A window open on the world

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JAPAN
a century of change
With deft and telling brush strokes, a 16th century Japanese Buddhist priest, Shugatsu, executed this painting, "Rain", using the "ink-splash" technique in which forms are created from the chance configuration of freely spattered ink. Shugatsu was the disciple of the great Japanese priest-painter Sesshu and accompanied his master on a trip to China in 1468. He died at the age of 70 in 1520. The compression of form, the allusive poetry, the delicate balance of lines and space, characteristic of much of Japanese painting came as a revelation to European artists of the 19th century, particularly the Impressionists, and has since had a marked influence on Western modern art (see page 28).
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By Ki Kimura

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TO WESTERN LITERATURE AND THE ARTS
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NINE WRITERS OF MODERN JAPAN
THEATRE OF TIMELESS TRADITION

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LETTERS TO THE EDITOR
FROM THE UNESCO NEWSROOM

TREASURES OF WORLD ART
Rain (Japan)
This year marks the centenary of the Meiji Restoration which ended Japan’s isolation and led to rapid modernization of the country. This event is being commemorated by Unesco and its member states. The “Unesco Courier” devotes this special issue to Japan and its century of dynamic change which gave new impetus to Japanese civilization.

EMPEROR MEIJI
father of modern Japan

by Ki Kimura

Ki Kimura is one of Japan’s foremost authorities on the history of the Meiji era. Historian and novelist, he is president of the Meiji Culture Research Association and was formerly cultural adviser to the Tokyo Metropolitan Government. Among his many books on cultural and historical questions are “Emperor Meiji” and “A Study In the Cultural Intercourse between Japan and U.S.A.”

But by the middle of the 19th century this self-enforced isolation of Japan suddenly came to an end. Besieged by foreign powers clamouring for the country to open up to Western commerce, and threatened by rebellious feudal lords, the fifteenth Tokugawa Shogun yielded power to the Imperial house.

The youthful Meiji Emperor, Mutsuhito, and his dynamic advisers opened Japan not only to Western ideas and commerce but to all the tempestuous currents of the 19th century world. The Meiji Restoration—exactly one hundred years ago—was like the bursting of a dam behind which had accumulated the energies and forces of centuries. Japan set out to achieve in only a few decades what had taken centuries to develop in the West: the creation of a modern nation, with modern industries and political institutions, and a modern pattern of society.

Young Samurai changed their Japanese dress for top hats and dark suits and sailed off to Europe and America to study Western techniques of government, industry—and war. In a tour de force of modernization, the Meiji revolutionaries raised their country to be a peer of the Western powers, in less than 40 years—and without sacrificing Japan’s traditional culture.

The events leading to the Restoration started the year after Meiji was born, when Commodore Matthew Perry’s “Black Ships” from the United States steamed into Kurihama Bay in

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From national seclusion to doors open on the world

1853 on a mission of diplomacy and commerce.

After Perry signed a treaty of amity with the Shogun the next spring, Russia, the Netherlands and Great Britain secured similar agreements. Hermit-Japan, after secluding itself for over 200 years, slowly began to resume contact with the outside world.

HEN Japan re-opened its doors, it was stagnating under a feudal system which had divided society into four distinct castes: warriors, farmers, artisans and tradesmen. So all-pervasive was this caste system that it exercised control over the very lives of the people to the extent of prescribing exact rules on all activities relating to daily life and behaviour. Even the use of language, both written and spoken, was determined by the individual’s social class.

The Confucian ethic, with its emphasis on the practice and cultivation of the cardinal virtues of filial piety, kindness, righteousness, propriety, intelligence, and faithfulness, constituted the foundation on which all relations between superiors and inferiors, one’s obedience to authority, and the concept of master-servant were formalized. Society was stable, but totally immobilized.

The Japan of those days was moreover an impoverished agrarian state. Even in the late 1870s, some 75 to 80 per cent of the employed population were engaged in agriculture. Per capita annual income was estimated at about 65 dollars. In other words, Japan was a nation sustained by a farming community working at a bare subsistence level.

Right from the time of Perry and the first treaties the Japanese were interested in international relations on the basis of independence and equality. There was a danger, they felt, that the Great Powers might dominate them, and a way of thinking, not in terms of the clan but in terms of the state, was born from this feeling.

The confrontation between groups advocating an open-door policy and those who urged the exclusion of foreigners was, for a time, bitter. Both factions had the same goal: to preserve national independence. When the champions of seclusion realized that this freedom could be maintained only through intercourse with foreigners, they made common cause with their former opponents.

Conflict also arose over whether Japan should return political power to the throne or continue the traditional Shogunate system of government. Again, national independence was the determining factor.

In 1867, both the Shogun and Emperor Komei, Meiji’s father, died. The young Emperor and the new Shogun, Yoshinobu were duly installed in the highest offices of the land. Yoshinobu was a man of vision, convinced that Japanese independence hinged on the country being unified and modernized. In late 1867, encouraged by a coalition of fiefs led by the strong provincial clans known as the “Satcho Dohi,” he surrendered his authority to the Emperor and ended 700 years of military rule.

In February 1868, the Reformation began: Emperor Meiji assumed supreme executive authority, and informed foreign representatives that his title should replace the Shogun’s in all existing treaties.

Encouraged by his counsellors, many of whom he chose from the Samurai, Japan’s warrior class, Meiji broke the strict prohibition which barred foreigners from the capital, Kyoto, and received the representatives of the Great Powers in a New Year’s audience. He also cast away the feudal edict against travel, and journeyed the 27 miles from Kyoto to Osaka to attend a naval review.

His major step in the first year of the Reformation came when he summoned his nobles to the royal palace and, in their presence, took the “charter oath” by which he promised that a deliberative assembly would be formed, all classes would share in the government, and that justice, not ancient custom, would in future be the guiding principle of the administration.

In the same year, he separated Japan further from its past by moving the capital from Kyoto to Edo and renaming it Tokyo, or Eastern Capital.

In the beginning, the Reformation’s leaders devoted almost all their energies to developing a sound economic base for the new state: the monetary system had to be stabilized, taxes levied, new industry developed, and foreign markets opened.
One prerequisite change was the abolition of the feudal system which, with autocratic chieftains governing and levying taxes over huge estates, stood squarely in the way of economic progress. No central government could effectively unify Japan if it continued to exist.

Feudalism had been a way of life since the 12th century, and the clans were strong. Yet such was the spirit of the times that the four great Satō Dōri clans of the west returned their estates to the Emperor in 1869, and entreated him to re-organize them under a uniform set of laws. The lesser clans soon followed, and between 1871 and 1872 the four classes of warrior, artisan, farmer, and tradesman were abolished.

The most important factor in Japan’s economic development was a strong and integrated control by the central government. This strength was needed to enforce three difficult decisions made in the first half of Meiji’s reign, and which were to have enduring effects on Japan’s prosperity.

First, the government resisted the temptation to unite the country through foreign military adventures. Six years after the young Emperor took power, strong members of the government favoured going to war with Korea after Korean shore batteries had fired on a Japanese gunboat. Despite the fact that such action would have temporarily unified the country, which was plagued by discontented elements at the time, the proposal was rejected in 1873, and the nation’s energies were turned to solving domestic problems.

The second decision was to deflate the economy in 1881. Serious inflation at that time made it difficult to promote modern industry and investment. Disregarding public dissatisfaction, the Meiji government firmly introduced stringent fiscal measures that halted inflation in 1884, with the result that the economic goals set in 1868 were achieved in 1885, as planned.

The third decision concerned the financing of new industry. The Meiji leaders avoided the comparatively easy solution of allowing foreign investment, reasoning that it might make Japan dependent on foreign nations. Instead, they raised the necessary funds by instituting a land tax. Investment from abroad was restricted.

Meiji Japan built its modern industry on a traditional foundation. Raw silk and tea were the original mainstays of Japan’s exports, and these were encouraged (even the Empress set up a cocoonery in the palace grounds to promote sericulture) because their foreign exchange earning power helped establish new industries.

Hokkaido, then a vast virgin island at the north of the Japanese archipelago, was opened up with American assistance (see page 62). Agriculture and Japan’s chemical industry (today the second in the world) were started. Apple trees, never before seen in Japan, were planted, and the first dairy industry was begun.

After seeing its success in the West, the Meiji leaders believed firmly in private enterprise. But centuries of feudalism had left the country with few industrial traditions or skills, and Japanese investors were cautious about risking their capital in new and sometimes strange ventures.

To foster industrial growth, joint-stock companies were encouraged, with emphasis on foreign-exchange firms, trading companies and transportation companies; government subsidies were granted to key businesses and industries, and favourable tax concessions made.

The government also built model factories in the steel, cement, plate-glass, firebrick, woollen textiles and
Far-sighted leader of a peaceful revolution

A policy of equal opportunity was established in Meiji Japan. To draw gifted students from poor homes, education was made free at military academies and teacher training schools and colleges.

Western learning was introduced with the approval of the Emperor who himself had studied Occidental books, notably Johann Bluntschi’s “Allgemeines Staatsrecht”, a work on political science used by German, French and British universities at that time.

In 1890, the Emperor ordered that the guiding principles of school education be compiled in an “Imperial Rescript on Education”. It enjoined all students to honour their ancestors, respect their parents, be loyal to superiors and serve their country.

That the educational policy was successful can be seen from the fact that by 1885, 42 per cent of the students at Tokyo Imperial University were commoners compared to 25 per cent in 1878, and at the end of the Meiji era, primary school attendance was 95 per cent.

This love of learning of the Japanese people, coupled with an academic level which was extremely advanced, although limited to a narrow sphere, provided the conditions necessary, once Western instruction was introduced, to bring about an amazing dissemination of general education, and produced scholars of international calibre.

Dr. Hideyo Noguchi, who was destined to become a world-famous bacteriologist in tropical diseases, started from humble beginnings as the son of a very poor farmer. Other distinguished scientists of the Meiji era were Jakichi Takamine who synthesized adrenalin, Shibasaburo Kitazato who isolated the gangrenous bacteria, and Kiyoshi Shiga who isolated the dysentery germ.

Japan’s modernization was carried out to counter the impact of the West, and the much needed reforms were mainly instituted by the strong central government. Yet, those outside the government, including its critics, also worked effectively for Japan’s renewal.

For example, Yukichi Fukuzawa, a pioneer educator, in expressing his opposition to the tendency toward an increasing governmental predominance, established Japan’s first private institution of higher learning, Keio University. Nevertheless, he was always concerned with the independence of the state end, as an educator, he worked for its betterment by increasing the capabilities of his fellow Japanese (see page 12).

Emori Ueki, a prominent liberal politician, was another example of “creative opposition”. While severely criticizing the authoritarian Meiji government by preaching freedom and equality, he declared that any person who did not extend his capacities and utilize his talents was falling the nation.

Taisuke Itakaki, another liberal of the Reformation, was tireless in his efforts to persuade the government to institute a deliberative assembly, and in 1881 it issued an edict declaring that a national parliament would be established in 1889 with the intervening nine years to be devoted to government preparations for an orderly change.

Hirobumi Ito, one of the statesmen who played a major role in reshaping Japan, was sent to Europe in the same year to study Western governments, and determine which one should serve as the model for Japan. After evaluating the American, British, and French systems, he chose the Imperial German constitution as best suited for Japan’s needs. It provided for an elected assembly, but made the government responsible to the throne. In 1889, Emperor Meiji promulgated the new constitution, and one year later the legislature was convened.

Parallel to governmental, social and industrial progress, the Japanese took on the considerable task of persuading their foreign treaty partners to revise the terms of their agreements. The existing treaties, which favoured the foreign signatories with low import duties (mostly five per cent), and gave their citizens exemption from Japanese law courts, had been signed under vastly different conditions.

It took 11 years for Japan to get the terms it wanted. The break came when Great Britain finally agreed to a new treaty abolishing extra-territoriality, and giving Japan the right to set its own import tariffs. Similar treaties with other countries were soon concluded, and the Emperor fixed 1899 as the year that they would come into force.

During this time, foreign wars had been avoided, but in 1894-1895, Japan declared war on China over Korea and defeated the Chinese on the battlefield. In 1904 hostilities broke out with Russia, Japanese troops entering Manchuria. A peace treaty was signed the following year.

During the remainder of Emperor Meiji’s reign, Japan moved within the circle of great powers consolidating its position as a vital component of international politics and trade.

On July 30, 1912, Emperor Meiji died at the age of 59. Under him, Japan had emerged from behind the ritual screen that had shielded it from the rest of the world to become the leading power in Asia and a peer of the West.

The revolution that Meiji presided over was even more remarkable in that it was orderly and controlled, and enhanced the monarchy rather than destroyed it, a result mainly due to the capable leaders who, in this period of “Enlightened Rule”, shaped the new Japan.
THE SPIRIT OF THE GARDEN LANDSCAPE

Landscape gardening in Japan is a subtle, creative art whose history goes back 1,400 years. Throughout that period it has retained a characteristic unifying concept. Like Japanese painting, the Japanese garden seeks to express the essence of nature rather than to represent nature itself. Flowers figure little in its composition, which is dominated by the use of rocks and natural stone. The impression of infinite space offered by the coastal landscape on the island of Honshu (above), for instance, is recaptured with skill and artistry within the narrow confines of the garden seen below, itself an archipelage of rocky islands set in an ocean of gravel. Symbolically, a vessel in stone (left of photo) sets out along the current of human life. Kenzo Tange's modern garden (bottom) designed for the Takamatsu City Hall, evokes the same feeling of the sea, with its waters lapping the pebbled beach against a background of terraced cement, recalling Japan's ricefields.

CONTINUED ON NEXT PAGE
Meditation in the peace and tranquility of a garden at the Daisen-in monastery, Tokyo. Daisen-in's three famous gardens were designed in the 16th century by the celebrated gardener-priest Soami in the stark severity of the kare-senzui (dried-up landscape) style, composed of pebbles, sand and waterless falls of rock. Symbolizing respectively Creation, Life and Death (shown here), they are considered one of the most aesthetically rich expressions of Zen Buddhism. The two mounds have special significance, symbolizing the renewal of life after death, for according to the Buddhist concept of reincarnation, death is the source of renewed life.
“The Great Bridge in the Rain” (right) was painted ten years before the Meiji era by Ichiryusai Hiroshige, one of Japan’s greatest landscape artists of the Edo period. (See page 36 for a full colour reproduction of another Hiroshige print.) Far right, a contrasting symbol of modern Japan, the mighty Wakato bridge: sharply etched against the night sky, it spans the 2,063 metres (6,500 feet) between Japan’s southernmost island, Kyushu, and the main island of Honshu.

YUKICHI FUKUZAWA
Master of enlightenment in the Meiji era

WE COPY A PHYSICS BOOK IN TWO DAYS AND NIGHTS

by Yukichi Fukuzawa

In the middle of the 19th century, a bitter controversy raged in Japan whether to reject all things Western or to adopt Western science and ideas. Outstanding among the men who supported the introduction of Western ways was Yukichi Fukuzawa (1835-1901), an outstanding scholar of Chinese, Dutch and English. Fukuzawa visited Europe and America and gained firsthand knowledge of Western customs and institutions. He wrote voluminously on the subject for 30 years. He started a newspaper which became one of the great Tokyo dailies. He founded a school which is now Keio University. All this is delightfully told in his “Autobiography” which appeared in 1899, two years before his death. We publish here a section from the chapter entitled “Student Ways at Ogata School,” in “The Autobiography of Yukichi Fukuzawa” translated by his grandson, Eiichi Kiyooka, and published by Columbia University Press, New York and London, 1966, in the Unesco Collection of Representative Works.

OGATA Sensei was a doctor to Lord Kuroda of Chikuzen, the grandfather of the present nobleman of that name. It was not that he went to Chikuzen or to Yedo to serve him, but he was simply the lord’s favourite doctor in Osaka. Whenever Lord Kuroda passed through Osaka on his annual journey to Yedo, Ogata would present himself to pay his respects in the feudal headquarters on Nakano-shima.

One year—the third or fourth year of Ansei (1856-1857)—Ogata Sensei had returned from this visit of state to his lord when he sent for me in his own room and showed me a new volume of Dutch print.

“Today on my visit to his lordship, he showed me this book, saying he had recently acquired it. So I asked for permission to look it over during his stay here.”

I took in the book with devouring eyes. It was a new text on physical science recently translated from English into Dutch with the name of...
Vanderbilt (?). The contents seemed to hold much that was new to us, especially the chapter on electricity.

All that we knew about electricity then had been gleaned from fragmentary mention of it in the Dutch readers. But here in this new book from Europe was a full explanation based on the recent discoveries of the great English physicist, Faraday, even with the diagram of an electric cell. My heart was carried away with it at first sight.

"This is a wonderful book, Sirl," I exclaimed. "How long do you think we might keep it?"

"Well," he replied, "I was told that my lord will stay in Osaka for two days. I suppose he would not mind our keeping it until his departure."

"I should like to have my friends share in seeing the book," I explained, and bore the volume back to the dormitory.

"Look at this!"

All the young men rose up as one and crowded around me and the book as eager as I was. Two or three of the older students and myself decided, on talking it over, to make a copy of it.

"See here," we said. "Just looking at the book won't do you any good. We must get together and copy it."

But then, to copy a volume of a thousand pages! We decided to do just the final chapter, the one on electricity. If we could have broken the book up and divided the copying among the thirty or fifty "ready-quill men," the entire contents might have been kept. But of course injuring the nobleman's possession was out of the question.

However, we worked at full speed, and the Ogata students could work expertly. One read aloud; another took down the dictation; when one grew tired and slowed down, another was waiting with his quill, and the exhausted one would go to sleep regardless of time, morning, noon or night.

Thus, working day and night, through meal hours and all, we finished the whole chapter in the time allotted, and thus the section on electricity, about three hundred pages including its diagrams, remained with us in manuscript. We finished reading it against the text for correction and regretted that we had no more time for the other parts.

But to have retained so much we counted fortunate, and when the evening of Lord Kuroda's departure came, we all handled the book affectionately in turn and gave it a sad leave-taking as if we were parting with a parent. When we heard from Ogata Sensei that Lord Kuroda had paid eighty ryo for the book, we were dumbfounded. Such a cost was so far beyond our conception that we should never have had even the desire or ambition to acquire such a treasure.

This event quite changed the whole approach to the subject of electricity in the Ogata household. I do not hesitate to say that my fellow students became the best informed men on the new science in the entire country. I dare say I owe to the copy of this book much of the knowledge which CONTINUED ON NEXT PAGE
enables me to understand something of the electrical industry today.

Many years later I remembered the book and wished to see the original again. A number of times I called at the Kuroda residence—for the times had changed and I had become a personal friend of the lord—but I was always told that since the great upheaval of the Restoration (1868), the book had been lost. I have always regretted this, feeling its loss like separation from an old friend.

I think this incident will prove that the young men around Ogata Sensei were, as a group, as zealous for foreign culture as any students in the world. Every now and then a student came from Yedo to Ogata's school to study, but never did anyone leave it for that purpose. If any went to Yedo, it was for teaching and not for more study.

We often talked about this fact among ourselves, and said proudly that we, the Osaka students, were above any in the country. But it could not have been that all the good students gathered in Osaka and no able ones lived in Yedo. It seems to me that the situation of the country then created this contrasting standard of scholarship in the two cities.

In Yedo, though the country's intercourse with foreign lands was yet at its beginning, there were constant demands for the Western knowledge from the government offices and from the various feudal nobility resident there. Consequently anyone able to read foreign books, or make any translation, secured the reward of this patronage. There was even the possibility of a poor language student being made a high salaried Samurai of several hundred koku overnight.

Osaka, on the contrary, was a city of merchants devoted to internal commerce; it was hardly to be expected that anyone there wanted to be informed on Dutch gunnery or Western arts. Therefore, however much we studied, our work and knowledge had practically no connexion with the actual means of gaining a livelihood or making a name for ourselves.

Not only that, but the students of Dutch were looked upon with contempt by most men. Then why did we work so hard to learn Dutch? It would seem that we were simply labouring at difficult foreign texts for no clear purpose. However, if anyone had looked into our inner hearts, he would have found there an untold pleasure which was our consolation. In short, we students were conscious of the fact that we were the sole possessors of the key to knowledge of the great European civilization. However much we suffered from poverty, whatever poor clothes we wore, the extent of our knowledge and the resources of our minds were beyond the reach of any prince or nobleman of the whole nation.

If our work was hard, we were proud of it, knowing that no one knew what we endured. "In hardship we found pleasure, and the hardship was pleasure." To illustrate, our position was like that of someone taking bitter medicine without knowing exactly what it was good for. We simply took it because nobody else could take it—the more bitter it was, the more gladly we took it.
In 1872, Yukichi Fukuzawa published his "Encouragement of Learning." The essay first appeared as a pamphlet, and the public took to it "like the thirsty to water." Some 200,000 copies were sold—an extraordinary figure for the time. Fukuzawa went on to publish a series of seventeen essays, all called "Encouragement of Learning," between 1872 and 1876. They established him as a thinker and an intellectual leader of the New Japan. The basic ideas in his first essay, published below, are as fresh and virile to the men of today as they were to those of 1872. As Eiichi Kiyooka has written: "There were many other scholars who advocated new thoughts, but Fukuzawa was foremost in force and clarity of expression, and above all in reaching a wide circle of people. It is certain that there has never been in all the history of Japan an essay that compares with this one in its influence on the Japanese people."

"HEAVEN never created a man above another nor a man below another," it is said (1). Therefore, when men are born, Heaven's idea is that all men should be equal to all other men without distinction of high and low or noble and mean, but that they should all work with body and mind, with dignity worthy of the lords of creation, which they are, in order to take all things in the world for the fulfillment of their needs in clothing, food, and dwelling, freely but without obstructing others, so that each can live happily through life.

However, taking a wide view of this human world, we find wise men and ignorant men, rich men and poor men, men of importance and men of little consequence, their differences like those of the cloud and the slime. Why should all this be? The reason is apparent. In the jitsugokyo it is said, "If a man does not study, he will have no knowledge. A man without knowledge is a fool." The distinction between the wise and the foolish comes from whether they have studied or not.

In society there are difficult tasks and easy tasks. Those who undertake difficult tasks are called men of high standing and those who undertake easy tasks are called men of low standing. All the tasks in which one must use his mind and which involve much worry are difficult, and those in which one labours with hands and legs are easy. And so, physicians, scholars, government officials, or big merchants and big farmers who employ many serving men are to be called men of high standing and importance.

When a man is high in standing and importance, his house will naturally be wealthy and, from the viewpoint of lowly people, he will appear to be high beyond their reach. But looking into the root of it all, we will find that the difference comes merely from whether the man has learning or not, and that there are no Heaven-made distinctions.

The proverb says, "Heaven does not give riches to men, but gives it to the labour of men." Therefore, as I have said before, a man is not born with rank or riches. Only those who strive for learning and are capable of reasoning will become men of rank and riches while those without learning will become poor and lowly.

Learning does not mean knowing strange words or reading old, difficult literature or enjoying poems and writing verses and such accomplishments, which are of no real use in the world. These accomplishments give much pleasure to the human mind and they have their own values, but they are not to be valued and worshipped as much as the usual run of scholars has tried to make out.

Since time immemorial, there have been very few scholars in Chinese classics who were good household providers or merchants who were accomplished in poetry and yet clever in business. For this reason mer-

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(1) The word Heaven as used in the essay has no religious meaning. Today the word Nature would be used, but in 1872 the Japanese word for Nature had not come into general use.
The boundary line between freedom and waywardness lies in whether one infringes on others or not.

**ADVANCING** farther, there will be many subjects to be taken up: Geography is a sort of story of and guide to Japan and all the countries of the world; Natural Philosophy is the study of the nature and the function of all things under the heavens; History is a detailed chronology and studies the conditions of every country in the world, past and present; Economics explains the management of a household and of a country and of the world; Ethics gives the natural principles for a man's conduct of himself and with his fellow men and shows how he should behave in society.

For the study of these subjects, one should read the translations of Western books. In writing one may let the Japanese alphabet suffice in most cases. If there should be a youth with a promise in scholarship, let him learn the “letters written sideways” and let him grasp the fundamentals in even one field or one subject, and according to these let him investigate the principles of things near him, and thus let him fulfill the need of every day.

Such is Jitsugaku (Scientific Knowledge or Real Learning) for all men, which should be generally imbibed without distinction of high or low in society. Only after this, should men pursue the separate ways of Samurai, farmer, artisan, and merchant, and the household business of each. In this way a man may attain his independence, a house its independence, and the nation too will attain independence.

In the pursuit of learning, the important thing is to know one's proper limitations. The nature of a man as he is born is not bound or restricted; a man as an adult man and a woman as an adult woman should be free and unrestrained in their actions. However, by stressing freedom alone without regard to one's proper limitations, one is most liable to fall into waywardness and licentiousness. What is meant by limitations is to conform to the reason of Heaven and humanity and to attain one's own freedom without infringing upon that of other men.

The boundary line between freedom and waywardness lies in whether one infringes on others or not. For instance, when one is using one's own money, it may seem that one is free to indulge in wine and women and to abandon oneself to licentiousness. But it is not so by any means. One man’s licentiousness will become the temptation of many men, causing the general degeneration of the society and the disruption of education. Even if the money he spends is his, his sin cannot be pardoned.

The problems of freedom and independence exist with a nation as much as they do with an individual man. Since ancient times, Japan has been an island country far to the east of the Asian continent, not associating with foreign countries, living on its own produce, and never being sensible of want.

But since the Americans came in the Kaei Era, foreign trade and intercourse began and developed to the state we see today. There have been arguments of many kinds even after the opening of the ports, some advocating loudly the closing of the ports and the expulsion of foreigners. However, these arguments take a very narrow point of view like that of the proverbial frog at the bottom of a well; they are not worthy of our note.

**TAKE** Japan, take any nation of the West; every nation is under the same heavens, illumined by the same Sun, enjoying the beauty of the same Moon, sharing the same ocean, breathing the same air, possessing the same human sentiments. Therefore, whatever we have in excess we should give to them, taking to us whatever they have in excess, teaching each other and learning together, never ashamed nor boastful, each fulfilling the needs of the other, mutually praying for the happiness of all.

So, according to the reason of Heaven and the ways of man, a nation should hold mutual intercourse with all others, and when reason is against it, it should bow even before the black natives of Africa, and when reason is on its side, it should stand in defiance of the mighty warships of England and America, or when the honour of the country is at stake,
No longer will a man's rank be determined by his birth but only by his ability.

Therefore, henceforth among the people of Japan there will be no such thing as the rank to which a man is born. Only by his ability and the position he holds will a man's rank be determined. For instance, it is proper to pay respect to a government official, but this is not the respect of the man himself. We should pay respect to the fact he holds his position because of his ability and administers the precious laws for the benefit of the people. It is not the person that one is to respect; it is the law that one is to respect.

All people remember that during the Shogun's regime the August Jar of Tea used to be carried along the Tokaido Highway. Not only the Jar of Tea but a hawk in the Shogun's household was more precious than an ordinary man; when a horse of the Shogun's household came by, all the travellers on the highway stood aside. Everything, even a piece of stone or tile, appeared awesome and precious when the words "belonging to the Shogun" were attached to it.

Though disliking it for many centuries, people had become used to it, and thus the ugly custom came to be. After all, this did not come from the dignity of the law, nor from the value of the things themselves; it was simply a cowardly device of the government to show off its power and to restrict the freedom of the people. One may call it an empty pretence without substance.

Nowadays, as such miserable laws and customs are to be discontinued throughout the country, people ought to set their hearts at ease, and if there should be the least complaint against the government, they should never hold it against the officials in secret, but they should seek a proper channel to present the case and to argue about it quietly and without hesitation. If the case should be in accord with Heaven's reason and with humanity, one should fight for it even at the risk of one's own life. Such shall be the lot of a man who calls himself a citizen of a civilized nation.

As I have said before, an individual man and an individual nation are free and unrestricted according to Heaven-made law. And so, if this freedom of the nation is in jeopardy, one should not fear to stand against all the nations of the world, if one's individual freedom is in jeopardy, one should not stand in awe of even the government officials.

Moreover, at the time when the equality of the four classes has been established, all men should feel secure in giving free rein to their activities as long as they follow the ways of Heaven. However, as every man has his position in society, he must have ability and virtue appropriate to his position. In order to give ability and virtue to oneself, one must learn the logic of things. In order to learn the logic of things, one must study his letters. This is the reason for the urgent need of learning.

As we look around today, the position of the three classes—farmer, artisan, and merchant—has advanced a hundred fold, and soon will be on a level with the Samurai. Even now the way has been opened for drawing talented men from among the three classes into government service. Therefore, all men must reflect upon themselves and realize that they now occupy a high position, and therefore must behave in a manner worthy of that position.

There is no one more pitiful and obnoxious than the ignorant and the illiterate. In the extreme of ignorance, they lose the sense of shame. When they grow poor and hungry because of their ignorance, they do not blame themselves, but they envy the rich, sometimes banding themselves to force a petition or even taking to armed rioting.

Shall I call them shameless, or shall I call them lawless? They owe their security to the law of the nation and they carry on their household business under the law. They take advantage...
of it when they may: Yet, when their personal greed dictates, they break the law. Is this not an outrage on fair reason?

It sometimes happens that a well-established man with some means knows only how to accumulate money but is entirely ignorant in educating his children. Uneducated children will be foolish, which is not to be wondered at, and they will become lazy and licentious, finally squandering away like a wisp of smoke the fortunes inherited from their ancestors.

To rule such foolish men, reason will not do; the only way will be to keep them in order by the show of force. A proverb of the West says, "Over foolish people, there is a harsh government." It is not that the government is harsh of itself; it is the foolish people who bring harshness upon themselves.

If the government over foolish people is harsh, reason requires that the government over wise people should be good. Therefore, in our country, too, we have this kind of government because there is this kind of people.

Should our people ever sink into deeper ignorance and illiteracy, the government will become even severer than today. Should people turn their minds to learning, acquire an understanding of logic, and advance toward civilization, the government will move toward freedom and leniency.

The severity or leniency of the government are natural consequences of the worth or unworthiness of the people themselves. Who in the world would prefer harsh rule to good rule? Who would not pray for strength and fortune for his own country? Who would welcome humiliation from foreigners? These are human sentiments common to all.

The important thing for everyone for the present is that he should regulate his conduct according to humanity, and apply himself earnestly to learning in order to absorb a wide knowledge and to develop abilities worthy of his position. This will make it easy for the government to rule and pleasant for the people to accept its rule, every man finding his place and all playing a part in preserving the peace of the nation.

"The Encouragement of Learning" has been included in the American edition of "The Autobiography of Yukichi Fukuzawa", published by Columbia University Press in the Unesco Collection of Representative Works.
THE ‘SECRET’ OF JAPAN’S EDUCATIONAL TRIUMPH

by
Masunori Hiratsuka

"JAPAN is a country of islands in the Orient far away from here... As an Oriental country, Japan has her own fine cultural traditions; at the same time she has achieved a remarkable advancement in modern technology and such rapid economic progress that it has even been called "a miracle." I believe it is very significant for us to study the education of such a country."

These observations were made by Professor Joseph A. Lauwrey, one of the world’s outstanding scholars on comparative education, in introducing a lecture on the development of modern Japanese education which I gave at the Institute of Education of the University of London several years ago.

Japan is a small country, smaller than California—only one of the fifty states in the U.S.A. Yet its population is just over 100 million and it is now one of the world’s giant industrial nations.

The development of modern education in Japan has been so remarkable that its enrolment ratio in higher education is very significant for us to study here. As an Oriental country, Japan stands second highest, and that of California is only one of the fifty states in the U.S.A. Yet its population is just over 100 million and it is now one of the world’s giant industrial nations.

The development of modern education in Japan has been so remarkable that its enrolment ratio in higher education is today one of the highest in the world. The enrolment ratio in the second stage of secondary education (senior high schools) is now the world’s second highest, and that of elementary education has been maintained at more than 99 per cent for boys and girls alike since 1920.

People from every continent have frequently asked me the same question: "How has Japan managed to achieve such rapid progress in schooling within a single century?" Some have even asked me to divulge the "secret" of this success.

What interests me particularly about the question is that those who pose it appear to imagine that Japan’s educational resources were almost negligible before 1872 when its modern school system was established.

So I always make a point of explaining that Japan is a country whose people have maintained a high respect for education and culture throughout their long history, and that facilities for education in various forms and types did in fact exist before the Meiji Restoration in 1868. And I never fail to stress the fact that a solid foundation had been laid for the rapid advancement of modern Japanese education.

In 1966 Unesco commemorated the 300th anniversary of the great Japanese woman novelist, Shikibu Murasaki, who wrote her famous "Tale of Genji" in the Heian Period, 950 years ago. The translation of this work into English in the 1930s, revealed to Western readers the narrative skill of Shikibu Murasaki, in her account of the adventures of the hero, Prince Genji, and also her perceptive descriptions of the court life of her day.

Shikibu Murasaki is only one of a number of highly gifted Japanese women writers, essayists and poets of the Heian Period, which witnessed a rich flowering of art and literature in Japan and many kinds of cultural and educational activities in which Buddhist priests notably played a leading role.

St. Francis Xavier, a Jesuit priest who came to Japan in the 16th century, recorded in one of his letters that the country had two universities and that the Japanese people were very industrious and polite. Besides the two universities there were many Buddhist temple schools whose functions were similar to those of the cathedral and monastery schools in medieval Europe.

When we talk about modern education in Japan, we should not overlook certain important historical developments of the Edo period (1603-1868) which immediately preceded the Meiji Restoration:

- Under Ieyasu Tokugawa, founder of the Tokugawa Shogunate, which governed Japan during the 265 years of the Edo period, respect for learning was made the highest principle of government, and military training was relegated to second place;
- With the exception of some minor troubles, Japan enjoyed over 200 years of peace—a fact unprecedented in world history;
- Through the integration of Chinese and Japanese classics with Buddhism, a religion which had done much to enrich the country’s arts and learning, a unique Japanese culture was formed;
- Though society was divided into four categories—warriors, farmers, artisans and merchants—people in all parts of the country spoke a single language;
- Japan had two major religions—Buddhism and Shintolism—whose followers were drawn from every class of society.

Of paramount importance was the fact that various types of educational facilities existed and were open to people from every section of the community. Towards the end of the Edo period, Japan had more than 50,000 "Terakoyas", a form of one-teacher one-classroom school, throughout the country. These schools, where reading, writing and arithmetic were taught to commoners, were run without financial support from the government. For the warrior class there were about 300 schools which were equivalent to the levels of present-day senior high schools and junior colleges.

Other types of popular education provided instruction in needlework, practical training in various everyday activities and apprenticeship in tech-
First day of school for six-year olds in Japan. 
99 per cent of Japan's children receive nine years 
of free primary and lower secondary education.

JAPAN'S EDUCATIONAL TRIUMPH (Continued)

tical and professional skills; opportunities for education were also available 
in winter youth camps in agricultural 
communities and in Buddhist and 
Shinto pilgrimage groups. Through all 
these facilities designed to meet the 
practical needs of daily life, many 
people received some measure of 
education.

All children of the warrior class, most 
townspeople and a large proportion of 
the more prosperous farmers were 
literate. Thus, in 1872 when the modern 
school system was established in Japan 
and the State made itself largely re-
sponsible for education, a solid found-
ation for the development of public 
education on modern lines had already 
been prepared.

Japan's national leaders at the time 
of the Meiji Restoration were resolved 
to give top priority to education in their 
plans for developing and modernizing 
their country. They were dissatisfied 
with Japan's existing educational sys-
tem and looked abroad, seeking to 
learn from the experience of other 
countries. The great spirit of the Five-
Point Imperial Covenant "to seek 
knowledge far and wide" was given 
full effect in the field of education. 
Japan learned a great deal from the 
educational systems of the Nether-
lands, England, France, U.S.A. and 
Germany.

In August 1872 the new public educ-
ation system, of which Japan can be 
rightly proud, was established. It laid 
special emphasis on democratic prim-
ary education. Regardless of sex, 
social status or means, all students 
were enrolled in the same type of 
primary school.

The emphasis on equality in educa-
tion had already been demonstrated 
in 1871 when the Japanese Govern-
ment, with the future development of 
national education in mind, sent
travelling many hundreds of miles to do so. The number of girls now attending colleges and universities in Japan has almost doubled in the past 15 years, to total 17 per cent of the student body.

Graduation day for 15 thousand students at Japan's mammoth Nihon University in Tokyo. With its student body of over 52 thousand, it is by far Japan's largest institution of higher education. The ceremony is being held in the university's auditorium (also Japan's largest) with a seating capacity of 100,000. It was formerly a gymnasium reserved for Japanese sumo wrestlers.

five girls to study in the U.S.A. The youngest, surprisingly, was a little girl aged seven. Thus the government affirmed its belief in the important role that women would play in the modernization of Japan. Needless to say many young men also went abroad to study. Without exception they returned to make important contributions toward the making of the new modern Japan.

The first government programme for the development of education was an ambitious one. The initial plan, announced by the Ministry of Education in September 1872, envisaged the division of the country into eight university districts, in each of which there were to be one university and 32 secondary schools. Each secondary school district, in turn, was to include 210 primary schools.

In other words, it was proposed to establish eight universities, 256 secondary schools and 53,760 primary schools in Japan. The strong emphasis placed by the Meiji government on a democratic education with equal opportunity for all provided the basic foundation on which the modern nation of Japan has been built.

By 1880 there were 28,000 primary schools with over two million pupils (just over 40 per cent of school age children). The enrolment ratio which was only 25 per cent in 1872 rose to 95 per cent by 1905, and in 1907, the period of compulsory education was extended to six years. Today the duration of compulsory education is a full nine years, and enrolment throughout this period is 99.9 per cent.

Japan's secondary school system has undergone some important changes in the course of its development. After 1886, the main function of secondary education, in line with the European pattern, became more or less a preparatory stage for college en-

CONTINUED ON PAGE 22
Students visiting Tokyo's National Museum gaze attentively at the golden funerary mask of Tutankhamen seen reflected in the glass showcase. This priceless relic from ancient Egypt was the centre-piece of an exhibition of ancient Egyptian art treasures, "Tutankhamen and his Times" which drew visitors from all over Japan in 1965.

If the Japanese love cameras, they also love sport. Sports such as judo, baseball, basketball, ping-pong etc. are very popular. Sport is also an increasingly important feature in the school curriculum. Here, a girl student shows her skill as an adept of Kenpo, the art of self-defence with a stick, unlike judo, or jujutsu in which the agility of the sportsman, devoid of any weapon, is paramount.
'Operation 6-3-3' — renovating a nation's school system

trance rather than an extension of primary education. At the same time, many types of secondary schools for technical and vocational training were opened in order to meet the various needs of a developing society.

In 1941, only about 20 per cent of primary school graduates entered regular four or five year secondary schools. This did not mean that for the remaining 80 per cent schooling ended with primary education. Statistics show that some 60 per cent entered higher primary schools and about 10 per cent were enrolled in part-time courses for young people. Thus only about 10 per cent did not receive any further schooling.

Various opportunities for technical and vocational training were offered to graduates of higher primary and primary schools through apprenticeship and on-the-job training in private enterprises. Many young people attended the so-called miscellaneous schools which gave short courses in such fields as dressmaking, cooking, typewriting, hairdressing and car driving.

Before the Second World War, a great variety of institutions of higher education were open to pupils after they had completed six years in primary school and five years' secondary education. As of 1945, universities numbered 46; higher schools, 33; various kinds of professional schools, 309; teacher training schools of various types, 186; and higher normal schools, seven. But the number of students in these institutions amounted to only four per cent of the 17 to 21 age group.

Japanese education since the Meiji era has played a very important role in molding social mobility. Many of Japan's outstanding leaders, including scholars and statesmen, came from remote villages. They attained their present positions not only by their own efforts, but because educational opportunities were offered them.

The country people of Japan have a well known saying that children should be given a good education even if farmland has to be sold to pay for it. Japanese people have continued to maintain their traditional respect for learning since the Edo period. Various types of scholarship programmes have been established which have aided a great number of young people from the poorer sections of the community.

In 1947, in the midst of social chaos and economic strains due to the war, the 6-3-3 educational system (six years of primary school, three years of lower secondary school and three years of upper secondary school) was adopted, and compulsory education was extended to nine years.

This was regarded by some as a rash enterprise, but the decision was taken because the Japanese people

were convinced that their country could be reconstructed only through the promotion of a truly democratic system of education. And indeed, the development of the new educational system was achieved through the efforts of countless people.

In this connexion, I recall a visit I made to the U.S.A. in 1950, at the invitation of the State Department, to study the U.S. system of higher education. While I was in Abilene, Texas, I happened to mention that Japan had adopted the 6-3-3 system simultaneously throughout the country. One professor told me that he did not see how that was possible. I was happy to be able to tell him that by the sincere and enthusiastic efforts they had made for the reconstruction, the Japanese people had turned the impossibility into reality.

Although the 6-3-3 system was set up in Japan under the guidance and inducement of the occupation authorities, its introduction was not due to their compulsion alone. Already in the mid-1930s there were scholars among the Japanese Prime Minister's advisers who regarded the 6-3-3 system in the United States as the most advanced democratic system of education in the world, and they recommended that it be introduced into Japan.

At the beginning of the 6-3-3 system, about one half of lower secondary school graduates entered upper secondary schools while most of the other left school and took jobs. Today about 75 per cent enter upper secondary schools.

The rapid increase in this ratio in recent years has given rise to many serious problems. The severity of the examinations for entry to upper secondary schools, the lower secondary school has become a preparatory stage for such examinations rather than an intermediate stage between primary education and secondary education proper in which special emphasis is given to observation and guidance of the individuality, aptitude and ability of each pupil.

There has been a tendency in Japan to regard upper secondary schools of the general academic type as being superior to other types, such as those which provide technical and vocational education. Regrettably, those who are labelled good teachers in Japan are in most cases so judged by the number of their students who enter the best-known higher schools.

Japan's Central Advisory Council on Education has now submitted a report on the reform of upper secondary education. After an examination of the whole situation, it proposes, among other changes, to diversify the contents of upper secondary school education; to provide compulsory education, in one form or another, up to the age of 18 for those who do not enter the regular upper secondary schools; and to considerably improve and expand facilities for part-time education, correspondence courses, miscellaneous school education and social education.

The Council particularly insisted on the need for an all-out effort to provide pupils with educational opportunities that correspond to their individuality, aptitude and ability. The Ministry of Education and local governments are now striving to implement the Council's proposals.

Under the postwar reform of the educational system in Japan, various types of institutions for higher education were reorganized simultaneously, in 1948, into four-year colleges whose courses strongly emphasized general education. Later, new five-year courses of two years and a Doctorate course of a further three years were offered at the new colleges which had formerly been universities. More recently, graduate school education has also been rapidly expanding.

The number of students receiving higher education has been increasing far more rapidly than was foreseen, particularly since 1955. The enrolment ratio is now about 18 per cent. One of the main reasons is the rise in the standard of living; another is Japan's rapid economic growth.

A further and even more important reason is that those who believe in the democratic right of equal opportunity in education have increasingly sent their children to colleges and universities.

As of 1967 there were 369 universities and university institutes, 451 junior colleges, and 54 technical colleges in Japan. Within ten years the enrolment ratios are expected to reach 85 per cent for upper secondary schools and 25 to 30 per cent for higher education.

The number of women students at higher educational institutions has been increasing year by year, which is very gratifying in a democratic society. Prior to the war women were not admitted to the Tokyo Imperial University, except in rare cases. Christian mission schools played a very important role in the education of Japanese women, and most of the outstanding women leaders were educated in private colleges.

Instruction in special fields is provided by various educational institutions such as the miscellaneous schools where cooking, dressmaking, flower arrangements, etc. are taught. On-the-job training in private firms and factor-
ies and correspondence courses have been becoming increasingly popular. Recently, education for mothers has been promoted through special "mothers" schools throughout the country, but Japan is still far behind other advanced countries in this respect.

Needless to say, teacher training is the most fundamental factor for the development of education, and has been given special priority by the government. In 1943, teacher training schools were reorganized into colleges at the higher education level. In 1946 it was decided that school teachers, including those in primary schools, must qualify at a four-year university course, and at the same time, the status of teacher training colleges was raised to university level.

With the rapid advance of science and technology, mass communication media such as radio and television have themselves become a major area of education. The school broadcasts of NHK (Japanese Broadcasting Corporation) have been very useful not only in enhancing the educational effect of classroom teaching, but also for correspondence course programmes in secondary education.

They are now proving to be an indispensable means of education for children and students at schools in remote areas where educational facilities and materials are still insufficient. Thus, they are playing a big role in eliminating regional differences in educational levels and in improving general educational standards.

Radio, TV, films and other kinds of audio-visual aids to teaching have been increasingly utilized in Japanese schools, improving the quality of education at all levels.

In conclusion, I would like to point out some of the fundamental problems facing Japanese education today. Firstly, education is generally considered as a form of school education. Not enough attention is paid to education at home, which is extremely important, nor to the significant influence of pre-school environments upon children. No less important is the significance of social education or adult education after the end of school education. What is really important is the idea of life-long education.

Secondly, a limited view is taken of human ability. Ability is generally understood as intellectual, while the existence of other kinds of abilities—technological, artistic, social (for better human relations) and physical abilities—are easily forgotten.

Thirdly, the evaluation of vocations is based on this erroneous view of human abilities. It is unfortunate that the meanings and social roles of different vocations are not fully appreciated.

Educational leaders in Japan are now trying to develop an education that is truly worthy of the name, taking into consideration the individuality, aptitude and ability of each student.
physics, mathematics and chemistry, as well as Western languages, were taught. Science instruction was also started at two military schools. Industry, in the form of blast and reverberatory furnaces, and iron and cotton mills, was also begun.

When the imaginative Meiji leaders came to power in 1867, their approach to science and technology stemmed from their policy of strengthening the nation by "seeking knowledge far and wide." They brought modern science to Japan by importing not only books but brains: almost 600 Western engineers, lured by salaries as high as $2,000 dollars a month, as well as the challenge of modernizing a medieval country, came from the West to direct new technological projects.

Although six government ministries were involved in promoting science and technology, the leading body in the early years of the Reformation was the Ministry of Technology which established the railway and telegraph services, managed government plants and mines, built lighthouses, and promoted the education of Japanese engineers, mainly through its administration of the school of technology, founded in 1871 and later amalgamated with Tokyo Imperial University.

The Imperial University was Japan's first university in the true sense that research as well as education was carried out. Founded in 1877, it became the leading centre for training modern scientists and engineers. Foreign instructors were predominant in the beginning, with 12 of the 15 professors of science coming from abroad.

Various countries influenced various disciplines: mathematics, physics and chemistry developed chiefly under the influence of the United States and Great Britain, medicine under Germany, and agriculture, biology, geology and mineralogy almost equally under Britain, U.S.A. and Germany.

As science was being brought to Japan by foreign experts, Japanese students were being sent abroad to study. The main aim of the government in sending the students abroad was to train them as teachers, and in 1884 they started to replace foreign instructors. By 1893, scientific education had passed completely into the hands of Japanese professors.

Since the modernization of industry was forcibly initiated by the Meiji government, its role was important in the development of science and technology, especially the latter. Through the national research institutes attached to each government ministry, research and development was encouraged, promoted and systemized, especially with a view to improving industrial technology.

Development at this time in the various branches of science included: calendar compiling and land surveying by the Bureau of Geography, established in 1871; the founding of the Tokyo Meteorological Observatory in 1875, which had twenty meteorological stations in operation by 1900; the formation of the Japan Seismology Society in 1880, the first such organization in the world; and research work in physics and biology.

Edward Sylvester Morse was a...
major contributor to Japanese biology. He arrived from the United States in 1877 to find that "evolution," whose principles had been enunciated by Charles Darwin twenty years before, was an unknown concept. He introduced it in his lectures and public meetings, and the idea was spread further by Japanese scientists.

In the early 1890s, about the time Japanese professors were replacing Westerners in the academic structure, Japanese scientists began to come into their own. Perhaps the first creative Japanese chemist was Takamine Jokichi who discovered and synthesized adrenalin in 1900, and the enzyme, Taka-Diastase, in 1909; in 1910, another chemist, Suzuki Umetaro, discovered vitamin B; Nagoka Nantaro took Japan's first step in the direction of nuclear physics when he published his "Theory on Atom Structure" in 1903; Kitazato Shibasaburo's Institute for Research of Infectious Diseases, founded in 1892, was regarded as one of the world's three leading research institutes. The

Japanese, although still striving to reach the level of Western science, began to reap the fruits of their intellectual industry and determination.

At the end of the 19th century, with the development of the textile, ship-building and machine industries, the manufacture of iron, coal mining, and the electric power industry, Japan gradually caught up with Western industrial powers.

By 1919, manufacturing had surpassed agriculture as Japan's most important economic activity, and the industrial "centre of gravity" shifted to heavy and chemical industries.

World War One had a profound effect on Japanese science. Until then, it had developed in step with the West, but with international relations disrupted, Japan's scientists for the first time charted an independent course. Research institutions were founded during and immediately after the war and through them science was finally harnessed to technique and industry to serve as a driving force for progress.

Post-World War One scientific achievements were numerous: in physics, research into metals, especially new steels aided Japanese industry, and nuclear physics made rapid progress with Yukawa Hideki presenting his "Theory of Mesotrons" in 1934 (for which he received Japan's first Nobel Prize in 1949). The second Nobel Prize awarded to a Japanese went to another physicist, Tomanaga Shinichiro in 1965.

In geophysics, Japan continued to pioneer seismological research; in biology, Fuji Kenjiro did outstanding research on chromosomes; in medicine, advances in the study of cancer were remarkable, beginning with the artificial generation of cancer in 1915 and later studies of liver cancer; in chemistry and agriculture, diligent investigations often had direct bearing on industry and food production.

However, this new maturity was to bear too little positive results in the decades that followed: Japanese scientific and industrial efforts were subordinated in the early 1930s to the...
Japanese welders and painters form a striking pattern on the hull of the big cargo vessel under construction, far left. This giant ship will soon be dwarfed by mammoth ocean tankers of 500,000 tons which Japan, the world's largest shipbuilder, will be constructing by 1970. Japan's position as an industrial colossus has been attained despite its few mineral resources. Every inch of the land is exploited to the full, epitomized in the extraordinary photo of tiny Hajima Island (left) off the shore of Nagasaki, where coal deposits under the sea are being worked amidst the serried ranks of multistoried buildings, cliff faces and Erector-set-like cranes and pit-shafts.

For several years after the war, scientific and technological research activities in Japan were virtually suspended. American occupation forces banned research on atomic energy, armaments, and aeronautics, and dismantled Japan's cyclotron.

In 1951, the peace treaty was signed, and in 1954 research in atomic physics and the development of atomic energy were resumed. The Science and Technology Agency was established in 1956 to co-ordinate activities in those fields, and in the same year Japan's Atomic Energy Commission was formed.

About 1955, Japan's post-war prosperity began and, recognizing the indispensability of science and technology to the resuming economy, the government and private enterprise built new universities, faculties and research institutes.

There was a conspicuous reliance in Japan at that time on foreign techniques, but research funds were started, and are being continued, by industry to redress this situation through financing scientific and technological research at universities, and expanding or establishing their own research institutions.

Poor conditions for study impose great restrictions on the development of basic research. This has resulted in a great many Japanese scientists going abroad in search of better research facilities, a situation that has hardly improved, especially in mathematics, physics and chemistry.

Although science and technology students have increased twice as fast (between 1954-64) as students in other faculties, their numbers need to be greatly increased, and an enrollment of a further 170,000 is planned.

Possible reasons for the shortage of students may be the comparatively modest salaries and the system of remuneration of Japanese scientists and engineers, particularly early on in their careers. Pay is largely based on status and seniority, and there is insufficient recognition of talent.

Recently, a new staff system was introduced in industry, intended to encourage higher knowledge and creativity.

Despite these problems, Japan has been able to develop into one of the six most advanced technological countries of the world. The key industry in this prodigious rise has been electronics, where Japan's output is second only to the U.S.A.'s.

In 1966, Japan produced over three thousand million dollars worth of electronics, 30 per cent of which was exported. In telecommunications, the country's micro-wave networks are second largest in the world and handle all television broadcasts and half the telephone transmissions. Japan's 100 million people have 13,000 telephone and 20 million TV receivers. The best known product of Japan's electronics industry is the transistor radio, a now commonplace instrument of communication that has had far-reaching effects on listening habits throughout the world.

Among Japanese electronic advances have been the Esaki diode, and the development of a novel computing device called the "parametron" which performs logical and storing functions in telephone exchanges, telegraph printers, machine tools, and in digital computers.

Computers, in fact, are the core of Japan's electronics industry, in the absence of any large defence or space programme, and Japan uses more computers than any other nation. Its first automatic computer was built in 1952, and a current ambitious programme, to build an ultra-high performance computer system, began with State aid in 1966.

Japan has also been a leading nation in the development of peaceful uses of nuclear energy. In 1967, the Japanese Atomic Energy Commission began a big new ten-year programme of research, development and utilization, with an estimated budget of over $1,200 million. Nuclear power installations are to be increased with a target capacity of 6,000 megawatts for 1975, and between 30,000 and 40,000 MW for 1985.

Also in 1967, the keel was laid for Japan's first nuclear ship, an 8,300 ton vessel which is to be launched in 1969.

To keep Japan's economy vigorous, a "Medium-Term Economic Plan" was introduced in 1965. Among the scientific measures which were recommended in support of it were: the need to couple the advancement of science and technology with Japan's economic growth, improve the quality of scientists and engineers, increase research in public welfare, raise the level of technological work in agriculture, forestry and fisheries, and the smaller enterprises, assist and encourage research by tax relief, and improve the research environment.

This last mentioned is no mere platitude. A complete new "Science City" north of Tokyo, is to be completed by the mid-1970's. Its residents will be 52,000 scientists and engineers working in 40 laboratories, to improve the world around us.

JAPAN’S CONTRIBUTION TO WESTERN LITERATURE AND THE ARTS

by Earl Miner

JUST as there is a creative interplay between tradition and change within a national literature, so is there commonly a fruitful encounter between the artistic genius of one nation and the differing genius (which is commonly not well understood) of another.

Among the nations, Japan is at once unusually creative and unusually susceptible to foreign modes. It has also proved highly effective in exporting features of its culture to other nations. More than that, we may say precisely that the dominant spiritual or intellectual effect of Japan upon other nations has been artistic.

If too little is known abroad about Japanese law, philosophy, linguistics, rhetoric, social theory, and other national achievements, the reason is hardly that Japanese are by nature without talent for such enterprises than that other countries have had a greater need for Japanese understanding of human experience in artistic forms.

Enthusiasm and doubt over Japan are not new responses. After arriving in Japan in 1549, St. Francis Xavier declared, “these people are the delight of my heart.” In 1577, another Jesuit wrote that, religion apart, Europeans were barbarous by comparison with Japanese. In 1868, it was claimed that Japan “exceeded in beauty and magnificence all the pride of the Vatican at this time and the Parthenon here-tofore.” But the country was often regarded as a symbol of the far-away, that Japan “exceeded in beauty and magnificence all the pride of the Vatican at this time and the Parthenon here-tofore.” But the country was often regarded as a symbol of the far-away, that Japan “exceeded in beauty and magnificence all the pride of the Vatican at this time and the Parthenon here-tofore.” But the country was often regarded as a symbol of the far-away, that Japan “exceeded in beauty and magnificence all the pride of the Vatican at this time and the Parthenon here-tofore.” But the country was often regarded as a symbol of the far-away, that Japan “exceeded in beauty and magnificence all the pride of the Vatican at this time and the Parthenon here-tofore.”

By 1856 the self-isolation of the country had become a source of irritation to powers like England, France, Russia, and the United States; and there was a sense that little more could be said or done until the nation was open once more. Yet in that same year, according to cherished French legend, Félix Bracquemond discovered a volume of Hokusai’s wood-block prints which soon became his “breviary.”

Because the terms in which French writers and artists regarded Japanese culture were to dominate—or characterize—Western cultural interest in Japan for half a century or more, we may defer consideration of them for the moment while we examine the responses of those two countries more closely involved in the opening of Japan.

It might seem strange that the United States and England benefitted far less artistically from first-hand contact with Japan than the French from more detached interest, but it was France that was on the verge of a great artistic revival, and we must understand at once that a nation, in this case Japan, is often most influential in these matters from a dim distance.

INSTEAD of seeking aesthetic inspiration, the United States entered into its passionate and ambivalent attachment with Japan (one need only compare the American story, Madame Butterfly, with the cold exoticism of Pierre Loti), and England showed a characteristically restrained enthusiasm that found its highest expression in the work of some remarkable scholars—B.H. Chamberlain, James Murdoch (a Scot), W.G. Aston, and several others.

They and their successors built upon the worthy foundations of Jesuit writers, of seventeenth-century German historians like the very able Engelbert Kaempfer, and the Dutch historians who carried all before them in the eighteenth century. Scholarly interest in Japan, leading as it often does to translations of major literary works, has always been important in controlling more fanciful responses to Japan. In nearly every Western country today there are scholars treading on the successive footprints of Spaniards, Germans, Dutch, and English.

In nineteenth-century America, Clio, the severer Muse of history, was less welcome than her more rapturous and mythographic sisters. The excitement began with news of Commodore Matthew Perry’s success, in 1853. When a Japanese mission, come to ratify Perry’s treaty, visited several American cities in 1860, excitement was unbounded.

On June 26, “The New York Times” wrote of the unparalleled magnificence of the spectacle. The next day it carried a poem by Walt Whitman, “The Errand-Bearers.” The Japanese were “lesson-giving princes,” and they brought the Orient—“The next of languages, the bequeather of poems, the race of old.” Much in this derives from the philo-orientalism of the American Transcendentalists, but Whitman had actually seen Japanese—visitors, as it were from Eden.

Such enthusiasm came to be heightened and hazed over by a veil of exoticism, and in particular that associated with Lafcadio Hearn. Partly because of the titles of his writings, partly because of the slow surf that beats in his prose style, many assumed that he told of life in a distant paradise. He himself sought to harmonize Buddhism with the evolutionary philosophy of Herbert Spencer, and if he was in Eden, he grew increasingly dissatisfied with it.

He was, however, sufficiently American (again the contrast with Pierre Loti is valid) to be deeply attached to that which he grew to dislike. What seemed mere exoticism actually concealed the cultural relativism and aestheticism in which was rooted the artistic plant that nourished Hearn: Impressionism.

So significant and widespread an artistic movement as Impressionism has many causes, manifestations, and effects. But no one has ever questioned that its characteristic expression was French, and its characteristic medium, painting. If a Hearn could take Impressionist thought and prose style to Japan, it was in no small ma-

CONTINUED ON PAGE 30
The Meiji Restoration not only opened the West to the people of Japan; it also opened Japan to the Western world. The wealth of Japan's cultural heritage, especially its art and literature, struck the West with full force and has since had an abiding influence on Western art and thought. The way in which both the arts of Japan and the arts of the West have mutually benefitted from this contact is the keynote of a series of manifestations organized by Unesco to commemorate this year's centenary of the Meiji Cultural Revolution. Among these are an international round table on these mutual influences, held in Kyoto and Tokyo, in September, an exhibition of works of art by Japanese and Western artists, in Tokyo, as well as the publication of an art album (now in preparation), all on the same theme. A special study on the translation of Western literature into Japanese, and its effect on the development of Japanese writing is also being undertaken by the Unesco-sponsored Centre for East Asian Cultural Studies (Tokyo). The present article is condensed from an essay on "The Significance of Japan to Western Literature," by Professor Earl Miner, presented to the Unesco International Round Table.

Detail of a unique portrayal in wood of Kuya Shonin, a famous wandering monk of 10th century Japan. Known as "the market sage", he went among the people to teach them the wisdom of Nembutsu (Buddha of Infinite Enlightenment), also called Amida in Japan. Here, the 13th century sculptor Kosho has depicted Kuya Shonin with little images of Buddha emerging from his mouth. Legend has it that these appeared whenever the monk invoked the name of Nembutsu.
The triumph of 'Japonisme'

JAPAN'S CONTRIBUTION (Continued)

The important figure in the poetic adaptation of Japan is Ezra Pound, who was born June 1, 1914: "I trust that the gentle reader is accustomed to take pleasure in 'Whistler and the Japanese'. Otherwise he had better stop reading my article until he has treated himself to some further draughts of education."

Pound clearly regarded his fellow American expatriate as a catalyst for a widespread cultural reaction involving Japan, France, and his own poetic interest. In fact, Whistler had preached and Japanese appeared in England since the late 1860s. The identification of him with Japanese art was a commonplace, and his erstwhile friends, Swinburne and Wilde, sometimes went so far as to make the connexion between Whistler's French terminology, by writing 'nocturnes' or 'études' in their poetry, and his Japanese interests, by writing an "Impression Japonaise".

At all events, Pound's phrase, "Whistler and the Japanese," shows that the first impressionist lesson had been learnt; Japan is creatively rele-

vant for the first time to what was most creative in contemporary European civilization. Second, the major relevance, apart from the general one of sensibility, was artistic technique.

In the century since the Meiji Restoration this double view has dominated most significant artistic approaches to Japan. And until perhaps World War II it was also likely to be the case that enthusiasts for Japan were first captivated by the Japanese print.

Europe also owes to France the first popular discovery of Japanese poetry. There had been in France, as in other countries, a certain amount of dreadful pseudo-Japanese writing; indeed there would continue to be some. But after the publication of Marcel Revon's Anthologie de la Littérature Japonaise (1910), simple exoticism was no longer intellectually respectable.

There was, however, a sudden vogue for haiku in French (1). Some French poets composed so-called haikai in the trenches during World War I, and thousands of these verses were sent to competitions held by the "Nouvelle Revue Française." But the really creative discovery of Japanese poetry was peculiarly international—prompted by France, it was an American discovery in England.

In Japan as in the West the terms haikai, hokku, and haiku are often used interchangeably. Strictly speaking haikai were integrated sound patterns that might be integrated—a presumption lasting to the beginning of the Meiji period; hokku are first verses in a sequence; haiku is a term really current only in the Meiji period and after for a discretely considered form of 5, 7, 5 syllables. Today haiku is often used loosely for all three types. It is curious that in the early years of this century usual French usage was haikai. English was hokku, and American was haiku.

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We present below brief notes on nine authors of modern Japan. Many have had novels and short stories translated into English. See “Bookshelf,” page 74, for a short bibliography of works from Japan published in English under Unesco’s Literature Translations Programme.

YASUNARI KAWABATA

Born in 1899, Yasunari Kawabata revealed his literary talent in the essays and stories he contributed to magazines and newspapers while he was still in college. After graduating from Tokyo Imperial University, he launched a literary magazine and quickly established his reputation as a novelist with “The Izu Dancer.” Certain of his later novels, such as “The Flower Waltz,” evoke the ephemeral beauty of worldly things, and “Snow Country,” one of his major novels, recounts a love story in the setting of a mountain village. A distinguished literary critic, he has discovered many promising young Japanese writers.

YUKIO MISHIMA

Born in 1925, Yukio Mishima had already published an immense volume of work by the time he was 37 years old—-a dozen novels, more than 50 volumes of short stories, six modern plays and a number of Kabuki and modern-version No plays. Although best known for his portrayal of postwar youth in Japan, he has often turned to classical Japanese literature for his material, an interest reflected in his dramas. Among his works published in English are: “Confessions of a Mask,” “Death in Midsummer,” “Twilight Sunflower,” “Five Modern No Plays” and “The Temple of the Golden Pavilion.”

SHOHEI OKA

Author of a number of prize-winning novels, Shohei Ooka was born in Tokyo in 1900. For his “Story of a Prisoner of War,” based on his own experiences in World War II, he was awarded the Yokomitsu Prize in 1948, and two years later his novel, “Fire in the Plains,” received the Yokumitsu Literary Prize. One of Japan’s leading authorities on French literature, Shohei Ooka has translated a number of Stendhal’s works into Japanese.

JUNJI KINOSHITA

One of Japan’s best known modern playwrights, Junji Kinoshita has developed a style of drama based on Japan’s old folk stories. For his dramatic work “The Evening Crane,” he was awarded the Mainichi Drama Prize in 1949, and another of his plays, “Wind and Wave,” received the first Kishida Drama Prize. Junji Kinoshita, who was born in 1914, is also well known as a translator of Western authors, both modern and classical, from Somerset Maugham to Shakespeare.

OGAI MORI

Ogai Mori, who was born in 1852 and died in 1922, played a major role in the development of modern literature in Japan. His linguistic ability combined with high literary gifts enabled him to produce outstanding translations of Goethe, Schiller, Ibsen and other great European writers, translations which influenced not only modern literature and modern theatre in Japan, but which also gave an impetus to modern Japanese poetry. The son of a doctor, he went to Germany in 1874 to pursue his own study of medicine and remained abroad for four years. He was thus the first Japanese writer to become well-acquainted with Europe. Ogai Mori introduced the Western type short story to Japan and wrote plays in the Western style. The historical stories, novels and biographies he wrote in his later years are often considered to be his finest works.

JUNICHIRO TANIZAKI

Junichiro Tanizaki was born in Tokyo in 1886 and studied Japanese literature at Tokyo Imperial University. After publishing a one-act play and numerous stories, Tanizaki became known as a leader of the so-called neo-romantic school in Japanese modern literature. His most important novels were written after 1923, and the first to be published in English was “Some Prefer Nettles” (about the conflict between the lure of Western innovations and nostalgia for traditional Japanese ways), followed by “The Makioka Sisters” (1957), “The Key” 1961, “Seven Japanese Tales” (1963) and “The Diary of a Mad Old Man” (1966). For “The Makioka Sisters,” he received the Nobel Prize in Literature in 1967. Among Tanizaki’s major literary works is his semi-autobiographical translation of Japanese of the great 11th century classic, “The Tale of Genji.”

KOBO ABE

Kobo Abe is representative of a new group of Japanese writers who have turned their attention to universal themes. Born in 1924, he studied medicine, but after graduating in 1948 decided to follow a literary career, and the same year published his first book, “The Sigs at the End of the Road.” Novelist, poet and playwright, Kobo Abe has received a number of literary awards for his books and plays: the Akutagawa Prize for his novel “The Crime of Mr. S. Karuma,” and the Yomiuri Prize for “The Woman in the Dunes.” In 1963, the latter was made into a film whose international success helped to make this novel about modern man and the society in which he lives even more widely known.

KAFO NAGAI

Kafu Nagai was born in Tokyo in 1879 and died there in 1959. The people of Tokyo and the changing face and moods of the great city were his favorite subjects and he wrote about them with nostalgia and affection. Early in the century, after spending several years abroad in the U.S.A. and France, he wrote two volumes of short stories and sketches which strongly reveal the influence of French literature. Among his novels which have been translated into English are “The Foot,” “The River Sumida” and “The Two Wives.” “A Strange Tale from East of the River,” often considered to be the masterpiece of his later years, was recently published in English, together with fragments of his other works and a long biographical essay on the writer. “Kafu the Scribbler” (See Bookshelf, page 74).
KABUKI. Dating back to the end of the 16th century, this traditional dramatic art of Japan has attained a perfection which draws large audiences, including many young people. With its superb costumes, decor and lighting, its elaborate make-up, dancing, vocal and musical accompaniment and its declamation of lines in a cadence half way between singing and ordinary conversation, a Kabuki performance is an enchanting and dazzling spectacle (photo left). Yet the most important aspect of a Kabuki play is the acting. As a Kabuki actor must learn to play roles strictly according to tradition, he needs to begin training in childhood. Since 1629, when women were forbidden to act in Kabuki plays, female roles have been taken by men, even though the ban was lifted in 1889. The Kabuki theatre repertory comprises about 300 classical plays, and many modern ones, including some adapted from Western works.

Photo © Rapho - Paolo Koch

BUNRAKU. Though it originated in the 7th century, the Japanese Bunraku puppet theatre became a true dramatic art only three centuries ago with the harmonious blending of three dramatic elements: puppet actors, the Tayu or narrator, and the Shamisen player whose three-stringed instrument accompanies the recitation. On the stage (left) each puppet is manipulated by three men. Unlike Western puppet masters, they are visible to the audience, but are gowned in black (to signify invisibility). Long training enables them to handle their charges (often as tall as a child and weighing from six to 20 kilogrammes), so as to convey the play’s every action and emotion. Each Bunraku puppet is an authentic work of art in its own right.

Photo © H. Chevier - Brainard - Magnum
THEATRE OF TIMELESS TRADITION

NO. The Japanese Nô play, a classical and historical drama, developed as the theatre art of the Samurai (it was the only theatrical performance a Samurai could attend). The word "Nô," is believed to be of Tibetan origin. It signifies "performance" or "accomplishment."

Closely associated with the Zen Buddhist philosophy, the Nô play goes back ten centuries, but its major development began in the 14th century. The masked actors, the chanting chorus and the bare stage sets recall the classic Greek theatre. The plays are short and their themes eulogise gods, great warriors and the virtues of patriotism and loyalty. Few people today can follow the classical language of the Nô play—a mixture of Chinese and old Japanese. The art of the masked actor (right) lies in his ability to impart fine shades of meaning by his movements and gestures.
ant to contemporary Western art. The relevance was brought home to Pound when he received Ernest Fenollosa’s notebooks in 1912. During his long residence in Japan, Fenollosa had examined the art of the country with great care and to a lesser extent had studied its language and literature.

Pound was fascinated by Fenollosa’s (mistaken) belief in the ideogrammatic properties of the Chinese written character and by the metaphrastic translations of certain Nō plays which Fenollosa had set down with Japanese assistance. (It is not clear whether Pound learned of his hokku from Fenollosa or not.)

Here was literature more relevant to contemporary writing then the European tradition. As W.B. Yeats put it, the writers who created the conventions of Nō were “more like us even than Shakespeare and Corneille. Their emotion was self-conscious and reminiscent, always associating itself with pictures and poems.”

The second Impressionist lesson—the relevance of Japan to technique—was the one that Pound soon began to practice and to teach, as it were, under the three heads of hokku, “ideogram, and “Nō.” In a well known article on Vorticism (Pound’s development of Imagism) in the “Fortnightly” for September 1, 1914, he recounted how he had responded (in 1911) to a scene in the Paris Metro with a poem of thirty lines, which in six months he reduced to half as many, and which after another six months he made into the following hokku-like sentence:

The apparition of these faces in a crowd;
Petals on a wet, black bough.

Citing the translation of a hokku, he went on to say that “The one image poem is a form of super-position; that is to say it is one idea set on top of another.” Essentially, Pound invented a technique, modelled on hokku, in another. Essentially, Pound invented a technique, modelled on hokku, in another. The colour prints went on to say that “The one image poem of thirty lines, which in

Pound later called such a technique, or phenomenon, "Unity of Image," and Yeats wrote similarly of "a playing upon a single metaphor" in Nō. The concern with unity of technique and sensibility which played so large a role in the criticism of Pound, Yeats, and Eliot was obviously inspired by a conviction of disenchantment or “disillusion” in contemporary experience.

To Pound, one of the few modern poets to achieve a degree of success with the long poetic form, these essays were an obvious normality in a poem eschewing a straight narrative line. In the Cantos there is not a single unifying image as the mountain, light, the voyage, and the heavenly visitor. It is almost inevitable that long poems should have recurrent images, but Pound consciously takes the essence of a given image (the mountain-ness of a mountain) rather than its particular attributes (Mount Fuji, Vesuvius, Taislan, etc.), as a passage shows:

The lake flowing away from the side was still as is never in Sirmio

With Fujiyama above it.

The passage shows, in addition to the technique modelled along Japanese lines, that Pound sometimes includes Japanese details or illusions. In making them at once popular and a basis for theory and technique, he succeeded in doing for haiku and Nō what the Impressionists had done for the colour print.

In the years following World War I, Western contacts with Japan multiplied. Some still took their understanding of Japan from prints and books, but others took theirs from visits to Japan, from visiting Japanese, or from a variety of sources.

Among the Imagists following in Pound’s wake, there was for example Amy Lowell, whose brother Percival represented the United States in certain Asian countries. The colour prints he sent home inevitably fused with what she understood of haiku and Japanese customs, enabling her to provide her readers with (if it is possible) a well-informed exoticism.

Others were affected by visits to Japan. Paul Claudel, who had moved from France to Japan in the 1920s, found kabuki a revelation, “for me a veritable professional school of dramaturgy.” Since his play writing days were largely past, it is not altogether clear what he had learnt at that school, but

As Pound said in the “Fortnightly” article: “I am often asked whether there can be a long imaginative or vorticist poem. The Japanese, who evolved the hokku, evolved also the Nō plays. In the best Nō, the whole play may consist of one image. I mean it is gathered about one image. Its unity consists in one idea expressed by movement and music. I see nothing against a long vorticist poem.”

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Exciting new ideas for poetry, theatre and cinema

he did achieve a signal success with a play emulative of Kabuki, La Femme et son ombre. He is surely the only Western writer to have a play performed twice (1923, 1929) in Japan by a major Kabuki company.

Another visitor, whom the Japanese have taken even closer to their hearts, is the English poet and scholar, Edward Said. One will not often find evident or exotic traces of Japan in his work, but perhaps because of that, Japan has played a part in lending a new perception to the natural fineness of his writing: "I have written many (poems since leaving Japan) in which experience in Japan and acquaintance with Japanese art and poetry play a part though inconspicuously."

Another English traveller to Japan, William Plomer, should be mentioned because he brought to his fiction and poetry a sense of humour and a wit very much lacking in most writing about Japan.

Sometimes Japan went west, as when in 1923 the Kabuki company of Ichikawa Danjûrô visited the Soviet Union and other countries. It could not have arrived in Russia at a better moment. Vsevolod Meyerhold and Sergei M. Eisenstein in particular managed both to convey the more principle of Japanese theatre and to devise from it major innovations in cinematic technique. Meyerhold had studied some Japanese at the University of Moscow just after World War One progressing far enough to have a Poundian enthusiasm for the "ideogram," which attracted him by its supposed combination of artistic concreteness and intellectual symbolism.

Eisenstein understood far better the practical "language" of Kabuki theatre. He grasped before anyone else in the West the truth that the varied elements in Kabuki also form a "monistic ensemble"; and that "elements of significance" (words, song, dance, etc.) show a "transferring" from one category of "provocation" (of the senses) to another. Eisenstein's understanding was remarkable enough, but his greatness as a director and creator of cinematic techniques gave his understanding unusual, and highly influential, significance.

Many Western film directors have obviously learnt a good deal since the 1950s from such brilliant Japanese directors as Kurosawa Akira. More than any other, these films have done more to create an appreciation (if not always an understanding) of Japanese life and civilization than has any other artistic form.

There is a generation that dates its understanding of the cinema as an art from the first appearance of Vertov's Man with a Movie Camera (Venice Film Prize, 1929). And yet, decades before, Eisenstein had articulated in theory and demonstrated in practice the likely possibilities for a cinema absorbing traditional techniques of Japanese acting. It is the more appropriate that Japanese films, so influential in the West, should themselves owe a debt to Eisenstein and that he should have written knowingly (who else had?) on Japanese films as early as 1929.

In France and Germany, Nô has seemed more important than Kabuki. As early as 1924, there were plans to present a Nô directed by Suzanne Bing, at Copeau's School at the Vieux-Colombier. Highly successful rehearsals were held, and the actual performance was aborted only by the injury of a principal actor. Even the sceptical Harley Granville-Barker was impressed.

The partnership of Paul Claudel for Japanese theatre and the scholarly French works on Nô by Noël Péri and others continued to stimulate French interest in both Nô and Kabuki. Charles Dullin—in his teaching and productions abroad—made the virtues of Japanese drama in his students, among them Jean-Louis Barrault.

But it is a sobering and illuminating fact that the real article—the Kanze company of Nô that performed at the Théâtre des Nations in 1957—was neither understood nor appreciated. Ten years later, French audiences were perhaps more receptive but almost as baffled when Nô was performed at an international theatre festival in London.

It seems to be true that to be effective in the European theatre for all but specialists, Japanese drama must be accommodated, modernized, or creatively misunderstood. Bertolt Brecht was remarkably faithful (to Arthur Waley's translation) in his two versions of the Nô play, Der einsamer Raum and Der Nôbelscher Trinkrath—but these two works have not been his most popular plays.

Similarly, Gabriel Cousin adapted the Nô play Obasuteyama for Le Voyage de derrière la montagne (1962), but he was far more successful in a play using a Japanese subject, Le Drame du Fukuryu Maru (1954-57; performed 1963). The subject is Japanese or universal—the problem of the effects of radioactive fallout—but the technique is merely "Japanese."

Nô has also had particular appeal in Germany, where a few careful work by scholars. Eva Hess's translations (1963) of the Fenollosa-Pound renderings of Nô have been performed at a number of German theatres. After they had been shown, it was even for the public to accept the "modern Nô plays" of Mishima Yukio (Kindsai Nôga-kushû, written 1950-55) and then the visit of the Kanze company. In spite of its momentary popularity and its deep impressions upon some German directors, Nô, like most Japanese arts, has had to date little apparent impact upon Germany.

Postwar English interest in Japan has also been disappointing to many people. Although there are few works to consider, by all odds the most significant postwar work inspired by Japanese literature or theatre is the "church opera," Curlew River (1954), the music by Benjamin Britten and the libretto by William Plomer.

At Plomer's urging, Britten had attended in Tokyo a performance of the Nô, Sumidagawa. His enthusiastic response led to an agreement that the Japanese play would be transferred from its medieval Buddhist setting to a Christianized situation by the Curlew River in East Anglia.

Britten and Plomer are at present working on "two more works in the same style—The Burning Fiery Furnace, and The Prodigal Son. But there is no pretence that these "church operas" are faithfully Japanese, but as one would expect from a composer of such stature and a writer so familiar with Japan, they are the more indirectly indebted, and better, for that.

In the United States, Japanese theatre, like many things Japanese, has had a much more far-reaching effect. It may be recalled that one of Giacomo Puccini's most universally loved operas, Madame Butterfly, grew from one of the greatest successes in the American theatre, David Belasco's Madame Butterfly, itself based on an American novel of that title published in 1897.

Since World War II, Japanese theatre has gained a reputation with American directors, choreographers, actors, and playwrights greater than any other foreign tradition. There have been visits of "Kabuki dancers," Kabuki proper, Nô, Bunraku, and even Bugaku groups. At the University of California, Los Angeles, there has been a Gagaku orchestra for several years, and other colleges or universities have been performing bits of Japanese plays or Yeats's "Nô plays" since the early 1950s.

The major Japanese impact upon American theatre has, however, centered upon the New York theatrical world. Those most affected have been those—actors, choreographers, and directors—who do not so much write plays as make theatre. The choreographer Jerome Robbins, the ballet director George Balanchine, the director Elia Kazan, and even the writer Thornton Wilder are among those who have adapted Japanese drama to their purposes.

Interest has grown so strong among those significantly involved in theatre and dance in New York that Japanese
Oldest of all Japanese toys, dolls were more than playthings in ancient times. The "Ningyo" (Nin-"man"; Gyo-"shape"), as the Japanese call a doll, was once used as a kind of scapegoat for the appeasement of crimes and sins. To ward off evil from a newborn baby, it was also the custom to place a paper doll in the cradle. From a talisman, the doll became a toy and gave birth to a skilled craft (still flourishing in Japan) that creates artistic little figures from paper, wood, clay and porcelain. Left, traditional, hand-painted wooden doll from forest areas of Honshu. Right, a 250 year-old queen-doll of the Edo era, dressed in brocade and velvet and wearing an ornately decorated crown. Its face is painted gleaming white with crushed oyster shell, mixed with colour to etch in the eyes and tiny mouth.

THE LAND OF TEN THOUSAND DOLLS

Left, a 200 year-old dancing girl doll from the island of Kyushu, still a famous centre of clay dollmaking. Clay dolls of this age are rare because of their fragility. This one, 40 centimetres (16 inches) high is performing the "Genroku," a folk dance. Since industry has largely taken over toymaking from craftsmen, Japan has become the world's leading exporter of toys. Dolls still rank among the most popular toys in Japan.

Japanese usually buy the decorative "Hagoita" rackets displayed in photo right as ornaments or as a lucky charm. The game of Hagoita, similar to badminton is played with a racket and shuttlecock (design on vendor's kimono), and a player's skill is measured by how long he keeps the shuttlecock in the air. Hagoita is rarely played nowadays, but the rackets decorated with portraits of celebrated Kabuki actors and cinema and TV stars are a popular buy.
JAPAN'S CONTRIBUTION (Continued)

'Thirteen ways of looking at a blackbird'

methods have reached the summit of esteem accorded the Stanislavsky "method" years ago. In fact, it may be thought that things have gone too far.

It is one thing for Greta Garbo to think Utaemon’s New York performance in Dôjôji the greatest theatrical experience of her life; it is quite another for directors to adapt essentially meaningless bits and pieces of a now fashionable Japanese stage technique.

The problem in the United States is, then, quite different from that in other countries. American theatrical circles do not lack enthusiasm for Japanese theatre, but often there is too little real perception and creative discipline. It may be that all would come right if really significant playwrights emerged at this moment. But what above all distinguishes the genius of Japanese theatre is that it is in large measure the creation of perhaps the world’s most skilful actors.

The great postwar American interest in what are widely called "haiku and Zen" resembles somewhat the French interest about the time of World War I. But there are differences, especially those involving a more detailed background and a greater American commitment to things Japanese. The background is of course that of Pound and those who followed him—in particular the post-Imagist "Others" group, which included both Wallace Stevens and William Carlos Williams.

Stevens approached Asian art and literature, like all else, obliquely, but his Thirteen Ways of Looking at a Blackbird is the finest series of "English haiku." His formal experimentation, involving some echoes from specific Japanese poems, is accompanied in this series of poems by a transformation of that French inheritance of Impressionism and Symbolism that Stevens so prized. The transforming process is akin to the transcendentism of earlier American enthusiasts for the Orient in that the blackbird is inter-related with its surroundings and with the human observer.

In many ways, Williams presents an objectivity opposed to this transcendent. Certainly the realities he treats are often low-keyed. Yet there are some points at which one would be hard-pressed to identify the lines as those of Stevens or Williams.

So different, this man
And this woman:
A stream flowing in a field.

Before describing the more purely literary characteristics, one must consider "Zen." Most people know by CONTINUED ON NEXT PAGE
now that "Zen" consists of a partially understood version of D.T. Suzuki's partially modified version of Rinzai Buddhism, which is but the second largest group of Japanese Zen Buddhism. "Zen" has provided a new version of that transcendentalism and individual protest against social forms which would have been wholly congenial to Ralph Waldo Emerson and Henry David Thoreau in the nineteenth century.

To such irrational or suprarational transcendentalism, we must add objectivity and formalism as the chief features of postwar poetry inspired by Japan. The objectivity is owed to Williams and to haiku (usually in translations). The formalism is yet another version of the Romantic search for expressive form, whether in terms of brief "English haiku" or lengthy serial poems.

The combination of "haiku and Zen" has meant that the best poets of this kind have made every effort to find their way by experience, by devotion of their faculties and personalities in a search for an illumination transpiring at once in verse and within themselves. It can be seen, therefore, that the Impressionist or Poundian enthusiasm for technique as such means much less to them; if transcendental experience can be gained, that is, objectified, the desired form will come by itself.

There are numerous other Americans who write "haiku" or "tanka" or who are interested in "Zen." Primary and secondary school teachers often find "haiku" in English an effective device to stimulate their pupils to experiment with poetry. Many institutions of higher learning in the United States offer lectures on Japanese literature in translation. And the largest group of scholars and teachers of Japanese outside Japan sustains and nourishes such interests.

Of course it is true that there is no American poet who knows Japanese as well as Dryden or Racine knew the Graeco-Roman classics. And there is some discrepancy between the understanding of Japanese literature held by the remarkable postwar generation of American scholar-translators (who nonetheless are not poets) and the Japan-inspired poets (who nonetheless inadequately comprehend Japanese). Yet it is fitting that the Western country closest to Japan in war and peace should be the one to think Japan most important to its scholarly and poetic interests.

Years ago, C.S. Lewis remarked that "the whole tone of medieval love poetry can be explained by the formula, 'Ovid misunderstood.'" Partial understanding or misunderstanding is inevitable in any effort to adopt cultural features of another nation, especially when the culture of that nation is, like Japanese civilization, so closely guarded by its unique language and its insular situation.
World theatre on Japan's stage

From the start of the Meiji era, the Japanese theatre ventured beyond the bounds of tradition. In 1872, two plays inspired by the work of the Scottish writer, Samuel Smiles (one of Emperor Meiji's favourite authors) were performed in Kyoto by actors in Western dress. Soon, plays on contemporary themes as well as Western classics were being produced. In 1912, the enthusiastic reception given to Ibsen's "The Doll's House" and Gorki's "The Lower Depths" in Tokyo's theatres marked the opening of Japan to the mainstream of world theatre. In less than a century, a broad selection of works from the spectrum of Western dramatic art—from Shakespeare to Ionesco—had been introduced to the stages of Japan. Photos show some of these landmarks in the modernization of the Japanese theatre.

Photos © Toshio Kawaike

MADAME BUTTERFLY Devious journey of a Japanese heroine from an Italian opera based on an American novel and play to a Japanese Bunraku puppet theatre in 1956.


THE LOWER DEPTHS Natasha and Luka in Maxim Gorki's play staged in 1960 by the Mingei Drama Company. Gorki's works were introduced to Japan half a century ago by the Modern Theatre Movement.
JAPAN'S CONTRIBUTION (Continued)

Is Bashô better known than Aristophanes?

But if no effort will insure full understanding abroad, so no degree of linguistic protection or geographical isolation can now insure a culture against being understood and misunderstood by other peoples. (It should be said of course that numerous political, economic, social, and other factors relate to and modify artistic concerns.) Moreover, behind every effort of people in Western countries to reach out to the artistic wealth of Japan is a sense of need for what those riches are supposed to contain.

The almost total indifference of our novelists and short-story writers to Japanese prose fiction is itself a phenomenon that—and this must be insisted upon—resembles French and American enthusiasms for haiku in telling us more about Western writers than Japanese. It would be difficult to guess from Western indifference to Japanese prose fiction that it began so early—with The Tosa Diary (ca. A.D. 935)—or that the greatest work of Japanese literature is The Tale of Genji (ca. 1010).

In other words, Western writers and artists have turned to Japan for what they needed, not necessarily for what is there. Their Japanese counterparts have of course done the same. It would be as foolish to expect a full understanding of another national culture as it would be wrong to think no gain in understanding has been reached or to be content with what has been gained. (After all, not many people understand their own national artistic inheritance very fully.)

But it is striking that whereas American poets, for example, have scarcely seemed to notice Japanese prose fiction, Japanese writers have found pre-Soviet Russian fiction far more to their use than American poetry. There is, we must also recognize, a social prestige attached to French literature in Japan perhaps unmatched by any other national tradition, and yet the number of Japanese with adequate command of French is very small.

Such matters show that the story of Western borrowings from Japan is one largely concerned with a Western need to search out for what it was felt was represented by Japan. All considered, that meaning of Japan (whether one that accords with reality or not) has been much more important than might reasonably have been expected. A dim racial sense that the origins of life are in the East, the accidents of wars and geography, the passing enthusiasms and sudden wonderful perceptions of possibility—all these and more mark the past century of Western contact with Japan.

Fifty years ago there were probably more Frenchmen who had heard of Hokusai than of Phidias, and today there are probably more Americans who have heard of Bashô than of Aristophanes. Whatever we may decide to be fit in such matters, we may be sure that the American poet, like the French painter, has discovered in Japanese civilization that which gives his art and life a special grace.
TOKYO epitomizes the achievements of the century which has passed since the Meiji Restoration. It also reveals a city which confronts some of the most severe problems facing any great metropolis.

Prior to 1868 the city was called Edo, possibly after a local warrior who built a fort there. A small settlement existed in the 12th century, but 1457 is generally regarded as the year in which Edo's history begins because it was then that Ota Dokan completed the first castle on the site now occupied by the Imperial Palace.

The castle had a position which commanded the land and sea routes from the Kanto plain to the west. It was this strategic reason which led Ieyasu Tokugawa to make the castle his principal seat when he took it over in 1590. When Ieyasu became Shogun in 1603 Edo became the administrative centre of his military government. The Emperor remained at Kyoto with his Court, but power had shifted to Edo.

Edo was a small fishing village until the end of the 16th century. Then it began to grow. The Shogun summoned some 80,000 Samurai warriors to live in the city as his praetorian guard. The feudal lords were required to reside in the city every alternate year, and when they went to their fiefs they had to leave their wives and children behind as hostages. This led to the building of great houses, temples and shrines in Edo, and craftsmen, tradesmen, retainers and labourers crowded into the city.

By 1613 the population had grown to 150,000. In 1721 it was 1,300,000 and by the end of the 18th century it had reached 1.5 million. This made Edo larger than any other city in the world except Peking. Since then fluctuations in the number of inhabitants have been exceptionally great, partly owing to natural disasters, and partly owing to political, military and economic events.

In 1868 a vital change of status was brought about when Edo became the capital of Japan in place of Kyoto. The Emperor took up residence in the castle, which became the Imperial Palace, and the name of the city was changed to Tokyo (Eastern Capital).

Modernization began with extraordinary rapidity: the telegraph was introduced in 1869, the telephone in 1871, the steam train the following year, gas street lights in 1874. Tokyo University was founded in 1877. The electric lamp made its appearance in 1878, and motorcars in 1903. The first electric railway started in 1910.

Yet the immediate effect of the Meiji Restoration on the size of the city was a sharp fall in the population. This was due to the exodus of the dispossessed Samurai and the feudal lords (daimyo) and their families, who owned more than half of the city. In 1872 the population had fallen to a little over half a million and it did not reach a million again until about 1880.

The seeds of rapid growth were, however, germinating, for Tokyo soon became an industrial, commercial, financial and cultural centre as well as the political and administrative capital. The population rose to 3,358,000 in 1920 and 7,358,000 in 1943. These figures are not all strictly comparable because the administrative boundaries were enlarged in 1932 from 85 square kilometres to 554 square kilometres. Today the area is 2,029 square kilometres.

Tokyo contains the seat of the Emperor, the national legislature, the central government and the highest courts of justice. It is the greatest manufacturing, commercial, and financial centre. It has the headquarters of the national newspapers and periodicals, and the publishing, broadcast-
TOKYO (Continued)

Population 11 million, increasing yearly by 300,000

ing and television organs. The leading theatres, both traditional and modern, are situated there. The railway system radiates from Tokyo. It is the centre for sport and athletics.

Tokyo University occupies a position of special primacy in higher education, and more than a third of all the colleges and universities in Japan are located there. Tokyo is above all the centre of management for all branches of Japanese life. It is, of course, not supreme in every respect. Yokohama is far superior as an ocean port. Osaka and Nagoya excel in some branches of industry.

Tokyo has undergone frequent and severe vicissitudes from fires and earthquakes. Two great disasters occurred in the present century. One was the earthquake of 1923 which caused the death of 74,000 persons and destroyed the homes of two-thirds of the survivors. The other was the destruction caused by air raids during the Second World War. About 770,000 houses (roughly half of the total) were destroyed, the devastated area exceeded 39,000 acres, and the sufferers numbered three million, including 100,000 killed and 130,000 wounded. The population dropped from over seven million to three and a half million in 1945.

Since then it has risen by more than 300,000 a year and has now reached a total in excess of 11 million. This makes Tokyo the world’s largest city. The influx was for some years composed of returning soldiers, evacuees and expatriates; but in the last decade more and more people have flocked to the capital in search of employment. Natural increase has also added a substantial element.

No other great city has grown so fast. Moreover, the full extent of its growth is not revealed by the figures set out above because these relate only to the area of the Tokyo Metropolitan Government. The present administrative boundaries were determined in 1947, and as in the case of most great cities the population has flooded over them.

The modern history of the government of Tokyo dates from 1889 when 15 wards were incorporated in the City of Tokyo. For nearly a decade the city was administered by a Governor of Tokyo Prefecture who was appointed by the central government. In 1898 the city council was given the right to elect a mayor but the capital remained under the supervision of the Prefectural Governor and the Minister of Home Affairs.

In 1943 the Prefecture was merged with the City, which then became the Metropolis of Tokyo, combining the powers of a prefecture with those of a city. Numerous wards were added to the original 15 and the number is at present 23. Apart from the special wards the metropolis includes 17 cities, 13 towns and two villages, together with three islands in Tokyo Bay.

Within the special ward areas, which contain nearly nine million people, Tokyo Metropolitan Government exercises the major powers of a metropolitan authority. There is a lower tier of elected councils in each of the special wards performing minor functions, but they are subordinate to the Tokyo Metropolitan government. Outside the special wards this authority exercises only the powers of a prefecture.

The people of Tokyo have had a long struggle for self-government against the central government. Their greatest victory was in 1947 when the office of governor was made elective by the direct vote of the people. Even today there remains a certain danger of central domination.

Tokyo is the wealthiest city in Japan. The average income per head in the capital is twice the national average and three times as high as in the poor farming districts. The capital contains about 11 per cent of the nation and it produces 20 per cent of the national income. The Japanese economy has been growing in recent years at a faster rate than that achieved by any

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CUBICLE GOLF, PICNIC UNDER THE CHERRY BLOSSOMS

Golf, like many Western sports, has become a favourite Japanese pastime. Teeing off on three levels, Tokyo’s duffers (left) improve their form at this cage-like driving range in the centre of the city (close by Tokyo Tower, the Japanese counterpart of the Eiffel Tower). At right, women in traditional costumes picnic in a bower of cherry blossoms. The two weeks in April that cherry trees flower are a festive time for both young and old, as blossoms, like pink and white clouds, spread over Japan, transforming the country into a subtly coloured fairyland.
Drivers in the world's largest city drive to the left and queue patiently as their cars crawl along a busy Tokyo street, part of the serious congestion that affects both public and private transport.
other nation at any time, and much of this has been generated in Tokyo, the hub of the economic machine.

The tremendous vitality of the capital is visible on every side. There are new luxury hotels, new theatres, new railway stations, new offices blocks, new department stores, the vast stadium and swimming pool built for the Olympic games, new metropolitan freeways, a fast monorail to the airport, the first skyscraper ever permitted in Japan, the new super-express railway to Osaka running at 200-250 kilometres an hour, and the impressive new managerial sub-centre at Shinjuku with vast underground roads, shopping arcades and parking facilities. Motor cars pour off the assembly line at a rate which has placed Japan second among the automobile producing countries of the world.

Yet below the surface there are serious deficiencies which have not been overcome. The housing situation in Tokyo is bad for the low income groups and it will remain unsatisfactory unless much stronger measures are introduced to restrict profiteering in land. There is a need also for public authorities to provide many more dwellings for the poorer families.

Only 30 per cent of the special ward area has sewerage, and flush toilets are in use in only 27.8 per cent of the buildings. A piped water supply is available in 90 per cent of the houses in the special ward area but in three wards the proportion is much lower. Outside the special wards the overall figure is only 64 per cent. Moreover, a piped water supply does not imply a regular supply day and night throughout the year.

PUBLIC nuisances, such as air pollution, flooding, river pollution, fumes from motor cars, etc. are not effectively controlled. The torrent of motor cars pouring off the assembly lines has produced a traffic problem of immense difficulty, which is exacerbated by an absence of parking meters and an exceptionally low ratio of road space to the metropolitan territory (1).

The public transport system is grossly overloaded and is divided among public authorities and commercial companies. Its capacity is far below that required to cope with the exceptionally heavy commuter traffic.

In several respects the social development and the basic infrastructure of Tokyo have not kept pace with the increase of population and the growth of the economy.

There are several reasons for this imbalance. The excessively heavy influx of population would have overstrained the resources of any great city. But the huge industrial, commercial and cultural development of Tokyo demanded a much larger investment in public services than has been forthcoming, especially for housing, education, public utilities, transport and green spaces.

The central government has failed to provide Tokyo Metropolitan Government with the financial resources and the powers needed to enable it to cope with the pressing problems of the postwar years. Vital matters such as the rocketing price of land, the planning of the Tokyo region, the expansion of the city boundaries, the development of counter-magnets in other parts of the country, a more generous system of subsidies and loans for municipal purposes, have either been neglected or dealt with ineffectively.

Despite its problems, Tokyo represents a massive achievement by any standard. It is a modern city embodying many feats of design, technology and construction which are highly esteemed in the modern world. It must be compared, not with the squalid and poverty stricken cities of Asia but with the centres of wealth, fashion and luxury of Western Europe and North America.

And it contains within itself that fascinating and unique feature of Japanese society: the dual culture. One sees, the technical perfection of the Tokaido express railway, the marvels of modern radio and television factories, the ingenuous design of the latest department store building, the Festival Concert Hall, a highly accomplished national press, the stainless steel station at Shinjuku, a splendid exhibition of Utrillo's paintings, and many other manifestations of Western science and art.

One also sees the Nō theatre and the Kabuki, the ancient Shinto shrines and Buddhist temples, the kimonos and the traditional wedding costumes, the lovely gardens, the incense burning ceremonies, the tea ceremony, the flower arranging art, the Japanese-style houses, rooms and customs which have persisted through long centuries.

Nowhere else can one see ancient and modern cultures co-existing in this way without merging. The result is a triumph for what has been achieved since the Meiji Restoration. It is also a tribute to what was achieved before that important event.
The transformation of Tokyo began in the Meiji era, when a rash of new buildings spread outwards from the city centre. An outstanding landmark was Japan's first "skyscraper" (right). Its 12 stories, including three observation towers, were crowned by a cupola 225 feet above the ground. With its restaurants, theatres and the first elevator to be seen in Japan, it immediately became the country's most popular amusement centre, as shown in this humorous print of the time. Japan's first authentic skyscraper (36 stories) was built in Tokyo in 1967. Above left, a view of the still-changing face of Tokyo today.
THE city of ten million inhabitants is an organism which has appeared only in the latter half of the present century, and as such it is a historical novelty. Tokyo, New York, London, Paris and Moscow have passed or are fast approaching the ten million mark. To remain alive and grow they must have the mobility and structure befitting our modern times.

"The technological revolution of the late 20th century has resulted in a shift in the city from factory and industrial occupations to tertiary occupations such as sales and services which have become the pivotal functions of the large metropolis of today. The mass introduction of automobiles into the city has further completely altered the relationship between streets and buildings.

"The city of ten million is an aggregation of a moving, flowing population that demands more direct communication than ever before. But today, not only Tokyo but London, Paris and other large cities are being strangulated and paralyzed by a structure that dates back to the Middle Ages. This is the centripetal or radial pattern in which all traffic moves toward the centre of the city.

"There is only one way to save Tokyo and that is to create a new urban structure, a new spatial order, in which the urban system, the traffic system, and the architectural system of the city are organically unified. We have proposed that the antiquated radial structure of Tokyo be replaced by an elongated linear axis of communication, to be developed out across Tokyo Bay."

The man speaking is Kenzo Tange, one of the world's most celebrated and imaginative architects, with a long list of honours and awards to his credit.

He has won international recognition for his designs for the Peace Memorial Hall in Hiroshima, the Tokyo City Hall, and the Kagawa Prefectural Office.
Below, view of portion of residential area over Tokyo Bay. Each unit would be composed of a platform with the buildings rising above it like curved triangles, leaving the centre free for shopping centres, parks and squares, car parks, schools, etc. At certain levels concrete platforms would extend from side to side to house gas, water and electricity lines. On these platforms each individual could build a house to his own taste. Tange estimates that over 5 million persons could be housed in these residential areas. One side of central axis can be seen at right showing cyclical roads forming a chain turning right and left and crossing up and down at cubic crossings. Each of the axis roads is thus a complete circle. Above, view of the business and administrative buildings under the main civic axis.

Building, which have been described as "a superb fusion of the technology of modern architecture and Japanese traditional elements." He is the Architectural Director for EXPO '70, the first world exposition to be held in Asia, and has just completed the master plan for the exhibition grounds on Osaka's northeastern suburbs.

The author of books on the Katsura Imperial Villa, the Grand Shrines at Ise, and other masterpieces of Japanese architecture, Kenzo Tange is also professor of architecture at Tokyo University.

The 54-year-old architect maintains his off-the-campus offices and workshops on the two top floors of a seven storey building only a few streets away from one of his most celebrated creations—the National Gymnasium, a monumental piece of architecture acclaimed by the participants at the Tokyo Olympic Games in 1964.

This imposing structure, with its gigantic sloping roof, reflects Tange's aspiration for an architecture in harmony with the magnitude, rhythm and energy of the large modern metropolis. Although the shape of the building is essentially modern, Japanese and foreign architects have seen in the two interlocked arcs of the National Gymnasium and the spiral annex of the Small Gymnasium next to it, symbolic crests of traditional Japan. The beauty and originality of the edifice won him the Olympic Diploma of Merit.

For years Kenzo Tange's main concern has been with architecture in its relationship with urbanization. His counsel has been sought by city planners in Europe and America. In 1965, the Yugoslav Government chose his blueprint for the reconstruction of earthquake-devastated Skopje, and a completely new city is now emerging on the site of the capital of Macedonia according to his plan, under a 15-year project. He is currently at work with Italian experts on a new plan for the city of Bologna in northern Italy.

Tange's "Plan for Tokyo", first put forward in 1960, offers a revolutionary approach to modern urbanization, viewed not in terms of mere architectural form or even a complex architectural ensemble but as a civic axis of communication. It is this communication axis that Kenzo Tange sees as the heart and symbol of the contemporary metropolis, just as the cathedral was the heart and symbol of the city of the Middle Ages. "In an age when cities developed around central squares or plazas," Professor Tange explained to this writer, "when people lived within the limits prescribed by regional societies, the central square was the nucleus of communication, and the cathedral, the castle and the city hall were the spiritual supports as well as the symbols of urban life. Horses and
Detail of one of Tange's most powerful and forceful creations: the Kagawa gymnasium at Takamatsu. To reflect the idea of strength and suppleness needed by the athlete, Tange deliberately constructed the building in the shape of a Japanese fishing boat.
Spinal column for an ocean city

carriages moving along radial streets past rows of buildings must have formed a very harmonious ensemble."

But now, he points out, mass communication "has released the city from the bonds of a closed organization, and is changing the structure of the city itself. In the society with an open organization, and in the large metropolis which is the pivot of this organization, the mobility required for individual communication is assuming ever larger proportions. This, added to the ebb and flow of commuters into the centre of town every day, has led to the extreme confusion and paralysis we are witnessing in the large cities of today."

If the various functions of a great city were distributed along a line, Tange points out, communications linking them could be carried out in a minimum of time by movement along that line.

The linear axis would start from the present centre of Tokyo and gradually extend out in a series of cycles or units over the waters of Tokyo Bay until it linked up, in the final stage, with the opposite shore.

The pivotal functions of the city would be concentrated along the central axis. Highways would be suspended about 40 metres above the ground and 50 metres above Tokyo Bay. In other words, the highways would be huge suspension bridges running above the buildings with supporting piers at intervals of one kilometre.

A three-level transportation system is envisaged in Kenzo Tange's plan, each with ten lanes, for vehicles moving at 60, 90 and 120 kilometres an hour. The lowest (slowest) level would have one link per kilometre along the axis, the second level a link every three kilometres (a monorail suspended from this level is also foreseen), and the third level a link every nine kilometres. Traffic at all interchange points would move in the same direction on all levels.

This system would permit a flow of 200,000 cars per hour—ten to thirty times more than any high-speed highway system now in existence. As many as five million persons could move along the axis in a single day by using the various means of transportation, which would fulfil the needs of the 15 million inhabitants Tokyo is expected to have in the next twenty years.

To free the centre of Tokyo from its present congestion, the monorail lines would be linked to underground and railroad station interchanges along the axis. The construction of a large new railroad station on the axis is also foreseen.

A system of streets would extend out from the axis in parallel lines, leading into residential areas. This can be clearly seen in the districts built over the Bay of Tokyo (see photo page 56). Tange foresees that within twenty years some 5,000,000 people will be living on the bay. Some of the residential areas would stand on reclaimed land, others on platforms supported by piers sunk directly into the ocean floor.

By building on the bay, Tange feels, the people of Tokyo would rediscover the sea, since Tokyo, which has lost most of its coastal areas to factories, would again become a seaside city. "In this way," he says, "the ocean would become not only a symbol of our economic development but a pleasant part of our daily environment." In a sense therefore, Tange's project calls for the creation of a new
Two views of Kenzo Tange's revolutionary National Gymnasium (right and left) and the covered swimming pool of the Small Gymnasium (top of photo left) built for the 1964 Tokyo Olympics. The suspended roofs supported by huge pillars are of inordinate dimensions, typical of the "superhuman scale" of structures of our technological age. But the roof curves very close to the ground where spectators and passers-by circulate, thus furnishing the "human scale" to harmonize with this colossal edifice. Historians and critics have seen in the interlocking double arcs and spirals of these two buildings traditional crests of Japan, but Tange smiles at this and says they are "pure dynamic geometry."

Tange's revolutionary plan for the transformation of the radial city into a linear metropolis along a central civic axis has been inspired not only by an analysis of the many complex problems of modern urbanization but by a detailed study of the evolution and growth of living organisms in nature. The amoeba and other simple organisms, he points out, have radial centripetal forms, but more advanced organisms such as the vertebrates have linear bone structures with parallel radiations.

\[Continued\]
A R CHITECTURE matched to the speed and scale of our times

The plazas, cathedrals and small houses of the Middle Ages had a mass human scale which was suited to the movement of the people gathered in the urban centres, and harmonized with the human scale of roads radiating from them.

Today, however, huge highways, carrying high-speed traffic have introduced themselves into the old system. They represent the superhuman, technological scale which in no way harmonizes with the architecture of the late 19th century and the first half of the 20th. When we consider that our highways are built for speeds exceeding 100 kilometres an hour and our airports for speeds scaled at 1,000 kilometres an hour, the vastness of the new structures ceases to seem vast.

But the individuality, freedom and spontaneity of the human scale, Tange points out, form an ever-increasing antithesis to the superhuman technological scale. Man desires more and more to exercise his own individual choice in matters concerning houses, gardens, streets and plazas.

There are, therefore, two conflicting extremes—the major technological structures, which restrict individual choice determine the system of our new age, and the minor objects used in our daily living which permit the expression of free individual choice. "The gap between the two," Tange says, "is gradually growing deeper."

The important task before the contemporary architect and designer is to create a harmonious relationship, an organic link, between these two extremes, and thereby build a new spatial order for our contemporary cities.

"In our plan," Tange continued, "there would be an order of progression from the house to the playground for children, to the space for quiet gatherings, to large open spaces, to large-scale recreation and sports centres: from schools to other educational and cultural instalations; and from parking areas to transportation plazas to superhighways.

"Shopping areas, auditoriums and the like would be distributed around the surface of each unit area on the same human scale as at present, and there would be small streets for pedestrians as well as large and small plazas for crowds. These spaces would be identical with the historical, human spaces now in our cities. Our plan, in effect, would provide for architecture which would be compatible with the speed and scale of our times but which at the same time would permit the continuation of our historical urban life."

According to Tange, tradition in culture and architecture is adapted to the human scale, and would be very much out of place if used on the superhuman technological scale of superhighways, airport structures, etc.

"It is within this framework that we can better understand the change in Kenzo Tange's thinking in the past twelve years with regard to the place of tradition in Japanese architecture.

T ANGE has often been described as the outstanding Japanese architect who has "succeeded in accomplishing the union of the Japanese tradition with modern architecture." In 1956, he published an article entitled: "Creation in Present-Day Architecture and the Japanese Architectural Tradition," which created quite a stir amongst both Japanese and foreign architects because of the negative opinions he expressed about Japanese tradition. He explained his ideas to this writer in the following way:

"Immediately after the Second World War and up to the mid-1950s Japan struggled to rebuild its economic and physical structure. The thinking of our people was backward-looking, fixed on our ancient traditions and the history of the past. In this atmosphere, Japanese architects felt we could not fulfill the people's spiritual needs unless our architecture was inspired by Japan's ancient traditions.

"But in discussing tradition in Japan we architects came to realize that there existed two distinct types of tradition in our country—"an upper current" and "an under current." The upper current tradition stemmed from the nobility and aristocratic circles, in other words, from the upper classes of society, and found expression in their palaces, castles and other traditional residences, as well as in their gardens.

"The under current tradition sprang from the people. It can be found in the brightly coloured local festivals that enliven every town of Japan, and in the dynamic shapes of Japanese farmhouses and village homes.

"To most Americans and Europeans—and indeed many Japanese—only the upper current represents the traditional art and culture of Japan. But the under current tradition has a vital, dynamic quality of its own, and a richness which contrasts markedly with the shapes and forms of the upper current tradition."

Tange went on to explain that Japanese art historians have not paid much attention to this under current, and Japanese architects took their chief inspiration, up until about 1955, chiefly from the upper current forms.

"But the ordinary people of Japan have under current backgrounds," he went on, "and cannot fully respond to the upper current traditional forms. At this point, I began asking myself what the function of tradition in architecture really was."

Tange stopped for a moment, and then added quickly: "I myself believe that tradition by itself cannot be creative power. I sometimes compare tradition to a chemical reaction. It should act like a catalytic agent to create something new, but the traditional form or inspiration should not be visible in the finished product."

And he concluded with the following words:

"The Japanese economy has now changed its structure. With it our social structure and institutions have also changed. And most important, the attitude of the Japanese people is now forward-looking, not backward-looking. Formerly, everything in Japan was done by following the past. But now we have entered a new age, a technological civilization, where looking ahead to tomorrow is much more realistic than turning back to yesterday. For tomorrow will be a different, changed world. We cannot seek a solution to our new problems by following the pattern of the past. And the architect in society cannot do so either. He too must look ahead."
TRADITIONAL STYLES REBORN

An imaginative quest for new solutions marks the development of Japan's modern architecture. Its striking success is seen in the wealth of ideas and the aesthetic and functional harmony evident in many recent buildings. From some, a clear line of development runs back to old Japanese architectural tradition, with today's designers composing new variations on many old themes. One example is the youth hostel, top right, built in a grandiose mountain setting by Motoo Take. There is a striking likeness between its reinforced concrete roof and the high-gabled thatched roofs of 5th and 6th century Japanese houses, as shown by the clay house, top left, a "Haniwa" funerary sculpture.

Right, Kyoto's five-storey International Conference Building, designed by another distinguished Japanese architect, Sachio Otani. Its adjacent pool and gardens follow the Japanese tradition of integrating trees, bushes and flowers as architectural elements.
HOKKAIDO—frontier land of the Far North

Our “Far West” is how the Japanese describe Hokkaido, their country’s northernmost and second largest island—only a century ago a wild and barren land. Hokkaido’s first step to modernization was taken at the start of the Meiji era through the efforts of pioneer settlers and the launching of development programmes to tap its rich natural resources. The results are seen today in Hokkaido’s burgeoning industrial cities, busy steel plants and mining sites, lumber industries (including the world’s largest newsprint mill) and flourishing agricultural and fishing industries. Only one hour by air from Tokyo (left, plane leaves snow-covered Kushiro airport), Hokkaido is to be linked to Honshu, Japan’s main island, by a 37 kilometre-long rail tunnel. On completion in 1975 it will be the world’s longest undersea tunnel. Right, Hokkaido’s capital, Sapporo, with a population of 850,000, during the famous annual Snow Festival, when streets are filled with sculptures in ice. Sapporo has been chosen as the site for the 1972 Olympic Winter Games.

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Harvesting and drying of seaweed (photos above), a product used by Japan's food industry, now provides a regular income for formerly impoverished inhabitants of Hokkaido's coastal areas. Below, a collective marriage ceremony on one of Hokkaido's Pilot Farms. The bridegrooms are pioneer settlers and their brides come from local families. Cups of sake (fermented rice liquor) on table are exchanged between couples according to traditional wedding rites. Right, newly-weds set off on their honeymoon by sledge. With a fifth of Japan's total area, its lowest population density and a pleasant climate in summer, Hokkaido attracts a large number of young settlers, eager to start a new life in Japan's northern frontier land.
STUDENT unrest is a phenomenon that has been sweeping across virtually every part of the world in the past few years. But it seems to have had its first violent manifestations in Japan eighteen years ago. In 1950, Tokyo students, in a burst of violence, took over the main university buildings and locked up their faculty deans, to protest their fears that "Japan would again become involved in a war."

With these and subsequent demonstrations, the notion of "student power" was born in Japan. These events occurred when Japan was still a poor country barely recovering from the Second World War, and it is consequently difficult to agree with the statement often made that "student power" is the product of an affluent society. Moreover, other nations, recently shaken by student uprisings, are still a very long way from prosperity.

Japanese student unrest may perhaps be traced to the drastic changes that took place in Japanese society after the end of World War II. During the war, every effort had been made in Japan to build up a monolithic system of society. The vast reservoir of moral power, springing from the depths of Japanese history, was mobilized in this effort. Then, with defeat, came an agonizing atmosphere of shame. It became the fashion for Japanese to reject every aspect of their own country, to compare it unfavourably with the utopian concept they had of other nations. For a time, the Japanese people almost completely lost their mental balance.

Japanese society has since righted itself, but so far it has not found a formula to guide youth in a rational manner. The problems of Japan's young people, therefore are in a sense the problems of Japan's adults. The difficulties and perplexities of youth stem from the world shaped by their elders. And if adults cannot properly pave the way for the younger

CONTINUED ON NEXT PAGE
In search of peace and a better world

generations, youth can hardly be blamed for the deterioration of society.

At a time when the older generations are unable to find common
grounds for understanding in the involved international relationships
of modern societies, it is small wonder that the young are agitated and
confused. They aspire to the ideals of friendship and peace which are natural
to all mankind. But when they seek to attain these ideals promptly and
find the road blocked, they react—sometimes violently—against the ob-
ostacles which stand before them.

No single person has the answers to the big problems of today; no
curriculum can be devised that would eliminate all the impatent misgivings
of youth. Nevertheless, we must strive to understand what is behind youth’s
dissatisfaction, and give them confidence that society will make every
effort to solve the difficult problems ahead.

At the same time, this sympathetic understanding of adults does not neces-
necessarily mean giving way to “appeasement” or total abandon, nor that viol-
ence as such can be countenanced as a part of this “understanding” process.

The emergence of this generation with its own values and culture is making communication between older
and younger generations, teachers and students, parents and children,
employers and employees, increasingly difficult. Instead of the dialogue
that is needed, conflicts take place that intensify the differences rather
than resolve them.

Such estrangements deepen youth’s sense of insecurity, and when conflict
between older and younger generations is complicated by irreconcilable
ideological views or the dissensions that divide the present-day world, the
situation worsens, as is often the case in Japan.

Part of the explanation for the speed with which the current wave of student
unrest has radiated throughout the world might be attributed to our rapid
means of communications. Nowadays, television and other media transmit
the news to all parts of the world immediately. Youth in different coun-
tries, influenced by what they have seen, read or heard, react in similar
fashion even though the conditions may be essentially different from those
where the original spark was struck.

In this way a sort of chain reaction of disturbances may be set up in many
societies where resort to violence is considered likely to produce results.

For the Japanese college freshman,

participation in a virile student move-
ment often has an aura of coming of age attached to it. It is, as it
were, a “rite de passage,” a stage
in the awakening to the world around
him. But when, after graduation, he
leaves the university to pursue his professional or business life, he usually
settles down within the framework of the society he had so recently
attacked. This, at least, is what has happened in Japan.

T HE number of students
now engaged in violent manifestations
in Japan is on the decline, but those
who remain are campaigning more aggressively than before, no doubt
encouraged by similar movements in other parts of the world.

The causes to which they rally more often than not touch their deep human-
itarianism; they demonstrate against atomic weapons and war in all its
aspects, reflecting not only their own aspirations for a better world but also
the general aversion of the Japanese to armed conflict. There can be no
doubt, however, that political elements and ideologies play an important role
too. The stormy “Zengakuren” (National Federation of Student Self-Govern-
ment Associations), which has astounded the world with its extremely violent
demonstrations, is a case in point.

Police intervention on university
 campuses, which the students regard
as a sort of sanctuary, has become
an acute issue in present-day Japan.
University authorities who have called
in the police to counter student
demonstrations of violence, have been
denounced even by many moderate
elements of the student body for what is
considered “a violation of the students’ extra-territorial rights.”

Recently, the entire student body of
Tokyo Imperial University went on
strike. The trouble began in the
Faculty of Medicine. Medical students
are required to take a six-year study
course followed by one year of
internship. After passing the national
examination, the intern becomes a
qualified doctor.

In the past interns worked without
payment, and the medical students
asked the government authorities to
work out a fair compensation scale.
A new system of Registered Doctors
has been worked out for students who
have passed the national examination
to intern for two years at one of
216 designated hospitals in the coun-
try with an allowance ranging from
12,500 to 25,000 Yen ($40 to $70) per
month.

The medical students consider this
very meager, and are, also demanding
better equipped hospitals and facilities
for research work. With these and
other questions still unsolved, the
chances of classes opening on
schedule for the autumn semester
seem doubtful.

The increase in the number of uni-
versity students has given rise to
many problems. The phenomenal jump
in the birth rate immediately after the
war created a population wave that is
now creasing at the college level. In
spite of tremendous efforts made by the Government to increase classroom capacity and the number of teachers, the student-vacancy ratio in the spring of 1968 was about five to one. A leading newspaper predicted earlier this year that about 280,000 candidates would be denied admittance to colleges and universities in March 1968, and that most would probably try again next year, further swelling the number of candidates.

Thus far, reference has been made to problems affecting students and of the "student power" movement. As far as other young people are concerned, there are relatively fewer problems. Japan has its juvenile delinquency headaches just as other countries have. But for the first time in recent years the country has achieved a state of full employment, and the life of working people has improved and stabilized to a remarkable degree.

If one judges everything by a utopian yardstick (as students are often inclined to do), measures which partially improve a situation are insufficient because they never close the gap between reality and the ideal. In other words, anything less than complete improvement has no significance. However, for the working youth of Japan, the yardstick is a concrete measure to be used to improve reality.

Japan has undergone important changes in the past twenty years, but the people's traditional sense of values continues to form the basis for the country's development. The Emperor remains the symbol of national unity; the old family system has been abolished, but the family remains an important unit of society; allegiance to the company or organization one works for, not unlike the feeling towards one's family, is still considered a characteristic of Japanese society today. Women, who have had the right to vote since the end of the war, and are playing an increasing role in many domains, remain faithful to the family. Girls wearing bikinis at the beaches shock no one except very old-fashioned people. Everything, including the relationship between men and women, has become free and open.

Hence, it is possible to say that the way of thinking and fundamental approach to life of the Japanese people has not undergone as total a change as some persons think. The traditionally industrious character of Japan has developed and strengthened in the past twenty years. This homogeneous island nation with few parallels in the world has been formed over several thousand years, and this tradition is unlikely to crumble easily.

With the growth and expansion of Japan's industrial society, young people have converged upon the big cities and industrial areas of Japan as never before. Half of Japan's youth are now concentrated in these areas, and two-thirds of the total student population are enrolled in universities and colleges in six big cities—Tokyo, Yokohama, Nagoya, Kyoto, Osaka and Kobe. Along with urbanization and industrialization, the occupational distribution of Japan's youth has also radically changed, with 95 per cent employed in industry and commerce.

Often the newly urbanized youth lose their roots and lead solitary lives. Many seek new meaning in political and religious ideologies (the increased interest in religion has been widespread; one Buddhist sect, the Soka-gakkai, has attracted a tenth of all Japanese to its faith). But the "fin de siècle" mood said to prevail in Europe, is not yet noticeable among Japanese youth today.

Parents are not shocked or frightened by the younger generations. Nihilism, hallucinating stimulants, free sex, and the cult of violence have not taken root in the thinking and behaviour of Japanese youth. In the United States young people may shout "Make love, not war". In Japan, they simply shout "Don't make war". The "make love" is not voiced so openly. People faced with the uncertainties of life have built up abiding moral principles, and this may become a strong point for the Japan of the future.

The war dealt a devastating blow to Japan both physically and mentally. But now it has recovered to a remarkable degree. For the generation which stood stupefied amidst the rubble at the end of the war, the vigorous, youthful pace of present-day Japan seems like a dream. The mood of pessimism that many thought would last forever has vanished completely. Nobody is bored. And nobody is despondent or aimless.

One need only look at the throngs of well-dressed young people going to their offices and factories early in the morning to realize that Japan is a lively nation with no axe to grind. This liveliness is free and spontaneous. When one thinks of the fate that has befallen some nations it is perhaps better for Japan to have no axe to grind. For out of this freedom something unknown and very valuable may indeed be born.

The youthful vigour of Japan has, in a sense, served to restore national pride, and through her young people, whose vision has been broadened in the last two decades, Japan is bound to make a growing contribution to the world in the years ahead.
HOW JAPAN STREAMLINED ITS WRITTEN LANGUAGE

by Shin-Ichi Hasegawa

It is said that eighty per cent of the Chinese characters have been created through constructing new characters by combining a pronunciation symbol or other indicator on one side and the meaning on the other side of the ideograph. New characters were constantly made afresh as men found it necessary to express what new things they saw or thought. Some are not in daily use today, but the great mass of characters which had been invented up to the 18th century are recorded in the dictionary. The "Analects of Confucius", which was published in China in 1716, during the early years of the Ching dynasty, contains 47,000 Chinese characters. "The Great Dictionary", which was edited by Japanese scholars and is in daily use in Japan now contains 14,924 Chinese characters. Each character is numbered, so one can count them exactly. This dictionary was first printed in Japan in 1917 and has been reprinted more than 2,400 times.

If the great prehistoric monsters had survived to the present age, it would be considered a miracle. No less a miracle is the fact that the Japanese use so many characters in their reading and writing today, just as the Chinese and Koreans did centuries ago.

Newspapers using Chinese characters are printed in Japan, China, Korea, Hong Kong, Singapore, Malaysia, and in the places where their nationals live, for instance in the Philippines and the U.S.A. In Viet Nam, Chinese characters were changed to Roman spelling eighty years ago during the French rule, except for sacred Buddhist texts, still studied in characters.

To use so many ideographs for daily life may seem a severe burden viewed from the point of education. It may also seem inconvenient—at least people who are accustomed to use phonetic letters often think so. But one should think it over again.

The literacy rate of Japan is 99 per cent today. The daily circulation of newspapers in Japan is 32,447,141 copies published by 121 newspaper publishing companies according to a survey in October, 1957 or one newspaper per 3.12 persons and 1.23 copies per family. Japan is considered to be one of the top three newspaper-producing countries of the world. The first daily newspaper in Japan was "The Yokohama Mainichi Shimbun" which was published in 1870.

The oldest publication that has survived in Japan is the handprinted book of a Buddhist Scripture published in 770 A.D. This is said to be the oldest extant handwritten publication in the world. Since then the art of book printing has gradually developed, but for the most part, the method of wood-block printing or lithography has been used.

It was in 1869, the year after the Meiji Restoration, that metal type, such as the Chinese had used 500 years before, and Gutenberg a century later, was manufactured in Japan. In 1870 a printing press was brought to Japan from Shanghai. Since then the printing industry has remarkably developed.

The number of books published in 1967 amounted to 37,904 titles. The estimated number of copies of books published was 487,660,000 and the value of sales was $614,362,500. Top sales were in literature; social science came second and engineering third, with books for juveniles and school reference texts coming next.

In the course of a century Japan has become Asia's leading book publisher, despite the heavy burden of using so many ideographic characters.

Although China and Japan use the same ideographs, there are some fundamental differences between the two. In a word, Japan has "Japaneseized" the Chinese practice in the use of ideographs.

Before the eighth century the Japanese found the way to use Chinese characters as means to express Japanese ideas. This invention was called "Manyo-kana" and the most important work written in this way is the "Manyoshu"—a collection of Japanese poems edited in the eighth century and containing about 4,500 poems composed during the preceding...
Hira-gana, the writing adopted by women

four and a half centuries. These poems were expressed in Chinese characters, to each of which a Japanese pronunciation, and not the present pronunciation of Chinese, was assigned.

Later in the tenth century two kinds of "kana" were invented—one is "Hira-gana" and the other "Kata-kana." These were a Japanese innovation. The "Hira-gana" was made by simplifying "So sho" or quickly handwritten Chinese characters, while "Kata-kana" was made by using a part of the printed form of Chinese characters. They are not themselves ideographs, but rather phonetic syllables. "Hira-gana" was mainly used by women. At first it was called "women's writing."

In the "Heian" period when the Imperial Court of Japan was so peacefully prosperous, the position of court ladies had been elevated. Chinese ideographic characters were learned by upper class men, while women used "Hira-gana" in their writing. Many novels or stories were written by court ladies, the representative literary masterpiece being Lady Murasaki's "Tale of Genji" written early in the eleventh century.

"Kata-kana"—the other type of Japanese syllabary—was at first used as phonetic symbols to help students to read Chinese classics in the Japanese way. "Hira-gana" is most popularly used. After the Meiji era "Kata-kana" was given a new and important function to write words of foreign origin in a Japanese way. The number of forms in each of these purely Japanese systems of phonetic writing is about 50—they outnumber the 26-letter alphabet, but they have the advantage of connecting a vowel to a consonant to form one sound.

This peculiarity of Japanese "Kana," combined with imported Chinese ideographic characters, has enabled the Japanese freely to express their desires and thoughts in literature and in daily life. This combination of ancient Chinese civilization and Japanese-invented "Kana" letters may be considered the meeting and mutual understanding of the Chinese continental civilization and the island civilization of Japan.

Japan has created its own civilization in the world of letters, entirely different from the Chinese civilization. This is the way the Japanese act when confronted with foreign cultures. Some of the early novels written by court ladies were written solely in "Hira-gana," excluding all Chinese characters, and they are valued highly as literary masterpieces as well. Some male authors subsequently imitated the literary works of ladies, as for example the "Tosa Diary" of Kino Tsurayuki in the Heian Period (10th century).

The challenge of European civilization arrived at the shores of Japan in the person of an Italian Jesuit missionary accompanying a delegation of three Catholic youths sent by the Christian feudal lords in Kyushu to the Pope. This missionary brought a press, European metal type and several printers with him. This was 1590.

More than twenty books were printed in Latin, Portuguese, and Roman-spelt Japanese in Amakusa, Nagasaki, and Kyoto, in the late sixteenth century. Some of the printed books are preserved as national treasures. They include not only Catholic texts, but "Aesop's Fables" and the "Heike-monogatari" a romance of the Heike, the feudal clan which ruled in the late Heian Period.

This influence of Catholic missionaries was strong, although it was short-lived, because, for political reasons, Japan completely closed its doors to the coming of foreigners after 1639, except for the Dutch and the Chinese. For more than two hundred years Japan enjoyed peace, separating itself from the outer world. During those years Japan could develop its own civilization in business, politics, and culture.

Since ancient times, first in China and later in Japan, calligraphy has ranked as an art fully the equal of painting. The art of calligraphy was introduced into Japan together with Chinese characters, and since then the Japanese have developed many new styles of their own. Left, Zen inscription on a screen at the entrance of the Temple of Sambo-in, near Kyoto. It impresses the beholder by its graceful, flowing forms and also by its message. The inscription has many nuances, but one possible translation into English is: "It is better to leave things alone."

Photo © Pierre Ramond, Paris

Three examples of writing systems used in Japan. They show the phrase "Nihongo" (Japanese language) as it appears in (1) Kanji; (2) Hira-gana; (3) Kata-kana.

Peace is the basis of culture—this was proved by the Japanese civilization. Then came the open-door policy of the government under Emperor Meiji. This was the third response of the Japanese people to the challenge of foreign civilization which attacked this small island monarchy as part of the imperialist drive of the 19th century.

The invention of Chinese ideographs was necessary in China, where the strong central government was obliged to make announcements, not by mouth, but by letters, in such wide areas inhabited by so big a population. Ancient Greece was a small area and was divided into several independent city-states. So in the case of the Greek people their spoken language was endowed with the spirit of democracy. But in China the situation was different. Japan inherited the literary Chinese civilization.

However, Japan is a small country when compared with China, and it has a dense population. Illiteracy can be removed when government and people unite in the efforts of advancing education in this small country, and Japan already had a comparatively high standard of education when it was opened to the world.

The significance of the Meiji Restoration in 1868 is the change of cultural values from Oriental to European ones.

With regard to language policy for the new Japan, there were four possible courses of action. First, and the most
radical, would be to suspend the use of Chinese ideographs and to adopt the Latin alphabet. The second way was to write the Japanese language wholly in "Kana." The third way was to continue the use of a combination of Chinese ideographic letters and "Kana," just as Japan had done for more than a thousand years. The fourth way was to limit the number of Chinese ideographs used in everyday writing. This way had another aim, that is, to decrease the number of Chinese characters to be learned during compulsory education and thereby lighten for primary school children the burden of learning so many characters.

Each of these outlets from the burden of past civilization has been tried by the Japanese since the Meiji Restoration.

First, from the point of view of education. Although the Tokugawa feudal government officially closed the door to the outer world, little by little world changes were communicated to Japan through imported foreign books in Dutch and by Dutch traders.

Hakuseki Arai (1657-1725), a scholar and statesman of the early Tokugawa age, learned the Roman alphabet used in European countries. He wrote in his book: "The Europeans use an alphabet, consisting of a little more than twenty letters. We Japanese use more than ten thousand characters. Unless one has a strong memory, one cannot remember so many. This means loss of our energy." He was the first reformer of the way of writing by the use of Chinese characters which the Japanese had been using for more than ten centuries.

Two years before the Meiji Restoration, Hiseoka Maejima, another scholar and statesman, gave his opinion to the Shogunate that Japan should abolish the use of all the Chinese characters and use only "Hira-gana." After the Restoration, Maejima became the publisher of a daily newspaper printed only in "Kana." The title of the paper was "Kana-ga Kana Shimbu." But it lasted only one year. Maejima started another daily newspaper entitled the "Yubin Hochi Shimbu." This paper survived until scores of years later.

A suggestion to have the entire Japanese language spelt in the Roman alphabet was presented by Yoshikazu Nambu to high government officials in charge of education in 1869.

These two attempts to reform the written language by abolishing the use of Chinese characters were followed by others in later years.

But a more practical suggestion came from Yukichi Fukuzawa, a great leader of the new culture in Japan (see page 12), who wrote in 1872 in his book entitled "Maji no Osie", or "Teaching of Letters," that for ordinary people the number of Chinese ideographic characters would be enough if they learned from 2,000 to 3,000 ideographs, and used the phonetic "Kana" syllables to replace the rest. "I use in this book" he wrote, "less than 1,000 Chinese ideographs. I do not think that with the use of so few characters, the readers cannot grasp the whole meaning of this book." He was a forerunner of the new trend.

The number of Chinese characters in use was officially reduced after World War II. In 1923 a temporary Japanese Language Research Committee recommended a standard list of 1,960 Chinese characters to be used for daily life. This recommendation was supported by twenty newspapers.

In 1946, the same year when the new Japanese Democratic Constitution was promulgated, the Japanese Government reduced the standard list to 1,850 Chinese characters for daily use.

This was welcomed by most of the people in those days, but as years passed, criticism of this limit was made. The critics said that boys and girls should know more Chinese characters so that they could read their own classics.

It has also been pointed out that the decision regarding any consideration of a reduction in the number of ideographic characters to be used daily in writing should rest not with the government but with the people.

The tide of history would then decide how many ideographs should be used.

For a while after the war there was another trend toward the limitation of the use of Chinese characters and eventually toward the complete abolition of their use. The adoption of either "Kana" or the Roman alphabet to the exclusion of all Chinese characters was strongly advocated by some. However, this tendency has lost much force in recent years.

The growth of higher education has tended to increase the number of Chinese characters used. The learning of ideographs presents many difficulties, but it also has many advantages. The characters may look like letters to the uninitiated but in reality they are words. So they can represent many ideas at a glance to the reader.

The Japanese have invented another convenient way of writing Japanese in the system known as "Furigana," by which small Kana characters are placed on the right hand side of any Chinese character to show its pronunciation and meaning. This way enabled less literate people to read difficult Chinese characters.

Combination of two parts making one word in Chinese ideographs is continued on next page
The pros and cons of two-way writing

The Chinese character typewriter resembles the Western typewriter only in name. The machine comprises a large box in which all the metal characters are tightly packed. The 271 characters most frequently used are found in the centre with the rarer characters placed on both sides of this group with "Kana" and number markings for easy identification.

Typing is accomplished by moving an arm over the box until it is directly over the desired character and then pressing firmly down. Typing is thus a slow affair, but a skilful typist can type 714 Chinese Ideographs in ten minutes.

A much more useful invention of recent years in the field of publication is the use of the teletype setter for the classical Chinese ideographs. An electric teletype is connected to a monotype machine. When the teletype moves, it makes many small holes on the tape which symbolize the Chinese characters. An automatic monotype casting machine produces the type following the indication of the small holes. The Asahi newspaper inaugurated this apparatus in 1955 and Kyodo News Agency, Japan's largest news agency for local newspapers, began this kind of operation in 1960.

In 1959 the Asahi undertook the communication of whole facsimile pages of the daily Tokyo Asahi to its branch papers on Hokkaido, the industrial northern island of Japan. By the use of facsimile, identical news pages are printed by the offset process from the films supplied by a central office, thus obviating the need for setting type again. Now a similar system is used between Tokyo and Takamatsu by the Yomiuri newspaper, between Tokyo and Fukuoka by the Nihon Keizai, and between several other cities.

The coming of new means of communication, radio and television, has freed anew the Japanese people from the burden of ideographs. Radio was introduced to Japan in 1925 and television stations, both public and private, were started in 1953.

As this kind of new audio-visual means of mass communication needs no type and no printing machines, the trouble of using Chinese ideographs is avoided. But strangely enough, in Japan, the publishing world has become more prosperous in the years since television was introduced side by side with the prosperity of television.

The reason for this is credited to the expansion of education among the population, the economic development, and the increase of leisure among salaried people. In a word, successful modernization in Japan has widened the capacity of the people to enjoy the country's literary culture.
Letters to the Editor

ABUSE OF DRUGS

Sir,
The best material by far that I have seen on the menace of drugs is in the May 1968 issue of the "Unesco Courier". The pictures are vivid and to the point; the material is fresh and persuasive. You do an outstanding health service in publishing this kind of quality coverage on the growing drug problem.

I serve on the Oregon State Board of Control, with the responsibility for mental health, including the problem of drugs. I have referred your issue to the Director of our Mental Health Division because I feel that some of the ideas contained therein can be implemented in Oregon.

Robert W. Straub
State Treasurer
Salem, Oregon, USA

SIR,
I wish to congratulate you on your excellent issue dealing with drug abuse. As the editor of a mental health journal, I have every reason to believe that this issue is a major contribution to mental health education. The material is written in clear, understandable and non-jargonish or technical language—but does not speak down to the reader. I plan to make reference to this issue in our next (September) issue so that our readers will be alerted to this excellent source.

Our readers, by the way, are professionals in the mental health field and we have an international circulation, in both English and French, of about 24,000.

Carl Birchard
Editor, "Canada's Mental Health"
Ottawa, Canada

THE NEW FRONTIERS OF INTERNATIONAL LAW

Sir,

Sean MacBride's article "The New Frontiers of International Law." (Jan. 1968) is excellent, except that he fails to carry his conclusion far enough. If Indeed we wish to implement human rights on a global scale, certainly we need more than merely the proposed Universal Court of Human Rights, with its exhortatory functions, and more than the present system of unenforceable Human Rights Covenants. In order to make the noble ideas embodied in the Covenants binding, do we not need a system of enforceable world law of which the Covenants could be a part?

But the use of the adjective "enforceable" in connexion with "world law" clearly means world government. And if such a federal world government is to be effective, its laws must be enforceable on individuals; the enforcement on collective entities such as nations either results in war (if direct force is applied) or, if force is not used, is totally ineffective in the face of determined resistance (as we have witnessed in the case of Rhodesia).

To be just and democratic in the protection of human rights, the lawmaking body of such a world government should be elected directly by the people of the world on a more equitable basis than the present one nation-one vote system used in the United Nations General Assembly.

Is such a world government Utopian? If so, then the concept of human rights is doubly so, because past and present experiences demonstrate not only that political unification is a prerequisite to justice, but also that such unification can be brought about fairly rapidly, whereas the struggle for human rights is a never-ending one. Moreover, the goal of a governed world could be achieved by transforming the present United Nations Charter into a world constitution.

I have but one question: What are we waiting for?

J. Chrys Dougherty, IV
St. Stephen's School
Austin, Texas, U.S.A.

SIR,

In "The New Frontiers of International Law", Sean MacBride affirms the need to punish persons guilty of crimes against humanity and if necessary to brand them as international outlaws. I personally have doubts that we shall resolve the problem in this way. Who, in fact, are the people who violate human rights? Is it possible for us to punish governments, or those who act in their name? Why not set up a supra-national court whose jurisdiction would be automatic, that is, citizens of all countries accepting its jurisdiction could make use of the court to appeal against decisions taken against them by national courts, especially those dealing with criminal and administrative affairs?

And once the plaintiff's appeal had been accepted, the supra-national court should simply place him under the legal authority of the United Nations. In this way, even though he would be unable to exercise his rights in his own country, he could at least live elsewhere as a free person.

I know that this is not the justice we aspire to, but would it not be a step in the right direction?

José Sommaville
Lisbon, Portugal

Sean MacBride replies: "I fully agree that the establishment of a true world court, whose jurisdiction would be recognized internationally and which would be open to everyone as a supreme court of appeal, is the only really effective way of ensuring respect for human rights. Unfortunately, as we all know, the conditions are still far from ready to accept this idea. But in the meantime we should not overlook even minor steps or measures that could bring an improvement, however slight. I am sure that if a public employee—for example, a prison guard who illtreated prisoners—knew there was a competent authority to which the facts could be made known and which could brand him as a "criminal against humanity", this alone would have a restraining influence on him, even though he could not actually be punished, and would make others reflect too."

ASTRONOMICAL ANALOGY

I should like to point out an error in the photo caption on page 15 of your March 1968 number ("Our Health Tomorrow"), which states that the human brain "comprises 10,000 million cells—as many as there are stars in our galaxy"). This is not so. According to present scientific knowledge, the number of stars in our galaxy is at least ten times greater, that is, 100,000 million.

Prof. P.K. Nik Sauer
Carona Switzerland

The distinguished French physicist, Pierre Auger, comments: "The number of cells in the human brain is of the order of 10 to the 10th power (10,000 million) or 10 to the 11th power (100,000) according to whether one includes the various types of auxiliary cells (neuroglia etc.). For the stars in our galaxy a factor of uncertainty also exists. Thus the comparison is largely symbolical and can only be accurate to within a factor of two to ten. That the orders of numerical size should be the same is in itself quite remarkable."

"SPARE PARTS" SURGERY

Sir,

Experimental organ transplantation, whose results will be of doubtful benefit to the sick person of tomorrow (despite all the current publicity) have the undeniable disadvantages of diverting considerable medical resources which would be better employed in seeing that the sick of today are cared for under proper conditions, in well-equipped hospitals, staffed by adequate personnel, which is not the case at present.

As a doctor quoted in your issue "Our Health Tomorrow" (March 1968) so rightly observes, there is a great deal of duplication going on in clinical investigation. In my view this rivalry among aspiring "medical stars" who want to see themselves in the newspaper headlines should be stopped.

The very number of experiments makes it all the more difficult to exercise proper supervision in making sure that they are all really useful.

A. Thuillier
Marseille, France
British scientist awarded 1968 Kalinga Prize

The Kalinga Prize for the Popularization of Science, awarded annually since 1952 by an international jury chosen by Unesco, goes this year to Prof. Fred Hoyle, the distinguished British astronomer and author of many works on astronomy, philosophy and the sociology of science.

Love and Marriage

How man through the ages has interpreted the meaning of love and the institution of marriage is revealed in "Love and Marriage," the latest volume of the series "Man through his Art," published for the World Confederation of Organizations of the Teaching Profession with the co-operation of Unesco. Like its companion volumes, it presents artistic masterpieces from the world's major cultures, in 20 plates, in full colour, and over 100 text illustrations. Volumes already published: War and Peace; Music; Man and Animal; Education. Orders and inquiries from: U.K. ed.: Educational Productions Ltd., East Ardsley, Wakefield, Yorks. (school ed. 25/-, general ed. 30/-); Canadian ed.: The Queen's Printer, Ottawa, Ont. (school ed. $5.00, general ed. $8.00); U.S. ed.: New York Graphic Society, Greenwich, Conn. (school ed. $5.75, general ed. $7.95). For Scandinavia: International Publishing Co., Box 404, Orebro, Sweden (45 Kr.). PLEASE DO NOT SEND ORDERS TO UNESCO.

Flashes...

- Spain has three nuclear power stations under construction and will generate 25 per cent of its electricity from nuclear fuel by 1980.
- The U.N. Development Programme has allocated $400,000 for surveys of roads, copper and nickel mining in Botswana.
- The U.N. Relief and Works Agency for Palestine Refugees under construction and will generate 25 per cent of the electricity it produces from a solar power installation.
- The number of girls in Kuwait's schools has increased by 250% in the last five years.
- The number of girls in Kuwait's schools has increased by 250% in the last five years and now totals over 43,000.
- The Makioka Sisters, by Junichiro Tanizaki, have been translated into English and published in 1980.
- The Pillow Book of Sei Shonagon, by Sei Shonagon, has been translated into English and published in 1980.
- The Tale of Genji, by Murasaki Shikibu, has been translated into English and published in 1980.
- The Kalinga Prize, awarded by Unesco, goes this year to Prof. Fred Hoyle.
- The Life of an Amorous Woman, by Saikaku Ihara, has been translated into English and published in 1980.
- The Harp of Burma, by Michio Takeyama, has been translated into English and published in 1980.
- The Woman in the Dunes, by Kobo Abe, has been translated into English and published in 1980.
- The Noh Drama, Ten Plays from the Japanese, has been translated into English and published in 1980.
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