Perspective on Licensing in Japan

Trends in today's policies are traceable through history; a look at the future

BY MOREY MATSUMOTO*

During the years of 4000 to 7000 B.C., when European and Chinese civilization was taking place in the form of new stone age, the original Japanese were already living in a more primitive manner and using earthen wares.

M. Matsumoto

Until the end of the Glacial Epoch, or Ice Age, of some 16,000 years ago, the Japanese islands were said to have been connected to the Korean Peninsula by ice, allowing some of the animals, probably including human beings to travel between the mainland of Asia which are today North-east province of China, Mongolia and Siberia.

It was proven by the archeologists when the bones of one of the mammoth or elephant type of animals, which was more popular in Siberia or Eastern Russia, was also found in the central part of Japan.

Therefore, from the geographical point of view, the Japanese race has strong ties of blood with Eastern Siberians and Mongolians. Also from the etymological point of view, the Japanese language is a family of Ural-Altaic which covers Japanese, Mongolian, Siberian and all the way to the west up to the Hungarian and Finnish languages.

Many of the Koreans later came to settle in the Japanese islands, carrying with them western and Chinese civilization via Siberia and Mongolia, but not directly from China to Japan until some time later.

Again, from the etymological point of view, the Japanese race had very little to do with China's mainland. For a long time in history, the Japanese were corresponding with the Western world not through China but via north of China, namely through Mongolia and Siberia.

Horse Riders

As you are probably aware, the Mongolians were great horse riders. Their maneuvers on horseback were beyond our imagination in its speed. It is said that one of the Queens of Mongolia was carried in her palace made of leather on the big cart pulled by about 60 horses enabling her to move together with the Mongolian army. The Japanese were lucky, because we could learn from the Mongolians how to ride on horse back in the small island country. Probably, to own a horse 2,000 years ago must have been something like owning a gorgeous Rolls-Royce.

A little later than the Mongolian influence on the Japanese, the Southern Chinese came to settle in Japan. These people were experts in building and sailing on boats. Because Japan is an island country, traf-

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fic by boats was considered to be most convenient. Therefore, the Chinese civiliazation of building boats and navigation soon became popular in Western Japan, and enabled the Japanese emperor to own a little navy. For example, it is a know fact the first Japanese governmental mission was sent to mainland China in the year 57 A.D. and the second in 107 A.D., the 3rd in 239 A.D. and the 4th in 266 A.D.

It grew to the extent to occupy Southern Korea in 369 at the request of a local Korean king for help, and in 391 A.D. a larger army and navy were sent to Southern Korea to help them. Direct communication with China regularly took place to bring Chinese culture into Japan.

All these matters happened during the time of the Great Roman Empire. In fact, the first official mission from the Roman Empire to China arrived at the Chinese capital city in the year 166 A.D.

Technological Transfer

I have taken up this historical story with an emphasis on horses and boats, which were probably the first dramatic example of technological transfer from Mongolia and China to Japan, which made the Japanese automotive and shipbuilding industries today into one of the most important factors in the world.

China was already a great, civilized country in the years 7000 B.C. with the first-in-the-world invention of explosives, drinking tea and producing silk, etc. It became a modern country when all the local powers were united under one Emperor in 221 B.C. Coincidentally, more or less at the same time the Italian Peninsula became one country in 291 B.C.

I have no time to discuss the long historical background of technological transfer, but if you allow me to speak about a few epoch-making examples, Buddhism which was a creation by Buddha who was a crown prince of one of the local lords in India in about 500 B.C. was conveyed to Japan in about 550 A.D. via China and Korea.

While the Theory of Buddhism was being refined in China for about 322 years, it stimulated various kinds of culture and technology, like architecture for building large wooden temples, techniques for casting Buddha's image by brass or iron, using Chinese lacquar for housewares, beautiful textiles, etc.

All these technologies came to Japan, mostly via the Korea Peninsula. Also, technology in pottery or making chinawares was conveyed to Japan via Korea, which later caused a big war between Korea and Japan about which I wish to talk later.

The import of Buddhism to Japan was not just a religious matter, but it changed the Japanese society almost completely. The Japanese original religion was a kind of primitive religion in which you worship your ancestors as Gods. When a new philosophy of Buddhism came in, it created a tremendous dispute in the Imperial court in Japan.

Finally, in about the year 590, the crown prince of Japan who was a great admirer of the modern philosophy of Buddhism, killed his opposites in the Imperial court, and built the first temple in Japan after the Chinese style in the year 593 in Osaka. He build the second one in Nara in 604. The first temple in Osaka burned down and was rebuilt exactly in the same shape but in concrete. The second one still exists and is the most important national treasure. It includes a fine storied tower and several other buildings in a beautiful setting.

The same crown prince made the first constitution of Japan in 604. It consisted of only 17 articles and was a kind of ethical standard for the government officials.

Capital City

The Chinese way of capital-city construction was also introduced in Japan. The ancient capital cities of Nara and Kyoto were constructed in that fashion. The East, North and West of the city are surrounded by hills for defense and the South was open to flat fields for easy traffic.

The streets are in straight checkers and run precisely east to west and avenues from the North to South, with the Imperial Palace in the North Central. When the Emperor was seeing people, his chair was facing exactly South.

Chinese characters or letters already had been introduced into Japan by many professors who had been to China on the official mission. They became more popular along with Buddhism. And two sets of Japanese phonetic symbols, each consisting of 48, were made out of the Chinese characters. This was really epoch-making. We could now write and read on a common basis among Japanese.

Chinese and Korean technology for potteries or making porcelain and earthenware was a great attraction for Japaneses rulers all the time. It was especially important, for the tea ceremonies prevailed among the feudal lords who were proud of owning excellent pottery.

Such desire came to an explosive point in 1590. The series of civil wars in Japan came to an end under one military leader who then initiated two invasions to Korea in 1592 and 1597. They are now known as the "Pottery Wars" because the main results were that many of the feudal lords who participated in the wars brought back with them many capable artists and technicians of Korea to set up pottery plants in Japan.

The Korean artists and technicians were very well treated by the feudal lords on a high level in the Japanese society. Many of their descendants are still doing the same job and are rich families who have been naturalized as Japanese nationals.

I now wish to touch upon a very important case in which Japanese technology had an epoch-making influence on European industry for the first time in the history.

A Korean artist who was employed by a Japanese feudal lord in the west end of Japan tried to find good porcelain clay in his neighborhood. He was successful. For the first time in Japan porcelainwares were made and sold at very high prices. However, pictures were always painted in blue like Korean porcelain wares. It was known among the artists and technicians that in China, they were making porcelainwares painted with red color, but nobody knew how to make it. A merchant in the city of Nagasaki who was trading with China came back with a certain information that to produce red color on porcelain you have to use lead (Pb) powder as pigment.

But he could not obtain the most important know-how as to which temperature should be used in the furnace. The artist called Mr. Kakiemon challenged to it, tried every possible effort to produce high temperature while 1,000 to 1,400 degrees were used for making porcelain wares.

He spent all his money to buy suitable wood to burn in his furnace without success and made a last desperate effort with less quantity of wood which was left in his hands. To his surprise after a few days he got the bright red picture on his porcelain.

Vital Know-How

As you will see because of the shortage of wood, the temperature in the furnace did not rise high enough and stayed at about 800 degrees only. And that was the vital know-how which he was looking so hard for. It was about the year 750.

Now his village Arita became the most important pottery producer in the world. Dutch East India Company bought a lot of porcelain from Arita and shipped out of the local port of Imari, which name became the symbol of the highest quality in porcelain wares.

Royal Worcester, Delft, Meissen, all these famous European pottery producers were in a hurry to copy Imari wares. In fact some of the pictures painted by Royal Worcester which is in existence was almost the exact copy of the picture painted by Kakiemon himself.

My personal interest of the study in this case was which kind of know-how agreement was made or not made between the Arita people and Dutch merchants. So far, no trace has been found. And it seems that Arita artists and technicians were only happy to see the prosperous business out of their village. Dutch East India Company was, of course, the people who had the largest share of the profit. It is in the record that, for example, in a single year 150,000 pieces of Imari porcelainware were carried to Europe by four big Dutch merchant ships.

If you allow me to come back to the political structure of Japan, the first Emperor of Japan was crowned about 2,650 years ago. He was originally from the west end of Japan and fought his way to the east using boats and horses. He settled in the area South of Nara presently called Kashiwara to build a capital city.

The present Emperor is the 124th in succession and is said to be from the same family, although there are disputes among historians. The capital cities moved from one place to another many times. Finally in the year 794, Kyoto was built as the ideal capital city, as I said before, in Chinese style. Kyoto stayed as the Japanese capital city for about 1,100 years until it was moved to Tokyo in 1868, or about 110 years ago.

For many years, Japan was under direct control of the Emperor, but in 1192 the first military government was established in the city of Kamakura south of Tokyo. The second military government was formed in Kyoto in 1338, and the third military government in Tokyo, then called Edo, in 1603. This lasted for about 270 years till the Meiji restoration of 1868, at which time the power was returned to the Emperor.

During the time of the military governments, Emperors were sitting in Kyoto with the authority to confer degrees, classes, and peerage in the Imperial Court which were much wanted by the military leaders for themselves and for their followers. The last military government brought to Japan a peaceful 200 years without war inside or out.

The first Europeans who came to Japan were two Portugese sailors. They sailed out from China and arrived at one of the small islands in the South West End of Japan in 1543. They gave the local feudal lords two guns which they had with them. Within one year these guns were copied and made in the same island. We had in Japan a lot of experience in making steel and ironwares out of the "black sand" or "sand iron." The introduction of guns completely changed the military strategy and every feudal lord wanted to find ways to import from European countries.

The first Portuguese missionaries came to Japan in 1549 and were followed by Spanish missionaries, Dutch and British merchants. The ruling military governments welcomed all these visitors and allowed them to stay in Japan for teaching Catholism and for trading. In fact in 1587, four little boys were sent all the way from Japan to Rome to be personally welcomed by the Pope at Vatican.

However, when the religious influence of Portugese and Spanish missionaries became too strong for some of the feudal lords, the Central Government suddenly prohibited the Catholics from Japan and told the missionaries to go out.

Dutch Influence

While the Church of England was considered to be more or less the same as Catholics, Dutch merchants insisted that they were not Catholics but members of the Dutch Reformed Church. The Japanese government said to them, "OK, you may stay here."

As a result, while Japan was totally closed to foreign countries, Chinese and Dutch merchants, were allowed to stay in a limited place, in the city of Nagasaki in the West End of Japan, and the general manager of the Japanese branch of the Dutch East India Company was requested to come to Tokyo once a year to inform the Shogun or the head of the military government of the recent news of the world, presenting the government high officials with lots of gifts from the Western world.

Beginning in 1779, when Russian warships came to Japan requesting the opening of the Japanese ports to foreign ships, the British and French navies also came to Japan. In 1844 Dutch representatives advised the Japanese government to open diplomatic relations with the Western World. Then in 1853, the U.S. Navy headed by Commodore Perry came to Tokyo Bay with four navy ships and negotiated with the Japanese government for a friendship agreement. He was successful in signing the agreement when he came back the next year in 1854, and consequently two Japanese ports were opened for American whale catchers. In 1857 the first U.S. Consulate was set up in Japan.

What is interesting from the point of view of technological transfer was that during the time when Japan was open only to Holland, all the new knowledge of the Western civilization came from Dutch study. Ambitious young students went to Nagasaki to study medical, chemical, physical, mathematics, military, engineering, etc. all in the Dutch language.

Naturally the only European language spoken in Japan by students and interpreters was Dutch. It is a fact that negotiations between the U.S. navy and the Japanese government in 1853 and 1854 were done in the Dutch language by both the U.S. and Japanese sides.

Incidentally, during the peaceful 200 years, the central government of Japan encouraged education all over Japan. National colleges were set up in Tokyo and all the 300 feudal lords had to compete with each other in educational systems within each territory. At the end of the military rule in 1867; the number of schools in Japan was 284 national colleges and local state schools plus a few thousand private schools some of which were of outstandingly high standard.

Apart from the Dutch study for a limited number of students, most of the students were taught Chinese and Japanese ethics and literature. Most important of all was, for example, to respect your teachers. When a student walked in a street with his teacher it was a common rule to walk about one meter or three feet behind and not to step on the shadow of the teacher.

Such ethical rules prevailed in Japan and when a student wanted to get in a school it was not unusual that he paid an initial fee either in the form of money or gift. Tuitions were paid every month or semiannually. When he was a poor peasant he could pay tuition in the form of vegetables, fish or anything available to support the living of the teachers.

In 1872, the educational systems of all the feudal lords were absorbed by the central government and a compulsory education system began to be the uniform system all over Japan. Textbooks were printed by the government and distributed through primary schools.

Compulsory Education

Compulsory education was four years to start. Later it was extended to six years, and it has been nine years for the past several decades.

Since it was a minimum requirement by the compulsory system, when a family was too poor to pay tuition, the local governments bore such tuition to make sure that every young boy and girl, rich and poor, equally had the opportunity to receive education.

Today, about 90% of the boys and girls after 9 years of education go to high school for another three years voluntarily, and 38% of the high school go to universities and colleges. This rate will be 43% in 1980, according to statistic prediction.

What I am driving at by explaining all the above educational systems in Japan, is that without talking about it, we can not explain the rapid economic growth of Japan which took place during the past few years.

I often hear a statement that Japan made itself an industrial country within a hundred years after the Meiji restoration of 1868. But I wish to point out that it could be done only on the basis of two centuries of educational background under the feudal regime. One other thing which cannot be forgotten is another contribution of the feudal government to the Meiji restoration. During the last 270 years of feudal government, about 300 feudal lords were requested by the central government to form a miniature or copies of the central government.

The feudal lords themselves had to serve at the central government for every other year, staying in Tokyo (then called Edo). They were requested to work as government officials of some kind for one year then were allowed to go back home for one year, and it was repeated.

It was a clever system on the part of the central government, because the central government was able to watch what were going on in each corner of the country. This system of having a miniature government brought us many young and capable government officers in every feudal territory. When a new central government was formed in Tokyo in 1868 under the direct power of the Emperor, they could choose many young officers from every part of the country to let them serve at the central government. This situation helped Japan a great deal.

Therefore, I wish to say that there were two major elements which contributed to the modernization and industrialization of Japan:

1. Compulsory educational system of 110 years based on 200 years of voluntary education.

2. Large group of capable young officials who had been brought us already under the feudal system and continued to serve at the central government.

Even at present, the capable group of the government officials is driving the country. While Japanese politicians are keeping busy just in the political game, the bureaucracy of Japan has had a firm position in the country.

Politicians Change

These bureaucrats found that leaders of industry are more reliable than politicians who do not have time to study very well what is really needed for the country. Politicians can change at every general election, but bureaucrats are not changing. Therefore from the point of view of the business society, bureaucrats are much more dependable than politicians.

Both industry and the bureaucrats forward the common ground of interest to drive the country toward economic growth to achieve a higher living standard for the people.

There is no wonder that the word "Japan Incorporated" was brought about by a prominent columnist of the U.S.A.

Just at this time, the Japanese lower house has been dissolved and a general election is expected on December 5. Although the Liberal Democratic Party will probably win over the other major parties, we do not have any strong character among our politicians. Everyone of them is just average. Therefore, we will still depend largely on the capable bureaucrats and the "Japan Incorporated" will still roll on.

"Can Japan survive in this overcrowded planet?" is the next question. I shall have to discuss this subject in relation to the energy crisis which has had a tremendous impact on our country. For this purpose let me just review the economic picture of Japan in the recent 20 years, including the forecast up to 1980.

Japan enjoyed rapid growth of its economy during 1960 through 1972 with an average annual net growth rate of about 10%. It was initiated by Prime Minister Mr. Ikeda in 1960 who declared the very aggressive economic policy to try to double the gross national income within 10 years beginning that year. The same policy was adopted by Prime Ministers Messrs. Sato and Tanaka, both of the Liberal Democratic Party, with overwhelming success, looking at it from the aspect of the GNP and the income of the working people, although this rapid growth created, at the later stage, various conflicts and distortion in the Japanese economy and the society including air and water pollution problems.

All the Japanese industries were in a hurry to borrow funds from the bankers to invest in the newest production equipment so as to be competitive in the international marketplace, and they were successful. Beginning in 1968, Japanese exports boomed in many lines of business including steel, shipbuilding, automobiles, electronics, and so on.

Booming export brought a lot of foreign currency into Japan, and in 1973 the Japanese foreign currency reserve reached the historical high record of about U.S. 19.5 billion. When you consider that for about 15 years before 1968 Japanese gold and foreign currency reserve stayed at the low level of about $2 billion, you can imagine how big a factor this was for Japan.

Under Japanese laws for controlling the Foreign Trade and Foreign Exchange, as a rule such incoming foreign currency had to be sold to the bank of Japan to be converted into yen. Naturally, Japanese Bankers were flooded with yen which had to find borrowers.

Land Investment

The best investment was to purchase land, whether for the construction of new factories or for housing projects or just for speculation waiting for increase in price. As a result of the turbulent years of the "Land Rush", which was almost comparable with the "Gold Rush" in the 19th Century, about 2% of the total land of Japan was acquired by big contractors, developers, trading companies, and rich individuals some of whom

had previously nothing to do with real estate business. Average people who were already suffering from the high prices of land for housing found more difficulties in securing their homes.

The total territory of Japan is about 140,000 square miles only, which is about 1/25th the size of Australia. Moreover, most of the Japanese land is mountainous and 85% is not usable. Therefore, the Japanese population of 110 million is concentrated along the coastlines of the islands, using only about 15% of the already small territory. Reclaiming of land from the sea is being tried in some parts of Japan, but we have to face the serious opposition from local fishermen, for example, who have to lose their jobs, and also from the environmental interests. The land problem is a very serious factor in the Japanese economy which reflects on the cost of everything produced in Japan.

The "oil crisis" came about in October 1973. The Japanese local production of oil and natural gas had been negligible, and we were totally dependent on imports; about 46% from Iran, 38% from Arab countries, and 16% from Indonesia. Nuclear power covers only about 8%* of the total energy consumption of Japan at present.

The oil prices which became about four times higher gave a serious shock to the Japanese energy production, petrochemical industry and all other industries, agriculture, and so on. Prices of commodities shot up and the labor unions secured about 30% wage increase in the so-called "spring offensive" in 1974, which increase was again reflected on the prices of commodities. It now became the most important task for the Japanese government to fight inflation. Prime Minister Mr. Miki and his government brought about a policy to strictly restrict the overall demand of the commodities for saving the oil consumption, and for restoring the imbalance between the import and export caused by the soaring oil prices. The Miki cabinet made a firm promise about a year ago to confine the increase in the consumer price index within 10% between the end of March 1975 and end of March 1976. It seems that they have been almost successful, but at the sacrifice of many bankruptcies, large and small, which were caused by cooling-off of the consumers. The Japanese economy, which had been maintaining the average annual growth of about 10% during 1960 through 1972, dropped down to 6.6% increase in 1973, minus-0.2% in 1974, and will probably show a slight up of 2 % in 1975.

The business leaders of Japan have been bitterly complaining against the government for its tight policy not to spend enough money for governmental projects. Because of the decrease in imports and the recent increase in exports, the deficit in the foreign balance of Japan, which was aout $4 billion in 1974, was about $700 million in 1975. The Japanese foreign currency reserve today is somewhere around $13 billion. This means that money is available, but there is not business to borrow such money. Bankers are ready to lend money, but industries say to the government, "Give us jobs, before we go to the banks."

It seems to me that the Japanese government has been successful in fighting inflation, at a cost, and the Japanese economy is again standing at a turning point for deciding its future.

There still exists, as a favorable basis for it, the traditional Japanese ethics of:

1. High-saving rate which has been about 20 percent of the individual income.
2. Availability of high-quality labor supported by 103-year-old compulsory education system.
3. Stability of labor based on the traditional lifetime employment and generally speaking amicable human relations between the management and the labor union.

These classical factors helped create a high rate of growth of the Japanese economy over the past years, and, therefore, if the government policy is directed toward lifting the restriction on overall demand, the Japanese economy will find itself again on the right track for future growth.

A five-year projection, from now through 1980, is expecting the annual average growth in GNP of 14% nominal and 7% net, which means that the nominal GNP will be doubled in 1980 as compared with 1976.

However, from the bitter experience in the shortage of oil, the industrial structure of Japan will have to be modified to the direction of less energy consumption. There might be a slowdown in such industries as steel, aluminium, paper and so on which are big energy consumers. On the other hand, aircraft industry, machinery industry, electronics including computers importantly, optical and similar industries, which are of less energy-consuming type but with higher added value, may pickup.

The annual increase rate in Japan's energy consumption, which was 11.7% every year as the average of eight years from 1965 through 1973 oil crisis, will come down to a 5.2% average a year, or less than half, during the coming five years.

The Japanese government will have to face a difficult problem of securing jobs to the 55 million working people whose number is increasing by about 1% or half a million every year. Two basic labor problems in Japan besides unemployment are:

1. Increase in the population of senior citizens or elderly people.
2. Increasingly higher education of the younger generation.

Today about 90% of middle-school graduates go to high schools and 38% of high-school graduates go to universities and colleges which rate will be approximately 43% in 1980. Without appropriate economic growth it will be impossible to satisfy the growing demand for enjoyable jobs and social welfare of various kinds. At the same time, the Japanese industries will have to go for more intellectual or knowledge-intensive industries like aircraft and computer, to name a few. Investment for higher research and development, and transfer of technology in and out, will become more important.

Since the restoration of the Japanese political regime in 1868 or 108 years ago, we were in a hurry to import foreign technology to make Japan an industrial country. We do not have dependable statistics of royalty payments for the period prior to World War II, but the remuneration paid by the Japanese industries to foreign licensors was $5.073 million during 25 years

Actually lower, but this is an official figure.

from 1950 through 1974, while Japan's royalty receipt for the same period was $574 million. That means the ratio of receipt of 11.3% against the payment of 100. Licensing out of Japan has been increasing over the recent years, and if we take the example of 1975 alone we paid $712 million and received $161 million. That means the receipt of 22.6 against the payment of 100. What is remarkable in describing the Japanese technological efforts is that the amount of money spent for R&D by the Japanese industries in the single year of 1974 almost equalled the accumulated total of Japan's royalty payments over the past 25 years. It will of course take a lot more time before such an investment bears its fruit, but it seems, although not yet confirmed, that as far as the recent inventions and know-how are concerned, Japan's royalty receipts exceeded the payments since 1973.

No country can be isolated in today's world. We have to import and export, exchange technology on an international level. Japan's import, which was approximately $58.5 billion in 1975, is expected to be doubled to about $113.5 billion in 1980. Japan's exports, which were approximately $56 billion in 1975, will also be doubled to about $115 billion in 1980. Investment by the Japanese industries outside Japan, which is about $15 billion at present, will reach about $40 billion at the end of 1980 to keep abreast with the growth of the world economy.

Discussing the licensing policy of the Japanese government, there is no particular regulation regarding licensing out from Japan, except for the obligation for us to report any international contracts to the Fair Trade Commission of Japan for their clearance from the antitrust point of view.

Regarding licensing into Japan, which means payment from Japan of some kind whether in yen or in foreign currency, we still require validation by the Japanese government through the Bank of Japan and the agreement itself will come into effect only on the date of validation by the government. The validation can be obtained in one day on the licensing-in agreement of lump-sum payment of $50,000 or less and one year or less period. Validation for the rest of the licensing-in agreement will take about one month under normal conditions.

According to the Fair Trading Commission of Japan, about 10% of the total international contracts of all kinds reported in the past required some sort of amendments or modifications to avoid antitrust violations. These modifications were requested by so-called informal advice or administrative guidance and so far none of the international contracts ran into legal suit by the Fair Trading Commission.

As to direct investment by foreign investors into Japan, most of the restrictions have been lifted by now to observe the basic rule of OECD, with the exception of agriculture, mining, petroleum industry, leather industry and retail business for one reason or another.

Summary of Papers

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end.

The first session terminated with Mr. Jacobs' report on the UNIDO-LES symposium sponsored in New York by LES USA. Interesting and informative, this confirmed that LES can be instrumental in fostering a better understanding and in actively contributing to the solution of the many undoubtedly existing problems.

Dr. Giorgio Brizio, of Fiat's General Management and in charge also of corporate relations with Arab countries, spoke on problems concerning Middle East.

Mr. Howarth gave a fine report on transfer of technology to African countries. He heads the Industrial Property Department of the UAC International Group of Companies, which is Unilever's largest subsidiary operating throughout tropical Africa and in many other developing countries. He is also a consultant to the U.N.'s economic commission on industrial property matters in the English-speaking Africa. Mr. Howarth's comprehensive survey of the present conditions in a continent with great potential, and varying situations, offered many practical tips of great interest.

The President of LES Switzerland, Mr. Marc Besso, heading a panel of experts, submitted a concise yet comprehensive introduction on "How to calculate a license fee." It generated an interesting discussion.

lecture of Mr. Matsumoto of Matsushita Electric and past President of LES Japan, on "Level of compensation for technology licensed in the past and trend for the future; the Japanese scene." He not only gave a lesson on Japanese history. He also enabled us to realize how history and technological transfers are interrelated, how they react and counterreact. The teaching that can be inferred from his lecture is that technology transfer is particularly successful when it takes place toward a country having a background of history, national consciousness, and an efficient educational system, which will catalytically react with the transferred technology. This also means that the type and levels of technology being transferred must be adapted to the environment of each specific country and in any case be accompanied by a corresponding preparation and by a subsequent assistance to ensure that the transfers prove as profitable as it must be to both partners and the recipient country in particular.

Mr. Matsumoto insisted on the fact that the "teacher," i.e. the licensor, must be respected and compensated since learning is the base for developing as the technological history of Japan can well demonstrate.

Mr. Fitzpatrick of I.T.T. spoke on the attitude of multinational enterprises toward the introduction of new technologies into Third World countries and how big business is becoming aware of the problems and coping with them. He illustrated several practical cases to confirm the trend to a better understanding of local realities and to a deeper involvement in them.

Spurring a great deal of interest and debates, Libero Lenti, Professor of Economics, University of Milan, lectured on "Considerations on the technological balance." Later, John Gay of the U.K. Atomic Energy Authority and past-president of LES U.K., spoke on perspectives of collaboration between LES and international organizations such as UNCTAD, UNIDO, WIPO and others.

The conference, officially closed, reopened the next morning, Saturday, with a concise session devoted particularly to the benefit of Italian associates, though open to all participants.

A presentation of the incentives to transfer technology and to establish activities in Brazil, Canada and Ireland, a group of countries toward which Italian industrialists are showing an increasing interest, was organized with the collaboration of officials and representatives of the agencies of these countries and of private experts, among which the Canadian Embassy in Italy and the Industrial Development Authority of the Republic of Ireland.

The problems involved in the transfer of technology to Brazil were discussed by Franzo Grande Stevens, a well-known Italian lawyer and member of LES Italy with an extended background of experience in transactions involving this country. It was followed by a presentation of specific cases by Dr. Francesco Varola, another expert LES Italy member whose firm has business practices in various South American countries.