony Orchestra 51
 New Women's Society 174
Nichi Nichi newspaper 62 ff.
 Niigata Engineering Works 18
 Niigata Tekko 20
 Nikkatsu 52
 Nippon Air Transportation Co. 24
 "Nippon Dempo" (or Dentsu)
 news agency 62
 Nippon Electric Power Co., Ltd. 48
 Nippon Koku-yuso Kenkyujo 24

 Nippon Sangyo Kwaisha 287
 Nippon Sharyo 20, 287
 Nippon Yusen Kwaisha 9, 17
 Niwa, Dr. Y. 83
 Noma, S. 67-68
 North Manchuria Ry. 243 ff.
 Novelties 58 ff.

 Ochiai, T. 65
 Oji Paper Mills 60
 Okayamoto Bicycle Company 22
 Okochi, Viscount M. 164-165
Ono Maru 18
 Ono, S. cited 33, 89
 Open Door 241, 284, 288
 Orchard, J. E. cited 33-34, 165-
 166
Oriental Economist 67
 Osaka Iron Works, Ltd. 17
Osaka Shosen Kwaisha 18
 Osaka Tekko 20
 Oshima, Prof. Y. cited 209
 Otani, M. 65

 Paints and dyestuffs 56, 59
 Paper 59-60
 Paper objects 59
 Parkes, Sir H. 224-225
 Passenger increase 8
 Paterson, New Jersey 118-119
 Pearl nursery 78 ff.
 Pearse, Dr. Arno cited 186, 199
 Peasants 151 ff.
 Peffer, N. cited 291-292
 Perry, Commodore 272
 Petroleum 43
 Philanthropists 142 ff.
 Philippiness 55, 231-232
 Photographic inventions 73
 Plaster 31
 Population 160 ff.
 Portsmouth peace 236 ff., 271
 Pottery 56, 59
 Powers, H. H. cited 71, 213
 Price, G. Ward cited 97-99, 261
 Profiteers 133

 Rabbitt, J. A. cited 29-30
 Radio 49 ff.
 Radio programme 51-52
 Radio station in Nazaki, 55; in
 Komuro 55
 Railways 5-9; in Korea 7; in
 Manchoukuo 7, 28, 281-282

- Rationalization 196 ff.
 Rayon 117, 121 ff.
 Reading habits 61 ff.
 Red Cross 141
 Redman, H. V. 168
 Remer, Dr. cited on boycotts 253 ff.
 Rengo (or Shinbun Rengo) news agency 62
 Rice industry 155 ff., 159
 Rice riots 133
 Roads 25-26; in China 295; in Manchoukuo 281
 Rolland, R. 65
 Rolling-stock 20
 Roosevelt, Franklin D. 232, 240, 242
 Roosevelt, Theodore 5, 12, 71, 231 ff.
 Root, Elihu 253
 Rubber boots and shoes 57-58
 Rubber goods 57 ff.
 Rubinstein, H. F. 65
 Runciman, Walter 224, 225
 Russia and Japan 226, 231 ff., 236 ff., 268 ff., 298, 317 ff.
- Sakatani, Baron 24
 Sakura Express 8
 Sakuragraph 73
 Sakuragraph talking cinematograph 73
 Sanction of the boycott 251 ff.
Sanseido 64
 Sansom, G. B. 104, 225
 Sansom and Kermode cited 34, 57, 196, 314
 School system ix ff.
 Scott, R. cited 154 ff.
 Schneider, Dr. D. B. 232
 Seitosha (New Women's Society) 174
 Sericulture 114-116
 Service stations, of the Kanebo system 214
 Shakespeare cited v
 Shanghai, Battle of 255
 Shaw, Glenn W. 65
 Sheep 108-109
 Shibaura Seisakusho 20
Shigen 67
 Shimazu, G. 83-84
Shin Aichi newspaper 62
 Shinko Eiga Company, Ltd. 52
 Ship-building 9-10, 17-18, 42
 Shipping 9, 18, 117
 Shochiku Company, Ltd. 52
 Shoes 57
Shoso-in 207 ff.
 Shotoku, Prince 114, 140
Shufu no Tomo 68
 Siegfried, André cited 216 ff., 223
 Silk-Egg Control Law 129
 Silk industry 10, 76, 111 ff.
 Silk Trading Law, Export 128
 Silkworm rearing 114-116
 Soldiers and farmers 167-168
 Shinfujin Kyokai (New Women's Society) 174
 Skiing 178
 South Manchuria Ry. 28, 40, 236 ff., 279
 Soy-bean 278-279
 "Square Deal" 236
 Standard of living 41, 180, 185, 195, 200-201
 Standardization of industrial arts, board to investigate 190
 Steel 28
 Strawberries 160
 Structural supplies 160
 Sugimoto, K. 84
 Suhara's camera 73
 Sukegoro's trust 43
 Sulphate of ammonia 28, 56
 "Sump" 74
 Suzuki, B. 134-135
 Suzuki, J. 74
 Suzuki, U. 143-144
 Suzuki, Dr. U. 84
 Suzuki's microscopy 74
 "Swallow" Express 8
 Synchronous Motor 86
- Tachibana, K. 167
 Taft, W. H. cited 254
 Takahashi, K. 324 ff.
 Takaki, Dr. Y. 225
 Takuma, T. 83, 85 ff.
 Takuma boiler 35 ff., 89
 Talking-bouy 76
 Talking-pictures 54
 Tanabe, T. 65
 Tanaka Sharyo 20
 Tanaka, T. cited vi
 Tanaka, Mrs. T. 135
Tanomoshiko 146
Tatsuta Maru 18

INDEX

347

- Taxation 157
 Tea 7, 160
 Technical education ix
 Technical high schools ix
 Technical schools ix
 Telephone apparatus 49
 Telephones 54 ff.
 Television, Hamamatsu system of home 73
 Textile efficiency 110 (see Cotton, etc.)
 Timber 32
 Tires 57 ff.
 Tobata Loom Kwaisha 287
 Toho Electric Power Co., Ltd. 48
 Tokaido (highway) 25
Tokaido (book dealers) 68
 Tokorozawa Aviation Field 23
 Tokugawa, Prince I. cited 274
 Tokyo Central Telephone Bureau 55
Tokyo 68
 Tokyo Electric Light Co., Ltd. 48
 Tokyo Gas-Denki Kwaisha 287
 Tokyo Koku-yuso-sha 24
 Tokyo's reconstruction 6, 26, 193; welfare work 141
Tourist 67
 Toyota loom 33
 Transportation 15 ff. (see Roads, Railways, etc.)
 Trust, the first? 43
 Tsubame Express 8
 Tsuda, S. 103, 195, 199
 Tsuda, Ume 174
 Tsukada, H. cited 55
 Tsurumi, Y. 154
 Tuna 42
 Tungsten patent 49
 Typewriter, Japanese 73
 Uenoda, S. cited 138, 163 ff., 178-179
 Ujigawa Denki Co., Ltd. 48
 Umabachi Tekko 20
 Uniona, Labor 137 ff.
 Universities viii-ix
 Uraga Dock Co., Ltd. 17
 Urbanization 163
 U. S. A. and Japan 231 ff. (see America)
 U. S. S. R. and Japan 226, 231, 245, 268 ff. (see Russia)
 Uyeda, Dr. T. cited 160-161
 Vegetables 159, 195
 Viscose 122
 Wages 182, 330 ff.
 War material 36
 Wars 15, 167, 317 ff.
 Washington Conference 225, 226, 292, 294
 Washington Labor Conference 135, 180
 Watanabe, Dr. S. cited 28
 Welfare work 139 ff., 180 ff.
 Whitney, Willis R. cited 123
 Woolen industry 108
 Women 169 ff.
 Women's magazines 68
 Women's Patriotic Association 174
 Working hours 183, 332
 World Economic Conference 37, 104, 125
 World Engineering Congress 18, 123
 World War 5, 16, 133, 191 ff., 317 ff.
 Wu Ting-fang 254
 Yamazaki and Ogawa cited 34
 Yamamoto, Admiral 233
 Yamamoto, Dr. T. 85
 Yamamoto, Y. cited 19
 Yashima silk mill 214
 Yawata Iron Works 38, 135, 198
Yen, value of 6
Yen, devaluation of 36-37, 193, 195
 Yokohama Dock Co., Ltd. 17
 Yokohama Rubber Company, Ltd. 58
 Yokohama's reconstruction 27, 193; Silk Exchange 193
 Yokota, Dr. K. cited 225
Yomiuri newspaper 62
 Yoshihara, S. 24
 Young, Owen D. cited 305-306
 "Young Marshal" 283
Y'u-ai-kwai 134

昭和九年六月廿九日 印刷
 昭和九年七月二日 發行
 昭和九年八月二日 發行
 昭和十三年八月二日 發行
 昭和十三年八月二日 發行
 昭和十三年八月二日 發行
 昭和十三年八月二日 發行

JAPAN'S ADVANCE
 ◆ 躍進の日本 ◆
版權所有

著者  出版者 

著者 James A. B. Scherer
 發行所 中土義敬
Y. NAKATSUCHI
 東京市神田區錦町三丁目十二番地

發行所 北星堂書店
 東京市神田區錦町三丁目十二番地
 電話 錦田一四二九番
 振替口座東京一六〇二四番

THE HOKUSEIDO PRESS
KANDA, TOKYO, JAPAN

ON SALE BY MAJOR BOOK-SELLERS THROUGHOUT
 EUROPE AND AMERICA

\$ 3.00 in America 12s in Europe

定價參圓八拾錢 (日本內地及日本殖民地)

Scherer J.P.B. 51354
Japan's Advance

Name of borrower	Lent on	Received on
Smt. S. Dhavle	1959 2/4	1959 8/4

SERVANTS OF INDIA SOCIETY'S LIBRARY
POONA 4.

1. Books taken from the Library may not be retained for more than a fortnight.
2. Borrowers will be held strictly responsible for any damage done to books while the books are in their possession.

110-8007
1110710



View from the Author's Window of Central Tokyo, the World's Third Largest City. *Continued from front of book.*