

China

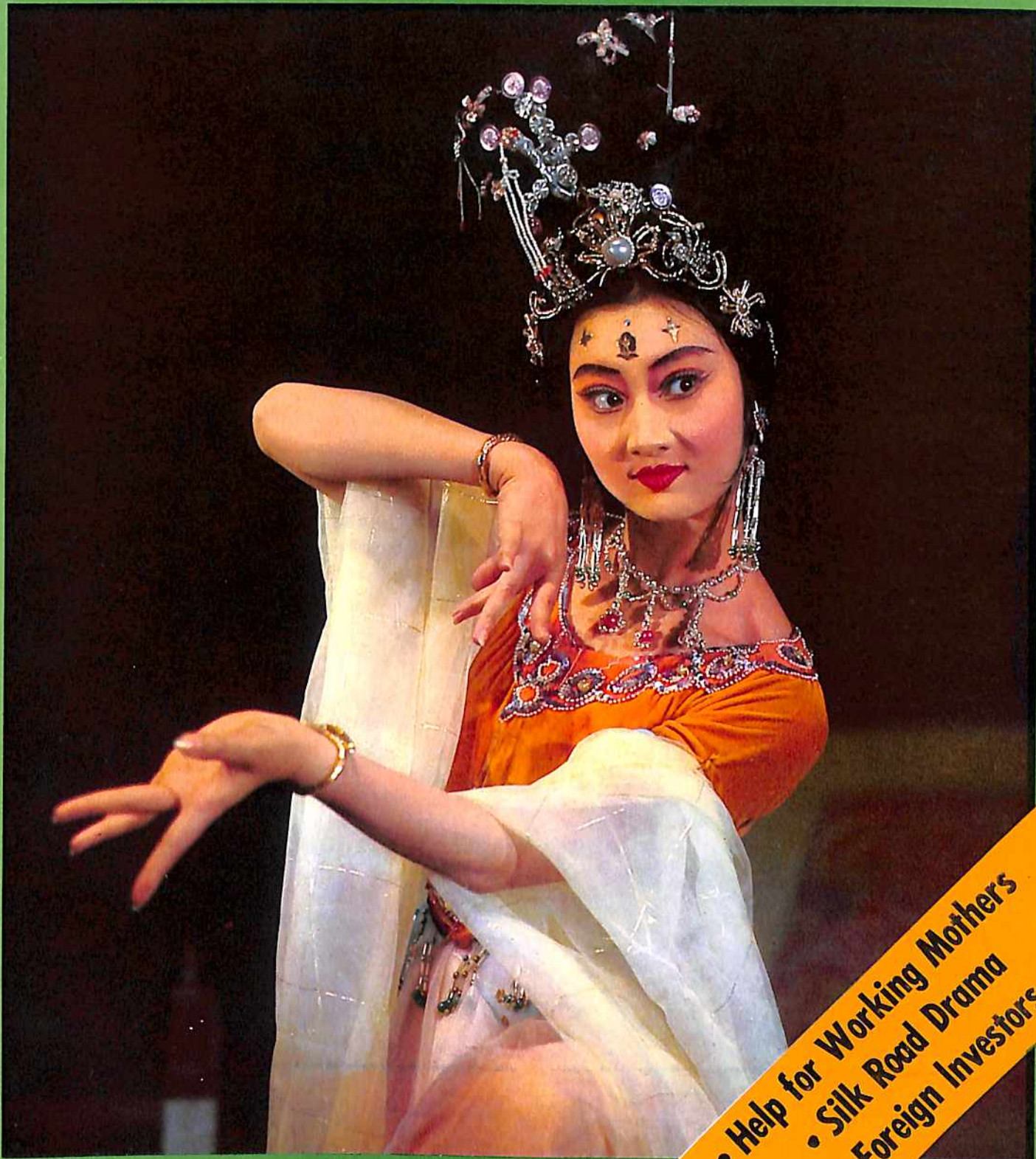
Reconstructs

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- Help for Working Mothers
- Silk Road Drama
- Foreign Investors

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Aerial view of Harbin, capital of Heilongjiang province.
Wang Hongxun

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Articles of the Month

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JOINT-VENTURE OVERSEAS INVESTORS IN CHINA



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Built for a 7th-century Chinese princess, the massive Potala and its art riches, once forbidden to all but a few, are now open to the public: background on its architecture and cultural relics. P. 44



Survey of the Huanghe River



CHEN RINONG

HOUR AFTER HOUR we drove over the arid yellow Loess Plateau of north China, accompanied all the way by a cloud of choking dust. Then our motor caravan rounded a low promontory and we saw the Huanghe River glistening in the harsh sunlight before us. We had reached Hequ, the northernmost point for the surveying team I was with. Here, at Hequ, the river rounds into an "S" bend, which gave the town its name, Hequ, meaning "River Bend."

Downstream from Hequ in Inner Mongolia are the middle reaches of the Huanghe which the team was to study to draw up further plans for controlling erosion. There were forty scientists on the team, including hydrologists, geologists, geographers and historians, many of them with years of experience in combating erosion. It was the largest expedition the China Society of Water Conservation had organized to survey this stretch of the river and the work took them over 3,200 kilometers over a month.

On the Fringe of the Desert

We followed the river south and crossed it in the night at Baode in Shanxi province. On the following morning our jeeps were laboring over a road of sand which took us to the edge of the Mu Us Desert in Yulin prefecture, Shaanxi

province. We found great stretches of the ancient Great Wall buried in sand, leaving solitary watch towers rising above the desert wastes like lonely lighthouses, their connecting walls submerged beneath the sands. Our forefathers in the distant past had built this chain of beacons across this part of the country to give early warning of enemy invasions. At the first sight of invaders fires had been lit, carrying the message swiftly from beacon to beacon, but they never gave warning of another invader which today has literally poured over the wall and struck deep into peaceful farmland, leaving in its wake desolate waste.

To our northwest were dunes and sparse Chinese tamarisks which came in very handy for spreading under our tires over a stretch of soft sand. Further south we drove through numerous shallow pools which was quite a change from the dust but which frequently held up our progress. Once, one of our vehicles got mired in one and we had to spend hours before we could dig it out and go on our way.

We reached the old city of Yulin in the night. We looked like an archeologist's find suddenly come to life.

"Must have been tough on you, Liu," a young technician said, looking at our 72-year-old engineer brushing himself down in the lamplight. His hair never looked whiter.

"Oh, I'm all right. I've been through worse," replied Liu Derun, veteran of many surveys.

Liu Derun spent the past fifty years at his job and he knows this part of the river well. He first visited this region 42 years ago fresh from college abroad. The nine-man team he was with had tramped, rode on horseback and floated downriver on cowhide rafts to study erosion and collect information on how to fight it. They had sent in their report and had urged immediate action but nothing was ever done by the authorities to check the widespread erosion and destruction of farmland. It was not until after the country was liberated that Liu and others like him saw their recommendations put into effect. Since 1949, Liu has worked on many of the major water conservation projects which are now helping to restore the productivity of this part of China.

We stayed two days in Yulin examining local water and soil conservation projects. What we saw was heartening. The people were fighting the desert encroachment and they had the state backing them. We saw among the dunes a small reservoir the local people had built themselves. The dam was of sand, entirely of sand, and it had shrubs and trees planted to stabilize it.

Water from this reservoir went to the newly planted shelterbelts about the new fields and orchards outside the city walls. Sand dunes

had been leveled and covered with a layer of soil to create new fields. Aerial sowing of grass to check advancing sand was being used quite successfully as we could see for ourselves from atop one of the beacons. Tracts of green grass with patches reaching out into the desert marked the newly reoccupied territory. The invasion was being driven back and the moving sand stabilized with a subsequent drop in the silt content of the Huanghe River.

On the Loess Plateau

We left the desert and struck into the heart of the Loess Plateau. From the distance the huge high-

land appears to be quite flat, but on coming closer the bare yellow earth is scarred and slashed here and there by gullies, thousands of them, some deep and with steep sides. Two hundred or so yards east off the road we came across a deep gulch. Obviously it was the work of recent rains for its sides were almost perpendicular. We took photos of it for the record. The fury and savagery of the attack by the running water on unprotected loess was plain to see.

The phenomenon of erosion is more startling when it is at work, as the rain comes pouring down. We drove through a heavy downpour one day to visit a particularly badly eroded area and saw the yellow earth literally melt before our eyes. A myriad of tiny rivulets ran together down a slope to a small stream gouging deeper and deeper into the ground. Chunks of earth collapsed and crumbled and melted away like pieces of biscuits in a wet saucer. The water at the bottom of the stream was dyed the color of the earth and our hearts were as ashen as the sky above.

"This is where the silt in the Huanghe comes from," Jiang Daquan the geologist said, with a sad shake of his head. He has been working on soil and water conservation on the Loess Plateau for

more than forty years. It was Jiang who, four years ago, observed that the surface of the running water was like a mirror, reflecting clearly even the blades of grass, while below the surface the flow was saturated with silt. He photographed this phenomenon and measured the silt content and found that suspended in every cubic meter of water was 800 kilograms of sediment! According to Jiang's estimate, the 11 major tributaries bring about 700 million tons of soil a year into the Huanghe. The silt raised the riverbed further downriver and was the cause of destructive floods when the swollen river burst its banks. This depletion of the soil and transporting away of millions of tons of arable soil reduced productivity and held down standards of living. It has been going on for a long time and it will need sustained efforts over many years to check this. However, a start has been made.

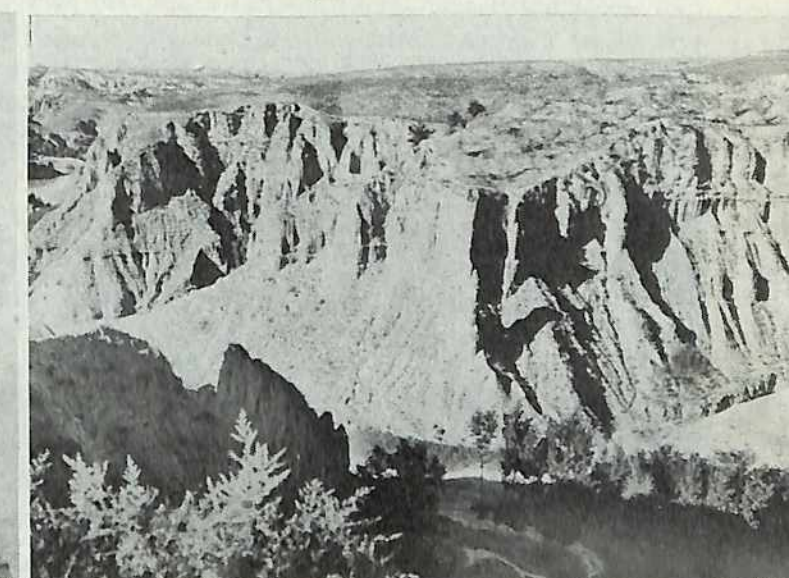
A Green and Prosperous Village

We decided to call on a mountain village not far from the city of Mizhi with the quaint name of High West Ravine. We heard that the people there has been waging a successful fight against erosion. We drove up a long valley and then crossing a sturdy small

Liu Derun (second left) and other conservation specialists.

Liu Xiaochao

Erosion, Hequ county, Shanxi province.



CHEN RINONG is a staff reporter for China Reconstructs.

bridge of stone arrived at High West Ravine in which lived 102 families. There was an air of prosperity about this little hamlet. We saw the trees growing on the slopes and the pastures and fields ending in stone walls in the little gullies.

We met Gao Zuyu, who we learned had been a guerrilla before returning to the land. He was the moving force behind the sustained push to improve the quality of their lives by restructuring and improving their land not long after liberation. They have managed to get much more from the land than the mere 225 kilograms per hectare they had been getting. The villagers had leveled the small ridge behind their village and built it into 2.7 hectares of good land. They had turned 40 hectares of sunny slopes into terraced fields and thrown up rock and earth works across many little ravines to check the run-off and collect silt to gradually build up 17 hectares of fields. Two small dams had been erected to impound water for lifting to the fields. One was on the upper part of the main valley and the other lower down. Loess is rich soil and with an ensured water supply the villagers are now getting 3.25 tons of grain per hectare on their 66 hectares each

year. A hundred and thirty-three hectares of poorer slopes were given over to orchards, woodland and pasture. They concentrated on getting bigger returns from a smaller area through high-input, intensive cultivation, instead of the old way which was to sow widely and hope nature would help.

Gao told us that even with less land under grain than before their total annual grain output had risen from 50 tons to 280 tons. The orchards and timber trees were bringing in more money and the pastures were supporting a sizable flock of sheep, goats and pigs. All this has helped boost incomes and provided the brigade with more funds to buy fertilizer, tools and to invest in production. But above all, and of longer-term significance, was the fact that the villagers have basically licked erosion on their four square kilometers. In the past, as late as 1966, it is estimated that the brigade was losing some 40,000 tons of topsoil a year. When the biggest downpour in 20 years struck in the summer of 1977 very little damage was done to the fields and erosion was minimal.

Our team of scientists took a good look around and liked what they saw. One old soil engineer congratulated the brigade before

he left, saying, "You're doing fine. Your valley is only a tiny part of the area affected by erosion, but you've shown the way."

Water and Soil Conservation

In 1953, the Huanghe River Water Conservation Commission set up an experimental station on the banks of the muddy Wuding, a tributary of the Huanghe, to study and solve the erosion problem in the 18-kilometer-long Jiuyuan Valley through which the tributary flows. The station staff worked with the peasants in building reservoirs and planting a vegetable cover. Their efforts over the years are paying off. The Wuding today is only half as muddy as before and farm production has gone up. From the start, the forty members of the experimental station knew how important it was to get the people to become actively involved and know how to tackle erosion. To this end they ran short-term courses to train peasant anti-erosion personnel from a dozen surrounding counties. Some 200 have been through these courses and they are doing a good job today in organizing and supervising various conservation projects up and down the area.

Sowing grass and planting trees, constructing walls across gulches and ravines to hold back water and soil and build fields by alluviation and building reservoirs in valleys are proving very effective on the Loess Plateau. In the past, this work went on rather slowly, mainly because all the heavy work of moving earth had to be done by human beings. There was very little machinery. Then, a few years back, conservation engineers saw what some of the local people were doing. They were using water power to move the soil instead of using carrying poles and baskets and carts. The engineers took over the idea and introduced hydraulic pressure hoses to remove the earth to where it was wanted.

At Zhangzishan commune we saw this new method being used by a team of peasants to raise the 17-meter-high dam another eight meters. The peasants, thirty of them, were washing away the

earth on the two ridges rising above either side of the dam. The powerful jets of water brought down a steady flow of sediment which were deposited on top of the dam.

Technically, this method is quite simple, and easy to use. Moreover, it is ten times more efficient than earlier methods and it halves construction costs. The erosion experts on our team were amused to see the principle of erosion being put to work to fight erosion. For my part, I was impressed by the crops growing on the broad top and sides of earth dams completed earlier. I learned that there are some 8,000 of these dams, each 15 meters high, in the two provinces of Shaanxi and Shanxi.

Rescuing the Reservoirs

On our 3,200-kilometer trip we saw a lot of good work being done to bring erosion under control. The overall situation, however, is still grave. Very grave, an engineer commented when I asked how serious the problem really was.

Erosion has not yet been tackled effectively in many places along the Huanghe, he said, and soil brought down into the reservoirs is silting them up fast, killing reservoirs with sediment within five to ten years. In Shaanxi, 40 of the 120 reservoirs with a capacity of a million cubic meters have been put out of use and the rest are able to hold only half the water they had been built to hold.

I began to see the dimensions of the silt problem and why local reservoir builders and experts alike were trying so hard to find a solution. One apparently promising method we saw being used to get out the silt was being tested at the Tianjiawan Reservoir. They were siphoning out the sediment.

This reservoir used to hold 9.4 million cubic meters until it had 4 million cubic meters of unwanted soil dumped into it. A reservoir can only hold so much "dregs" before it has to be abandoned. What was to be done? One young technician came up with a suggestion. He had come across the siphoning method in his reading.

For Your Reference

The Huanghe River and Silt

THE 5,464-kilometer Huanghe (Yellow) River flowing through nine provinces and autonomous regions is second in length only to the Changjiang (Yangtze) River. It drains an area of 752,443 square kilometers inhabited by 100 million people. The basin has 20 million hectares under cultivation and is regarded as the cradle of the Chinese nation.

Its source is in the Yueguzonglie basin north of the Bayan Har Range in Qinghai province. The upper reaches end at Togtoh county in Inner Mongolia and its middle reaches at Mengjin in Henan province. The river empties into the Bohai Bay at Kenli county in Shandong province. The Huanghe, or Yellow River, has the highest silt content in the world, whence it gets its name. It cuts across the world's largest loess plateau, 580,000 square kilometers of loamy soil and sparse vegetation. Heavy rains wash something like 1,600 million tons of soil a year into the river, enough to build a ribbon of earth one meter high by one meter wide 27 times around the earth.

A large portion of the silt is transported to the sea, but about 400 million tons of it is dumped along the lower reaches to raise its riverbed about 10 centimeters each year. In some places the river is three to five meters above the surrounding land, a virtual "supra-terranium river" which has to be confined by high and stout dikes. In the 2,000 years before 1949, when the country achieved its liberation, there were no less than 1,500 dike bursts and 26 violent changes in its course. Each flood took a huge toll of lives and created enormous devastation, which is why the river has been referred to as "China's Sorrow."

In the 30 years since the establishment of new China, the people's government has built many multi-utilization projects to make the river do more work and life safer for the millions living along its banks. On the upper and middle reaches stress has been on water and soil conservation through terracing fields, building walls across ravines to create fields by alluviation, planting trees and sowing grass.

Seven major conservation projects have been completed on the river itself and 136 medium and large projects on the tributaries, and dikes have been reinforced. The irrigated acreage has risen from 0.7 million hectares to 3.5 million hectares.

Although no dike breach has occurred in the past 30 years thanks in large part to these efforts, the problem of silt remains a major headache, which was why the China Society of Water Conservation organized a survey of the middle and lower reaches of the Huanghe prior to the symposium on how to tame the Huanghe held in October 1979. The 220 specialists and technicians attending presented 140 reports and papers and put forward tentative plans designed to improve soil and water conservation in the Huanghe basin.

Minimal erosion now in Wangjia Ravine, Lishi county, Shanxi province.





A flow of water carrying earth to build a dam, Zhangzishan commune, Zhongyang county, Shanxi province.

Couldn't they try siphoning out the silt? he asked. Two years were spent in trying before they could put the idea into effective practice. Then in the next three years they sucked out something like 80 percent of the silt from the reservoir.

We climbed to the top of the dam of red granite blocks to see how the siphon idea at work. There was a boat anchored out on the artificial lake with a huge pipe leading from it to a conduit on shore. Water containing 300 to 500 kilograms of sediment per cubic meter was spilling out of the conduit into a canal to discharge silt over a thousand and three hundred hectares. The local man showing us around said that the layer of silt was more than just covering the land, it was also fertilizing the land.

When we got off the dam to have a look at the canal we ran into the inventor of this silt-siphon method. We found him squatting by the canal, watching the operation. He is Fang Zongdai, 67 this year. A foreign journal in the 1940s had published his article about siphoning off the silt but nobody had paid much attention to

it. Anyway, there were no reservoirs even to silt up in China then, he said ruefully. Reservoirs and their problems came only after the country's liberation when the peasants were organized to farm collectively and reservoir building as part of flood-control projects on the Huanghe began. Fang had taken part in many flood-control projects but now he is applying himself to the problem of stopping the reservoirs from silting up. He claims that his method is the answer, but not all share this view. But whatever the case may be, the subject is a new one and is getting a lot of attention today. A definitive solution to the problem of silt in reservoirs has yet to be found.

Great Yu and Dragon Gate

In its long south-flowing stretch, the river has Shanxi on its left and Shaanxi on its right and near Yichuan and Hancheng the river begins to course through defiles so narrow and the walls so sheer that the water has to fight its way through. The local people have aptly named one very narrow sec-

tion "the bottle neck." Sixty kilometers further south the Huanghe has to squeeze through the famous Dragon Gate, which got its name from the steep walls rising almost perpendicularly out of the water. Li Bai, the Tang dynasty poet, had described this spot thus: "The Huanghe River cleaves the Kunlun Range ten thousand *li* to the west/ To roar and pound through the Dragon Gate." Legend has it that some 5,000 years ago lived Yu the Great, who cut a channel through the mountains here to open an outlet for "the Nine Rivers."

We saw nothing of the ancient sage. We met numerous people like him engaged in taming the river. At Dragon Gate, we saw a hydrographic station perched halfway up a precipice. The only access to it was by an iron cage hanging from a cable. We crossed over in the cage to visit those lonely souls who worked in all weather to record the river's flow and silt content, assiduously collecting data for more projects to tame the Huanghe.

Desilting Sanmen Gorge Dam

Through Dragon Gate and then bursting out of the Yumenkou opening, the Huanghe reaches open, flat country again before it is forced east by the impenetrable Qinling Range on its south. Further east the river has forced a way through the Zhongtiao Mountains at a place called Sanmen (Three Gates) Gorge. This narrow stretch once had two rocky isles dividing the flow into three streams. Since ancient times the three narrow gaps have been known as Man's Gate, God's Gate and Spirits' Gate, and collectively, "Three Gates."

A dam was built here between 1957 and 1959. It was the biggest

water conservation project undertaken by China at that time. In 1960 the dam began to impound water and the project has been playing an important role in controlling flood, ice runs, generating power and irrigating fields. But due to inadequate experience no one foresaw the danger of silt filling up the reservoir. Within a few years silt became a major problem. The huge dam was seen as a potential threat to a vast area and a crash program was started in 1965 to eliminate the danger. Outlets were built to improve silt discharge and after 1973 the problem here was considered by and large solved.

The Three Gates are no longer in view. Only the legendary rock called "The Midstream Pillar" stands solitarily above the water below the great dam, pounded by angry, churning water. The reservoir feeds water to a million hec-

tares of farmland and to the generators which supply 2,740 million kilowatts of electricity a year to central China.

As the Sanmen Gorge project alone is unable to solve entirely the problem of silting and the flood threat on the lower reaches experts are suggesting that another project should be built in one of the valleys below the Sanmen Gorge. This, they argue, would make fuller use of the Huanghe's hydro-power potential and also bring a greater area under irrigation. When will this be done and where will be decided soon, but even to a layman like myself I could understand that an enormous amount of effort is needed to solve the silt problem.

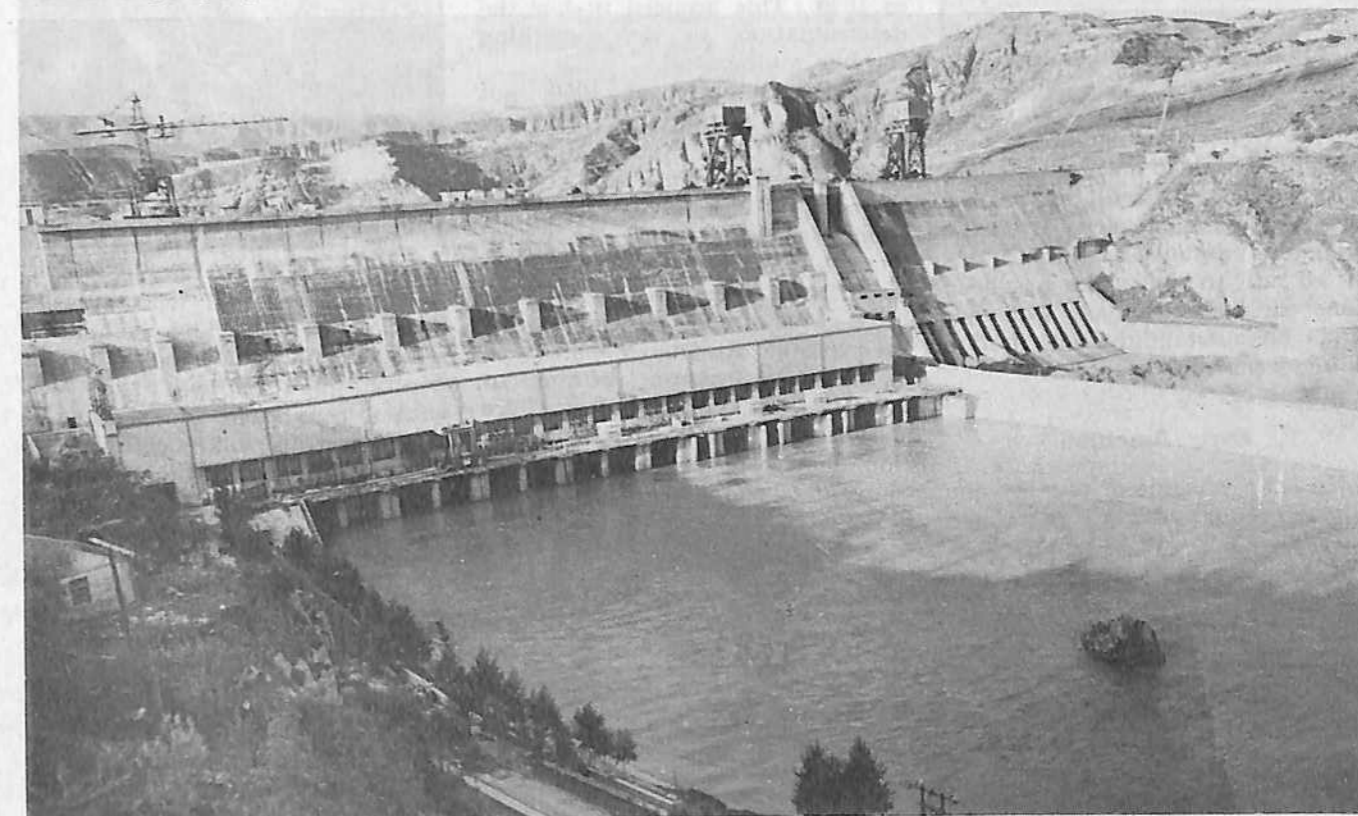
Sanmen Gorge was the last stop on our trip. On board the hydrological observation boat team members were animatedly discussing further plans to deal with the

various problems of the river, or working silently on these. The month I spent traveling with the team made me aware of some of the many difficulties involved in tackling erosion and the silt problem, and the economic and scientific significance in solving them. It will probably take several generations of efforts before the Huanghe River is brought fully under control. Nevertheless, with the whole might of the people married to modern science and technology the work is speeding up and the river will be made to contribute more towards China's modernization program. □

Addition to our article on Hans Shippe in the December 1979 issue:
Hans Shippe wrote under the pseudonym Asiaticus.

Sanmen Gorge hydropower station.

Photos by Han Xuezhong



She's Chief Engineer of the Shengli Refinery

OUYANG CAIWEI

EARLY every morning a slender graying woman of 50 clad in overalls and work shoes and a blue cloth work cap jumps on her bicycle and pedals around to the towering distillation column, the catalytic cracking installation and four others at the refinery of the Shengli oil field to plan the day's work with workshop heads and engineers and technicians. Then she goes to the control room to inquire how production went the day before and deal with any problems that have come up. Then she begins a series of conferences with technicians and workers on how to improve things like work processes or raise the efficiency of equipment.

She is Xu Qian, chief engineer and deputy director of production and technology of the refinery of the huge Shengli Petrochemical Complex in Shandong province, which processes 28 percent of the oil from China's second largest oil field. Under her guidance, remodeling was done on the refinery, originally built in the 60s, which raised its capacity from the designed annual 2.5 million tons to 3.5 million tons. She has been honored as a woman who has made an outstanding contribution to modernization.

Early Ambition

Xu Qian was one of four women who graduated in petroleum engineering from Qinghua University in 1952. She had entered the university four years earlier just before liberation, because she believed, like many young people of her generation, that China's salvation lay in developing its own

industry, and she wished to play her part through engineering.

In her childhood and youth, Xu Qian had lived in the port city of Tianjin under Japanese occupation for eight years. Her father found it difficult to support their family of eight on his salary as a middle school teacher. She saw a China that was poor, backward and bullied by Japan and other powers. As the country had little foundation in science and technology, the people had to use imported petroleum and manufactured goods. When Xu Qian was in senior middle school, a woman teacher of history, possibly an underground Communist, helped her to realize how imperialist powers had oppressed China in the last 100 years since Opium War in 1840. This aroused in her the determination to do something for her motherland.

In the summer of 1950, not long after liberation, a deputy director of the State Petroleum Administration came to Qinghua University. He talked about the country's urgent need for petroleum but made no secret of the harsh conditions in the remote areas where most oil fields were then located. Xu Qian was inspired and saw petroleum refining as her life work. When stating where she wanted to work after graduation, she wrote in her application: "I want to work in a remote area. Even if I have to go through this hardship or that all my life so that my country can have her own petroleum, I think I will feel happy."

After graduation she was assigned to work in the State Petroleum Administration supervising safe shipment of petroleum. She always asked to go to different oil fields

and often traveled with convoys of tank trucks, and sometimes was the only woman. One winter night when she was with a convoy in the northwest, she almost froze to death in the cabin of a stalled truck and had to be revived by her companions. When the convoy arrived at its destination her legs were so swollen from frostbite that she found it difficult to take off her fur-lined boots.

Undaunted by hardships, she pressed for a job with more responsibility under tougher conditions. In 1955 she was assigned to the Xinjiang Petroleum Administration at Urumqi, capital of the



Petrochemical engineer Xu Qian in her work garb. Liu Libing

and often traveled with convoys of tank trucks, and sometimes was the only woman. One winter night when she was with a convoy in the northwest, she almost froze to death in the cabin of a stalled truck and had to be revived by her companions. When the convoy arrived at its destination her legs were so swollen from frostbite that she found it difficult to take off her fur-lined boots.

Undaunted by hardships, she pressed for a job with more responsibility under tougher conditions. In 1955 she was assigned to the Xinjiang Petroleum Administration at Urumqi, capital of the

Xinjiang Uygur Autonomous Region in the remote northwest, but she was not content. Finally the leaders had to consent to give her a post as an engineer at the Dushanzi Oil Refinery in a vast expanse of flat, arid, stony and formerly uninhabited area.

She asked for no special favors as a woman. She often climbed distillation columns 30 to 40 meters high to inspect them, and made it a point to be the first to go into dirty distillation columns that needed overhauling, even when the temperature inside was nearing a suffocating 50 degrees centigrade.

"My ten years' life at Dushanzi was busy but rewarding," she recalls. "Although the place is far from major cities, I didn't feel life was dreary. All of us went into production single-mindedly. We rejoiced at its growth." By the time she left Dushanzi to work at the Shengli oil field ten years later, the refining capacity had increased several fold and it was making many more kinds of lubricants.

Marriage and Career

Dushanzi means even more to Xu Qian. It was at this remote oil field that she was married, at the age of 27, to Zhang Shouming, a mechanical engineer two years her senior. He is also strong-willed and equally dedicated to the country's petroleum industry. They had met at an oil field in the northwest in 1953. Zhang got a colleague to write to Xu Qian to ask if they might correspond, and they did. When in 1954 he was offered the choice of working in Beijing or Xinjiang, he decided on Xinjiang.

"I thought even more highly of him because of his decision," Xu Qian says. A year later they came together again at Dushanzi. They married in 1956. After their baby girl Caoying was born in 1959, they agreed not to have any more children so they could work better for the petroleum industry.

"My husband was content with a daughter," Xu Qian says. "He is not one of those who thinks boys are better than girls." Living

conditions were rough and child care was a far greater problem than it is today at the oil field. A motherly woman, a relative of one of their colleagues, agreed to look after Caoying at home until she was three. Then the child was sent to a day nursery. The family ate supper together before the baby's bedtime and then the parents often went back to their offices to work. A neighbor would listen if the child woke while they were out.

Once Caoying had bronchitis for three weeks, and Xu Qian had to take leave of absence to take care of her. After that, the parents decided it would be better for her to go to live in Tianjin. There her grandfather and aunt and uncle have lovingly brought her up since.

About this Xu Qian says, "Whenever my husband and I had some leisure we felt sad that we could not see our daughter and our home seemed empty, but I do not regret the decision." Since they found that Tianjin had better educational facilities than the new oil field, Caoying remained there. Now 20, she will graduate from senior middle school this summer. She has good records and grades in school and loves music and sports.

In 1966 Xu Qian was made a vice-head of the technical depart-

ment in the Shengli Oil Refinery, which was then under construction.

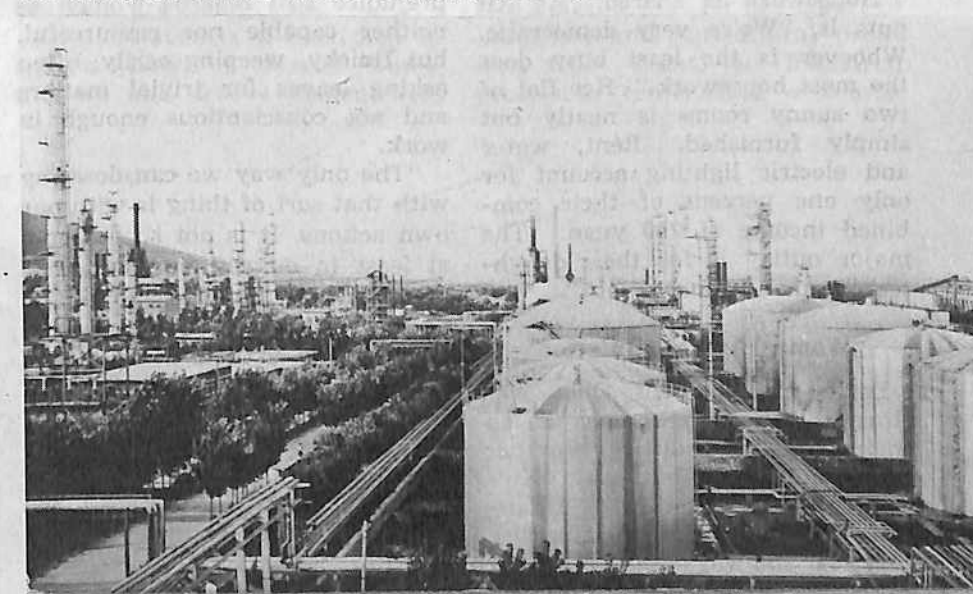
Shengli is only eight hours by train from Tianjin. So whenever Xu's work brings her near by, she takes the opportunity for a visit with her daughter. The whole family gets together on longer holidays. Caoying spends summer vacations with her parents.

After Caoying left, Xu Qian gave up what free time she had to teach in a spare-time technical school run by the refinery, but she did have some fun in the refinery's photography club, one of several such groups whose activities include amateur painting, music, drama and sculpture. She has a photo album with 500 photographs of Caoying, mostly taken by her.

When Xu Qian and Zhang Shouming married, they made a pact to help each other in their work and have done so ever since, even after Xu Qian was promoted to head post at Shengli in 1974. They have lunch in the canteen, cook and eat supper together at home. Sometimes she goes back to her office at night and Zhang Shouming reads at home.

On Sundays they make some favorite dishes or dough-wrapped meat *jiaozi*. Sometimes they take a bus to the nearest small city to visit a park, do shopping or dine at a restaurant.

The Shengli oil refinery where Xu Qian is chief engineer.



Xinhua



Women oil drillers at Shengli oilfield.
Xinhua

Housework is shared. As Xu puts it, "We're very democratic. Whoever is the least busy does the most housework." Her flat of two sunny rooms is neatly but simply furnished. Rent, water and electric lighting account for only one percent of their combined income of 250 yuan. The major outlay is for their daughter's keep and books.

Women Are Not Inferior

Early in 1963 Xu Qian was already nationally-known as an engineer in her industry. For her outstanding contribution in Xinjiang she was received by Chairman Mao at a national conference. Last year she was elected a deputy to the National People's Congress.

She is proud and happy about all that the Shengli Oil Refinery has achieved. The extra capacity achieved by one renovation in 1970 alone under her leadership is equivalent to building a new refinery at one-third the cost. The profit turned over to the state by the refinery over the years is enough to build 21 others, each capable of refining 2.5 million tons of crude oil a year.

Long Shouxin, the present director of the oil refinery, has worked with Xu Qian since the Xinjiang days. "Her knowledge comes mostly first-hand," he says. "She is good at delving into technology and analyzing problems. Her work on the innovation has tested all her qualities: her determination to persist when time and again there seemed to be failures, and her skills as a technologist and a leader."

He recalls that Xu Qian's maturing as a woman pioneer in such a male-dominated industry was not smooth sailing. There were times when men ridiculed or rebuffed her. Once when she disagreed with an official of the Shengli Complex on a technical problem, he lashed out at her, "If you don't want to go ahead, you'd better go home and look after your child." It turned out later that Xu Qian was correct and the official apologized to her.

Recalling her experiences over the years, Xu Qian says, "Male prejudice still regards women as neither capable nor resourceful, but finicky, weeping easily, often asking leaves for trivial matters and not conscientious enough in work.

"The only way we can do away with that sort of thing is with our own actions. It is not so difficult, at least in oil refining. It's true that women do not have the physical strength of some men, so not many of them do work like drilling, but they do have as much staying power as men. They are very careful in their work and also thoughtful in planning.

"Leaders have to canvass the opinions of many people and organize personnel. Women can do well at this sort of thing."

Xu Qian has proven this true in her own life. When she came to the Shengli oil field in 1966, it was rent by factionalism and ideological confusion. Her own best qualities stood her in good stead: drawing on her determination and modesty and her skill as a technologist and leader she was able to pull together a technical team and get things going.

In 1976 during the heyday of the gang of four, when technical knowledge made one subject to attack as a bourgeois intellectual, most of the technical personnel were taken out of technical work and sent to work in the shops. At Xu Qian's encouragement they took their plans with them and talked them over with the workers, resulting in improvements.

The workers admire her for her thorough knowledge of the refinery's equipment and pipelines, her capacity to direct work on the spot and solve difficult problems. She readily turns up at any trouble spot early or late, rain or shine.

The younger generation of technicians appreciate her constant efforts to train them. The Shengli Oil Refinery has two other women engineers and 67 women technicians. Xu Qian places strict demands on her younger colleagues, but is always there to help and encourage. In 1968 a college graduate named Li Yizhong was assigned to work with Xu Qian. He developed a design for a new installation in less than two years. Although the design had a number of defects and insufficient data, Xu affirmed its good features and pointed out its shortcomings. She even went with him to a chemical plant in northeast China to acquire accurate reference data. Thus she helped him draw up a successful design. The young man took part in five major design projects in seven years and became an engineer in 1977.

"We work for a great cause," Xu Qian says, "but one individual or one generation can't do it. Thousands upon thousands of technicians and engineers, both men and women, are needed." □

CHINA RECONSTRUCTS

The cities of Guangzhou and Shenzhen, both close to Hongkong, are two of a few selected areas in China where overseas investors have been granted favorable conditions for a limited period in order to stimulate economic development. This is viewed as one means of speeding up China's socialist modernization with quick capital, and by facilitating training of personnel and importation of new technology, equipment and systems. The article below and one on p. 17 tell what is being done in these two cities.

Developing Shenzhen

LIU XUEQIANG

SHENZHEN is the place where people cross Luohu Bridge from Hongkong to enter the People's Republic of China. As a result of this area being made one of the special districts which may attract foreign investment, a lot of industrial development and construction is under way in Shenzhen. From a quiet town of 20,000 inhabitants only a year ago, Shenzhen has grown to be a city of 330,000. The city and its environs have been promoted to the status of a special municipality directly under the Guangdong province government.

"From the viewpoint of an investor," the chairman of a Hongkong financial group told me, "Shenzhen has several advantages — suitable geographical and social conditions, convenient land and water communications and a vast area of undeveloped land. Rents charged on property and ground are low." The area also has a large labor force, and he also cited the low cost of labor.

The 2,000 - square - kilometer Shenzhen district lies on the fertile

Zhujiang (Pearl) River delta. Its subtropical climate provides lush crops the year round. Beautiful bays and excellent sites for harbors line its 195 kilometers of coast. The Hongkong-Guangzhou rail line passes through the city. Every year two million Chinese and foreign travelers and compatriots from Hongkong and Macao come and go via Luohu Bridge and the Wenjin ferry. The railway station has been enlarged several times, but is always packed.

Street Scene

The street scene in Shenzhen seems more relaxed: beneath the horsetail beefwoods and royal poincianas there are strollers, both visitors and local people clad in the colorful garments of the south, which flutter in the sea breeze from Shenzhen Bay, taxis of travelers shuttling to and fro. More restaurants and quick-lunch counters are being built.

On the outskirts of Shenzhen an endless flow of tourist buses, tractors and trucks loaded with

building materials stir up clouds of dust. All along the highway one passes sites where hillsides are being blasted to fill in hollows to create new level ground. One passes a gigantic automobile assembly plant which will be completed soon. Built with joint investment by the municipal government and the agent companies of the U.S. Ford Motor Company and the Japanese Mitsubishi Motors Corporation, it will produce passenger cars and deluxe tourist buses. Work has begun on the foundation for a big printing plant. From an official in the municipal administration I learned that the central and Guangdong provincial governments, too, had greatly increased available funds to be linked with overseas capital on developing the city.

Contracts Signed

Plans call for building Shenzhen into a sizable port for the export of industrial and agricultural products from China, an industrial processing center and a tourist

Shenzhen railway station, with Hongkong on the right.



area. The Office of Economic Relations with Foreign Countries located in the Workers' Cultural Park has become the busiest place in the city. Between January and October of last year representatives from 380 overseas firms came there for investment negotiations or discussions on other matters. Among them were representatives of 45 financial groups and multinational corporations, and businessmen from the United States, Japan, West Germany, France, Canada, the Netherlands, the Philippines, Singapore, Malaysia, Australia, Belgium and from Hongkong and Macao.

Within the short time of a year nearly 200 contracts were signed embracing industries in electronics, textiles, clothing, automobile assembly, printing, leather goods, toys, precious stones, foodstuffs, tourism, building materials, ocean fishing and equipment for fishing grounds. Total capital invested topped 200 million U.S. dollars. Business is done in the form of processing raw materials supplied from elsewhere, compensatory trade, cooperative production, joint-venture enter-

Imported automatic welding machine processes radio-cassettes in joint-venture plant. Photos by Zhu Yongqing



prises or enterprises financed entirely by overseas capital.

Shirts and Knitwear

The earliest of such undertakings is the Shenzhen Garment Factory in the center of the city. As an initial investment, a Hongkong manufacturer provided a small factory with 256 sewing machines worth 120,000 U.S. dollars. The present factory has an anticipated capacity of 65,000 dozen men's shirts. The Hongkong firm supplies the raw materials and, in the form of compensatory trade, the factory repays the investment with shirts over a period of three years.

A new production system was set up. Now, instead of working on one shirt from start to finish—as was previously done in this particular small plant—each machine operator processes a different set of pieces. Daily output has increased from five shirts per machine to 18, a higher rate of productivity than in factories of the same kind in Hongkong. The Shenzhen factory now has 397 workers and technicians but only 11 administrative personnel. In its first year the Hongkong investor made a sizable profit, the factory paid back 80 percent of the initial investment and was able to double the workers' wages.

Construction on the Shenzhen Woolen Knitting Factory was begun last January with investment of 250,000 U.S. dollars from a Hongkong company and 300,000 yuan Renminbi in Chinese investment. The factory went into

operation last May, producing 54 varieties of wool knit goods. Ninety-five percent of the total workers are young women—350 of them—with an average age of 20.

Visiting its bright new workshop, I asked a technician from Hongkong how he found these new workers at operating the machines.

"It usually takes three months to train for such jobs in Hongkong, but the young people here are hard workers," he said with a smile. "They finished their apprenticeship in a month and their quality is not bad, but of course there's room for improvement." Because the items the factory produces are up to standard, the Hongkong investor is willing to expand production and build another shop with a floor space of 4,000 square meters.

Plans for Shekou

Thirty kilometers west of the city is Shekou, a promontory in Shenzhen Bay separated from the town of Yuanlang, a satellite of Hongkong, by 27 nautical miles of water. Along its shore the Hongkong Merchant Steamship has invested heavily in construction of docking and related facilities. Since Shekou has a lot of land unsuited for farming but suitable for factories, it will also be built into an industrial area.

First-stage projects begun last July include an 8-kilometer highway, a 2-kilometer coast road, a 600-meter dock capable of berthing 3,000-5,000-ton freighters, dredging for the port and navigation

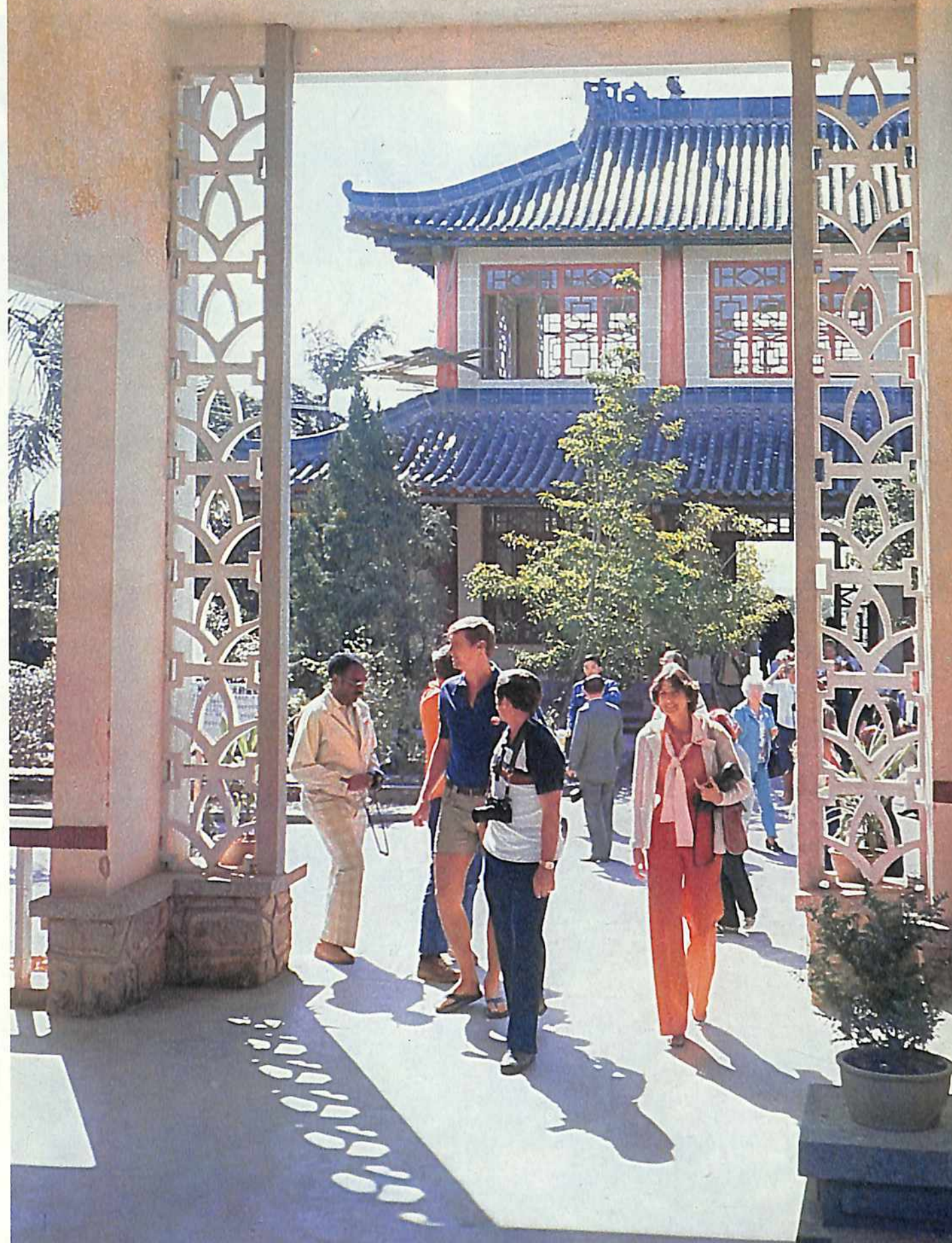
Joint-Venture Law

THE Law of the People's Republic of China on Joint Chinese and Foreign Investment promulgated on July 1, 1979 states (Article 1):

With a view to expanding international economic cooperation and technological exchange, the People's Republic of China permits foreign companies, enterprises, other economic entities or individuals to incorporate themselves, within the territory of the People's Republic of China, into joint ventures with Chinese companies, enterprises or other economic entities on the principle of equality and mutual benefit and subject to authorization by the Chinese government.

Shenzhen Reservoir and the Red Tower are popular tourist spots near Shenzhen.

Photos by Zhu Yongqing





Local and an overseas technicians exchange pointers at the Guangming Electrical Instrument Plant.



Making toys for export.



Technician from an overseas firm (left) helps solve a production problem at the Luohu Leather Shoe Factory.

Australian duck-raising specialist (right) at a joint-venture duck farm.





Nantou commune shop processes silk flowers for overseas firm.



Electronic watch shop at Shenzhen Electronics Factory.

Worker in joint-venture shirt factory seems to like what director and technician from overseas firm have to say about quality.



channels, a substation, a water plant and the accompanying pipes and cables. Factories — a dozen sizable ones — will follow as soon as this construction is finished.

In the development office of this area, a row of cream-colored buildings set among lush horsetail beefwood trees near the shore, I learned from Xu, its energetic deputy director, about plans for the future. Standing before a huge map, Xu pointed out the sections for heavy industry, light industry, chemical plants, a commercial area and a residential area. One portion is to be reserved for development as a pleasure beach with resorts.

Xu took me out onto a hilltop at the tip of the promontory's headland commanding a broad view of the future industrial area. In the bay, muddy jets of water were shooting out of the pipes of a dredger and on the newly-leveled ground all kinds of machinery were at work. Pointing to the open land below us, Xu said, "Over there will be a ship salvage yard. There will be a steel rolling mill. A new dock will be built in the bay. In a few days this hill we are standing on will be directionally blasted to fill in a small inlet."

Seaside Playground

The Shenzhen area has many scenic spots of interest to tourists and vacationers, including the Shenzhen and Xili reservoirs, Yulu Hot Spring and Meisha Beach. I visited a vacation resort camp at Xili Reservoir jointly run by the Shenzhen Travel and Tourism Company and a Hongkong counterpart. For 15 U.S. dollars a day, holidaymakers from Hongkong can rent a tent for sleeping on the beach for a night and enjoy the area's facilities for boating, swimming, fishing, mountain climbing, golf and bicycling. The price includes gourmet food and the famous fresh fruit from the nearby orchards. When I was there it had been open less than a month but had already received several thousand guests. Accommodations are now being expanded. □

Aiding Overseas Investors in Guangzhou

XIAN ZI'EN

THERE ARE quite a few United States corporations which can and are willing to render service in China, I learned from an old classmate of mine at Qinghua University years ago who has returned to China from the U.S. But most of them do not know how to go about negotiating for investment in China. I told him that financing capital construction and production with foreign investment is still a new thing in China. We have not had much experience with it and it may not always run smoothly. I also suggested that he might find it helpful to study the Law of the People's Republic of China on Joint Ventures Using Chinese and Foreign Investment adopted by the National People's Congress and went into effect on July 1, 1979.*

Not long ago I had the opportunity to visit a number of factories in Guangdong province which are cooperating with foreign investors. As of August 31, 1979 there were 368 such enterprises in Guangzhou using foreign investment to manufacture products with imported materials or doing assembly with imported parts, and 12 involving compensatory trade and joint venture. I visited five factories in the city of Guangzhou, four in Panyu county and four in Huaxian county making clothing with imported materials and assembling electronic products such as electronic wrist watches, television sets and radio-cassette recorders. Foreign investment in each of these factories is between 100,000 and 5,000,000 U.S. dollars. Contracts for most of these were settled within a few months.

XIAN ZI'EN is a member of the economic and construction group of the Guangdong Province People's Political Consultative Conference and has wide experience in industrial economics.

Of course some negotiations take longer. Negotiations for all of the 368 were done after the Guangzhou export fair in the Autumn of 1978, and operations began in the spring of 1979.

Most of the factories I visited have adopted modern methods of management and operation. The cost of processing in these factories is a little lower than in Hongkong. They have been able to meet their production plans in time and turn out products to foreign specifications. In one Guangzhou electronics factory producing TOQ triodes the rate of qualified products is 97 percent.

Larger Projects

A number of projects on a larger scale are still in the process of negotiation or waiting for governmental approval from Beijing. One foreign investor I know of said that he had drunk innumerable cups of green tea during talks in government offices from Guangzhou to Beijing, but though most of the cadres he talked to were quite interested in his proposal, the contract had still not been signed. It is evident that small-scale investments can be approved more quickly while large-scale compensatory items and joint venture items take more time.

After studying the foreign investment law and regulations I feel this is not unreasonable, because investment contracts are approved by different government authorities according to the size and character of the investment.

The following forms of foreign investment are possible:

* The text of the joint ventures law appeared in full in the July 20 (No. 29) issue of *Beijing Review*.



TV assembly with imported parts at the Guangzhou Broadcast Materials Plant. Yue Gao



Making electronic wrist-watches.

1. Manufacturing products as requested by foreign concerns using imported materials.

2. Assembling products as requested by foreign concerns using imported parts.

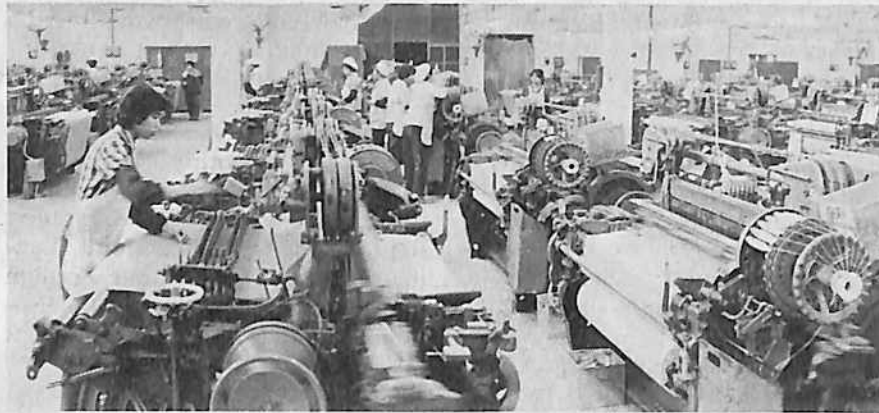
3. Medium and small-scale compensatory trade, that is, manufacturing products as requested by foreign companies using imported machinery and equipment and imported materials and parts.

The first two forms are approved by the local governments, municipalities, provinces or autonomous regions and can therefore be handled rapidly. In the third form in which foreign investment in a compensatory enterprise is repaid through sale of its products abroad, the contracts will be approved either by the State Planning Commission and the Ministry of Foreign Trade or by a local government.

Importing Technology

All the three kinds of enterprises may import advanced technology, machinery and equipment. Local governments are authorized to approve such agreements up to the limit of one million U.S. dollars. If a sum over this figure is involved, the contract will be approved by the State Planning Commission and related ministries.

If the proposal for foreign investment is in the form of a large-scale joint venture, the process of



Investment in this shop making denim for blue jeans will be paid for in compensatory trade.

negotiation is longer and more complicated. The most important point is that the proposed investment should be in accord with the general plan of development and that the technology, machinery and equipment to be imported are things China needs for her development. Foreign investors may initiate negotiations either with local governments or directly with the related ministries at the central government level.

I found that the foreign trade units, local government, and industrial and commercial enterprises, as well as tourist and service units in Guangzhou are all eager to do what they can to smooth the way for foreign investors. They are now making a study of their work thus far with the aim of improving it and cutting down on unnecessary formalities. □

Investment Information

INQUIRES concerning joint ventures can be addressed to the China International Trust and Investment Corporation (CITIC) which was set up last July expressly for the utilization of foreign investments on behalf of various Chinese central and local authorities, and the introduction of advanced technology and equipment for running joint enterprises. Its address is: P.O. Box 9021, Beijing. Cables: CITIC BEIJING. Telex: 22305 CITIC CN.

Lightening the Load for Working Mothers

TAN MANNI

How do working mothers cope with the problems of children and housekeeping? Fathers, of course, are helping out more. In addition there are many social services such as nurseries and cafeterias run by factories and other places of work. Neighborhoods, too, help in this way, and by organizing people with free time for housework aid services, for a small fee. Below we tell how these things work, through the stories of two families in Shanghai.

ONE evening last winter I knocked on the door of apartment 501 in the huge ten-story apartment building, Hebin Mansion, beside Suzhou Creek in Shanghai. It was opened by Zhang Zirong, short, plump and smiling. A few hours earlier I had seen her as a brisk professional, an architect bent over a drafting board at the Shanghai Institute of Industrial Design. Now she was a typical housewife, with apron and sleeve protectors, and a little boy at her heels. She welcomed me warmly to come inside. Her husband, Zhang Yongxiao, a 40-year-old sub-chief of a designing room in the same institute, was busy cooking. He greeted me cheerfully from the kitchen, frying pan in hand.

Three hours later, supper and washing up over and the children put to bed, we settled down at last for a quiet chat. Signs of fatigue showed on her face, but when she launched into an account of their daily routine in their household, with her husband contributing every now and then, she began to relax a bit.

"My day begins with the alarm clock going off at five thirty," said the 37-year-old mother of two. She

compared herself to a juggler, catching the "ball" of her work for the country's socialist modernization and snatching at the second ball of running a household. She attributed her ability to keep both balls going at the same time to help from neighbors and society as a whole.

"I listen to the weather forecast as I wash and dress. At six, I take a basket and go do my shopping. I come back half an hour later with our breakfast and the day's groceries. Meanwhile, my husband has dressed our six-year-old son

Chuangdong, made the beds and tidied up the place. After breakfast, our 11-year-old daughter, Yanmei, goes off to her school. I leave the apartment at seven thirty, dropping Chuangdong off at the kindergarten on the second floor. It's run by the neighborhood office. If there's time I have a word or two with his teacher. I usually get to the office by 7:50, which gives me a few minutes. And that's how my busy day starts."

Zhang Zirong is a graduate of Chongqing Institute of Civil Engineering in Sichuan province. Since her graduation in 1965 she has designed defense projects, factories, research establishments and hospitals in Shanghai and other places. At the moment she was working on a design for a large purification workshop for an integrated circuit factory.

"My husband and I have lunch at our institute's cafeteria. Yanmei comes home and eats in the lunch-

Lunch is delivered to school children from the neighborhood cafeteria on Zhapu Road.



TAN MANNI is a staff reporter for China Reconstructs.



Many are finding bread, as from neighborhood-run bakery above, easy to keep and serve.



Physical check at kindergarten where Zhang Zirong's son goes.



The neighborhood laundry on Zhapu Road.



The Zhapu Road medical station sends help when someone in the family is sick. Photos by Xinhua

room for children of working couples. The food comes from the cafeteria run by the neighborhood office, and women on the residents' committee take turns taking care of the children. They have fish or meat with every meal, as well as vegetables. They charge at cost, which comes to about twenty fen per meal.

"During the half-hour break after lunch I run through the daily papers or shop on Nanjing Road just down the way. Yesterday I bought Yanmei a sweater with a turndown collar for her birthday.

"Yanmei gets back from school at half past three. While she does her homework she puts the rice on the stove for supper. The residents' committee has someone on duty 24 hours of the day on each story of our building, and two retired women workers living next to us are always very helpful. Yanmei goes to them if she has any problems, so we aren't worried about her being at home alone. At five she fetches her brother home from the kindergarten. He has already had his supper there.

"After supper my husband checks Yanmei's homework, and before the children's bedtime he plays with them a bit. On weekend evenings if we don't go to watch TV at a neighbor's we sometimes have a family musical. The four of us entertain ourselves." I was told

that the couple are popular solo and chorus singers at amateur concerts held at their institute.

"After the children have gone to bed, my husband sometimes does work he's brought home with him or reads. I do some mending or knitting. Sometimes I look over books or journals, like *The Architects' Journal*, for instance. Well, that's our routine on most week days. The pace on Sunday is grueling. My husband cooks the two meals we have and I do the shopping. The rest of the day we do laundry or I sew on the machine."

Zhang Zirong said she hated having to spend so much time shopping and washing clothes. The time could be better used, say, reading. She cited household aid services now available through the neighborhood office, but felt her family couldn't take advantage of them yet. "If our salaries were larger we could become more 'emancipated' and have more free time like neighbor Yang Mengliu. She has someone from the neighborhood service group do her shopping and washing."

Monthly Budget

Zhang Zirong's family budget is about average for technical people in their late 30s and early 40s. Their incomes add up to 146 yuan a month. They have two old people to help out in addition to sup-

porting their two young children. Their monthly budget works out more or less as follows:

Rent, water, electricity & gas	14 yuan
Nursery fees, including two meals a day	12 yuan
Lunch at cafeteria, husband and wife	15 yuan
Lunch for Yanmei	6 yuan
Food for meals at home and sundries	58 yuan
Cigarettes, candy, fruit	10 yuan
Other expenses (including clothing, holiday gifts for relatives and medical expenses for the children)	16 yuan
Savings	5 yuan

Since shopping service for their family would cost three yuan a month and laundry six yuan they felt it would be too much of a strain on their budget.

A Better-Off Family

Zhang Zirong is neighbor of Yang Mengliu, a 49-year-old woman architect, who has been working 14 years longer and earns over 70 yuan a month. Her husband, a dean of studies in a middle school, makes more than 90 yuan. Their two sons, one a factory worker and the other a bank clerk, both unmarried, bring home a total of about 120 yuan, including bonuses. So this family is able to

have their shopping and washing done by others. They can also afford to pay the local service group to do such chores as spring cleaning, knitting, mending and waxing the floors. Their sons also help about the house and do the cooking. So Yang Mengliu can often work on at the office until after seven. She was promoted to the rank of engineer last year and is in full charge of designing projects. Her husband, who spends much of his spare time directing students' extracurricular science and technical activities, seldom has to be concerned with housework. Last winter he went to Beijing with an exhibition of his students' achievements.

Being better off financially, this family can afford a richer cultural life. They own a TV set, often go to concerts, and Yang Mengliu goes to the hair-dresser's every week. They save about 60 yuan every month, which they plan to spend on their sons' weddings and touring the country after they retire.

Social Services

The services mentioned above are only part of those run by the neighborhood offices — the grass-roots-level government administration, to make life in general easier for working couples, especially for working women. There

are 1,169,000 working women in Shanghai, making up 36.6 percent of the total work force. Since almost all married women under 45 have jobs, ten percent of the families with both husband and wife working have no one at home to look after children of primary school age and under. As their problems differ according to their income and housing, services required also vary. Most neighborhoods operate small enterprises like electrical appliances plants, watch parts workshops and so on, and some of the proceeds from these help support the service units. The main staff for these services are retired workers. There are 8,300 of them among the 62,000 inhabitants of the area under the Zhapu Road neighborhood office to which Hebin Mansion belongs. Many of these people are in good health and still want to do something useful. They do some of the things on a volunteer basis, glad to be of help to their working neighbors.

The main services provided include:

Neighborhood cafeterias. Many residents' committees (there are several under each neighborhood office) run non-profit cafeterias with food about 35 percent cheaper than that in restaurants. Workers who do not wish to cook at home have lunch and supper and buy

their next morning's breakfast there.

Kindergartens. There are 680,000 kindergarten-age children in Shanghai and its suburbs. Of these 30,000 in the city proper and 70,000 in the suburbs are still waiting for places. The kindergartens run by the neighborhood offices have been trying hard in recent years to expand and take in more. Some of them now are able to offer a day and night service, where a parent can leave the child there during a night shift job or a night out at the opera. The Board of Education provides the kindergartens with a subsidy of four yuan a month for each child. The charge per child for tuition is generally eight yuan, but parents actually pay only one to two yuan; the rest is covered by the mother's work unit.

After-school Homework Help. Every afternoon at 3:30 the senior citizens' clubroom in Hebin Mansion is turned over to the primary school children for homework under supervision of retired teachers and workers, storytelling and organized games. There are several such groups in the building. This service gets special attention in neighborhoods made up predominantly of factory workers. It is very much appreciated by parents who are unable to help their children themselves. During

summer vacations, primary school pupils can come to these centers from eight in the morning to study and play, or sometimes be taken out on excursions or to see films. They have lunch there, take a nap afterwards, have a mid-afternoon snack and go home at five when their parents are about to come home.

Aid to Youth. Many working parents with youngsters waiting for work to be assigned them worry that their children may pick up bad habits or fall into bad company. It is a problem. Of the 20,000 young people living in the Zhapu Road district today, 1,000 are waiting to take college entrance exams or to be assigned work. The neighborhood office finds them temporary work in the cooperatives and service trades it runs. Some neighborhoods have organized special tutoring classes in primary school rooms after hours for young people planning to take college entrance exams or proficiency tests which will help them get jobs in factories. Parents often express their gratitude to the neighborhood leaders for such help, which has enabled the young people to make better grades. For certain young people who have got in trouble, the neighborhood asks retired workers to make friends with them and try to help straighten them out.

Service Groups. The services provided by the groups organized by the neighborhood offices are staffed mainly by retired women workers and are geared to the needs of the local inhabitants. They include washing and ironing, house-cleaning, shopping, waxing floors, baby-sitting, household repairs, polishing pots and pans, tidying up gardens and mowing lawns. Charges are low, ranging from ten fen to one yuan for each item of service. They also do sewing and mending, knitting and tailoring at piecework rates.

Neighbors Help Each Other

The problem right now is that low-income families cannot afford many of these services, and often such services are not available in residential areas where higher-

income people predominate. So mutual assistance among neighbors is being promoted as a way of helping low-income families. Housing being short in Shanghai, several families often share one house and use the same kitchen. Where the residents are on good terms an elderly woman or retired woman worker voluntarily takes up the post of "housekeeper" for all the families. Working couples leave their house keys with her before they go to work. She will see their children to the kindergarten if they are pressed for time in the mornings, bring in their washing when it rains and warm up lunches for school children. Some also keep an eye on the children to see that they don't get into mischief. If working couples come home late, she fixes supper for their children, takes them to watch a TV show at the neighborhood club, and afterwards washes them and puts them to bed. The children have come to love these "housekeepers" and because of them some families have even refused the chance to move into a new apartment when offered one. On Sundays, the working couples, in their turn, help with heavier chores at the "housekeeper's" homes, such as carrying up coal, buying rice at the grain store and tidying up the house.

In workers' residential districts, it is retired workers, too, who take turns seeing that children do not make too much noise and disturb sleeping night-shift workers. Where possible, factories arrange things so that two women workers in the same house go on different shifts, so there is always a woman around the house to look after the children of both families.

As Zhang Zirong says, "Our lot is not easy. But when your husband shares the chores, when the old lady living next door offers to do things for you, when cadres from the residents' committee come asking you what they can do to help, when you feel that society as a whole is concerned, and is trying to help make life easier for working women like myself, you get a warm feeling and the load seems lighter." □

In Our Society

Delinquent Back from the Brink

ZHANG YUHAI is a bricklayer who lives happily with his wife and children in the city of Baicheng in Jilin province. Not so many years ago this young man was a familiar figure loitering about on the streets—and in the local police station where he was frequently brought for stealing. Today Zhang Yuhai has turned over a new leaf and is "going straight". Much of the credit for it goes to Sun Guilan, a warm-hearted woman in the neighborhood.

Zhang Yuhai's mother had died when he was only three. Left much on his own by his ailing father and his stepmother, the small boy spent much of his time in the streets, where from older boys he learned to pilfer and steal. As the years went by he became bolder; after his father died and the stepmother remarried when he was 16, he had nothing to restrain him. Police detention became an everyday occurrence.

Both the local police and the neighbors were concerned about the boy. Among them was Sun Guilan, head of the neighborhood committee, who lived in the same courtyard as Zhang Yuhai. Feeling that a proper home would help him give up his bad ways, she decided to take him in hand.

She invited the scruffy, unkempt 16-year-old to live in her home, and made a place for him to sleep on the warm kang platform bed where her own sons slept. One of the first things she did was to make him a new set of padded clothes. Decent lodging and regular meals improved Zhang Yuhai's health which had been in bad condition from the vagrant life he had been leading. Knowing that the boy liked movies, Sun



Zhang Yuhai at work.

Guilan several times bought tickets for him to go with one of her sons. She told Zhang time and again, "If you need anything just let me know, but no stealing."

FOR the first time Zhang Yuhai experienced a mother's love. But he could not understand why this woman treated him so well and was on guard against her. Well, stay a while and see how things turned out, he decided.

Several days later, some of Zhang's old cronies came to look for him. They threatened to smash up the house if Sun Guilan did not let him go with them. She sternly ordered them out.

Once a man barged into the courtyard and beat up Zhang, claiming that the boy owed him money. He threatened to take Zhang away if he did not return the sum. Although Zhang himself was not certain whether or not he owed him anything, Sun Guilan gave the man the money.

After these incidents some neighbors began to fear that they would not be able to live in peace with Zhang around. One of them wrote Sun Guilan's eldest son, who was serving in the army, saying that his mother was harboring an undesirable element. Not knowing the truth of the matter the son wrote to his mother advising her to get rid of the boy. Sun Guilan's other children also felt it was dangerous to associate with Zhang

Yuhai and that his coming put a strain on the family budget.

Sun Guilan saw it differently. She maintained that Zhang Yuhai was a son of the working class and that it was the duty—hers as well as others'—to stop him from doing harm to society. Patiently she talked to the neighbors and her children to bring them around.

AFTER a period of time Zhang Yuhai became bored. One day he sneaked out and went back on his old ways. If he could steal money he spent lavishly. If not, he went hungry. After a few days of this his stomach trouble returned. Finally, with nobody to turn to, he came back to Sun Guilan. Without a word she treated him as before. But when she tried to make him see the error of his ways he refused to listen. He ran away two more times.

The last time he became seriously ill. His cronies abandoned him one by one, leaving him to shift for himself. In his plight he remembered the warmth he had found in Sun Guilan's home. But he felt he did not have the face to go back. At this juncture, with the help of neighborhood policemen and acquaintances, Sun Guilan found him. The dirty, ragged boy threw himself into Sun Guilan's arms. Tears ran down his cheeks as he said, "Mother, I'll never run away again."

Sun Guilan saw that Zhang was really determined to repent and turn over a new leaf, so she took

him around to look for a job. No factory would accept Zhang Yuhai when they heard of his notorious past. Sun Guilan and public security workers did a lot persuasion. They told factory leaders it was the responsibility of society to reeducate young people like Zhang. To deprive them of the right to a job meant pushing them back into their old ways. Finally a construction team took Zhang Yuhai on as a bricklayer. Sun Guilan talked with the team leader and enlisted him in her campaign to transform Zhang into a useful member of society.

Zhang Yuhai took his first month's pay straight to Sun Guilan. She took care of his living and put the rest money into the bank in his name. This helped Zhang form the good habit of saving. Everyone was happy to see the change in Zhang Yuhai.

Years later it was Sun Guilan herself who introduced Zhang Yuhai to the young woman he would marry. As his wedding day approached, workmates and neighbors helped him build a new house, and members of the neighborhood committee made him bedding and bought cooking utensils and furniture.

Though not particularly well-off as money goes, Zhang has not let himself be led into temptation. He has never stolen again. Once when he found a wallet he gave it to his team leader to be returned to the owner with the contents intact. Another time he helped the police catch a thief. □

Sun Guilan often visits Zhang (right) and his family.

Photos by Han Fengzhu and Cao Wenju



Along the Silk Road Dance Drama

WANG XI and LIU QINGXIA



THE new full-length dance drama *Along the Silk Road* presented by the Gansu Song and Dance Ensemble has been widely acclaimed for its color and sheer beauty, as well as its new departures in staging and bringing to life ancient dance motifs.

Set against the background of the Old Silk Road, main artery of trade with the west in the Tang dynasty (618-907), the drama reflects the friendly relations between the Chinese people and the peoples of countries to the west a thousand years ago. Artistically it draws its inspiration from the famous grotto murals at Dunhuang in Gansu province along the old road.

The curtain rises on some striking and unusual stage effects—a pair of celestials with flowing silk girdles floating among misty clouds. Then, as the lights come up, three figures of the six-armed goddess of mercy are silhouetted against the backdrop moving their arms in unison. The tinkle of bells is heard and a camel caravan passes across the stage which now evokes the boundlessness of the desert in early morning.

As the story proceeds, Enus, a Persian merchant traveling the road is about to perish in a desert sandstorm. He is saved by Master Painter Zhang and his daughter Yingniang, who happen to be passing. Zhang gives his last water to save Enus, but meanwhile his daughter is kidnapped by bandits.

Several years later Zhang finds his lost daughter at the fair in Dun-

huang. She was sold into slavery and became a dancer in a theatrical troupe. When he does not have the money to redeem her, Enus, who he also meets, offers to do so. But the local official in charge of trade has designs on Yingniang. To keep her from falling into his hands, Zhang entrusts Yingniang to Enus and she goes to Persia with him. There she develops close friendships among the Persian people, learns their dances and teaches her own.

Later Enus is sent to China on a mission and Yingniang returns with him. The bad official plots to gain his revenge by getting thugs to attack the caravan with which they are traveling. Zhang again comes to Enus' aid by lighting a beacon fire to summon troops, but before they arrive the painter is killed.

At the Dunhuang fair Yingniang exposes the official and he and the thugs are captured. The drama ends on a note of joyous friendship amid performances by people from the 27 countries whose traders and artists have come to the fair.

Trade and Contacts

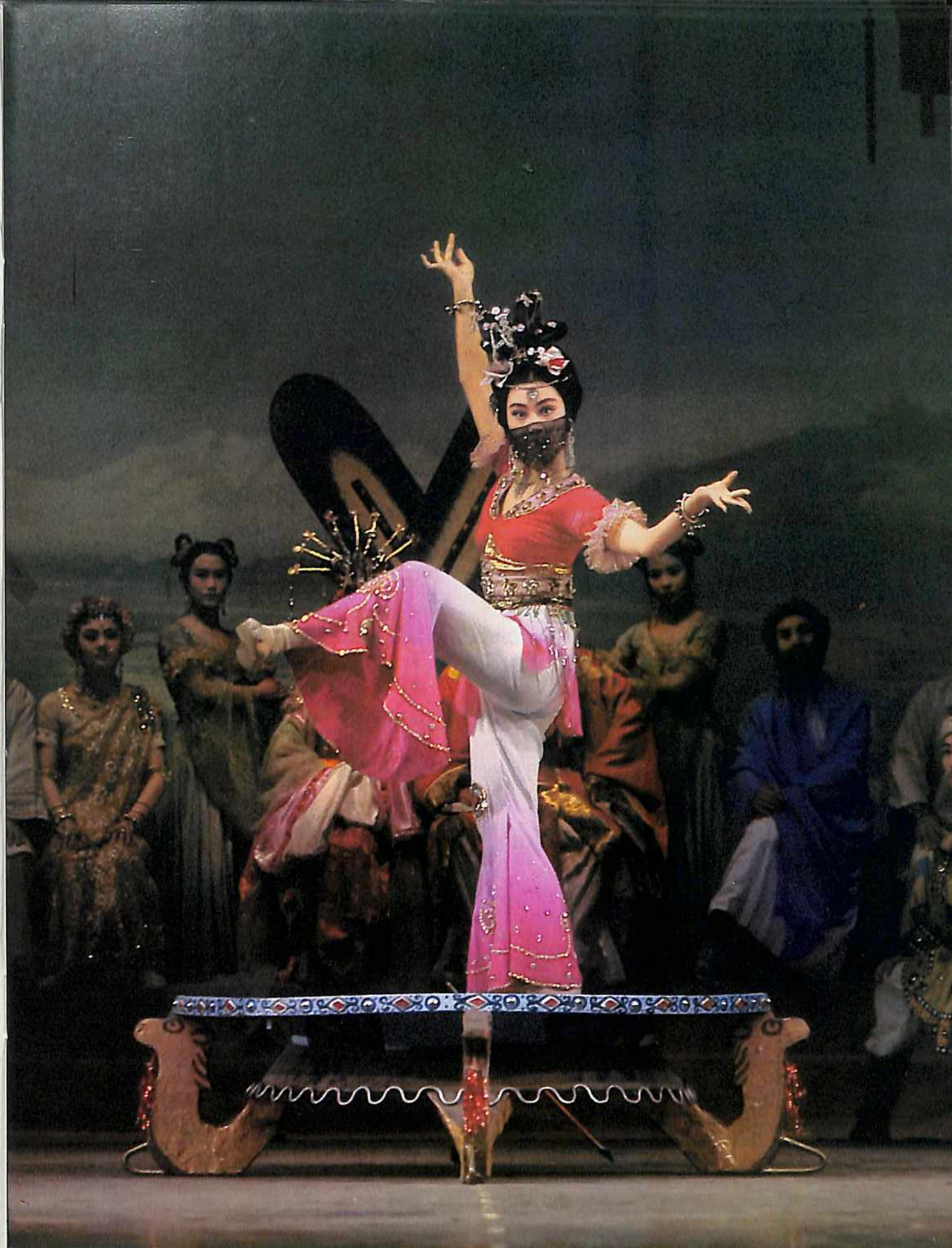
Economic and cultural exchange between China and foreign lands flourished during the early Tang dynasty. One of the most lively was that of Chinese silk for pearls from Persia. At one time about 10,000 foreign princes and aristocrats lived in the Chinese capital Chang'an (today's Xi'an), along

with envoys, merchants and scholars from Arabia, Rome, Japan, Persia and other parts of Central Asia. Some of their dances are presented at a gathering to welcome distinguished foreign guests at the magnificent visitor's hostel there.

The choreographers started from postures of musicians and dancers—both Chinese and Persian—shown in the Dunhuang murals, and went on to design the dances. They did considerable historical research to get them as authentic as possible. Figures in the murals of dancers or musicians playing the *pipa*, a mandolin-like stringed instrument, behind their backs were the inspiration for a dance by Yingniang in Scene Two. Reflecting the character of Yingniang as a bold and intelligent young woman of political integrity, this dance like a musical theme runs through the entire drama. Yingniang's solos in the first, second and fourth scenes begin from it.

The murals were also the inspiration for the floating celestials in the prologue, the dance of small children who appear out of big lotus buds, the Plate Dance, the White Silk Dance and the dances of goddesses who Master Painter Zhang sees while he is dreaming of a reunion with his daughter in a palace in heaven.

The colorful costumes, representing many refreshing departures in stage costuming, are also from the murals, as are the stage settings, which include a mag-



The Persian plate dance.



Yingniang teaches girls at the Persian court how to do Chinese embroidery.



The painter's dream of reunion with his daughter and his Persian friend.

Yinus, the Persian merchant.

Dance movements based on Tang dynasty murals.





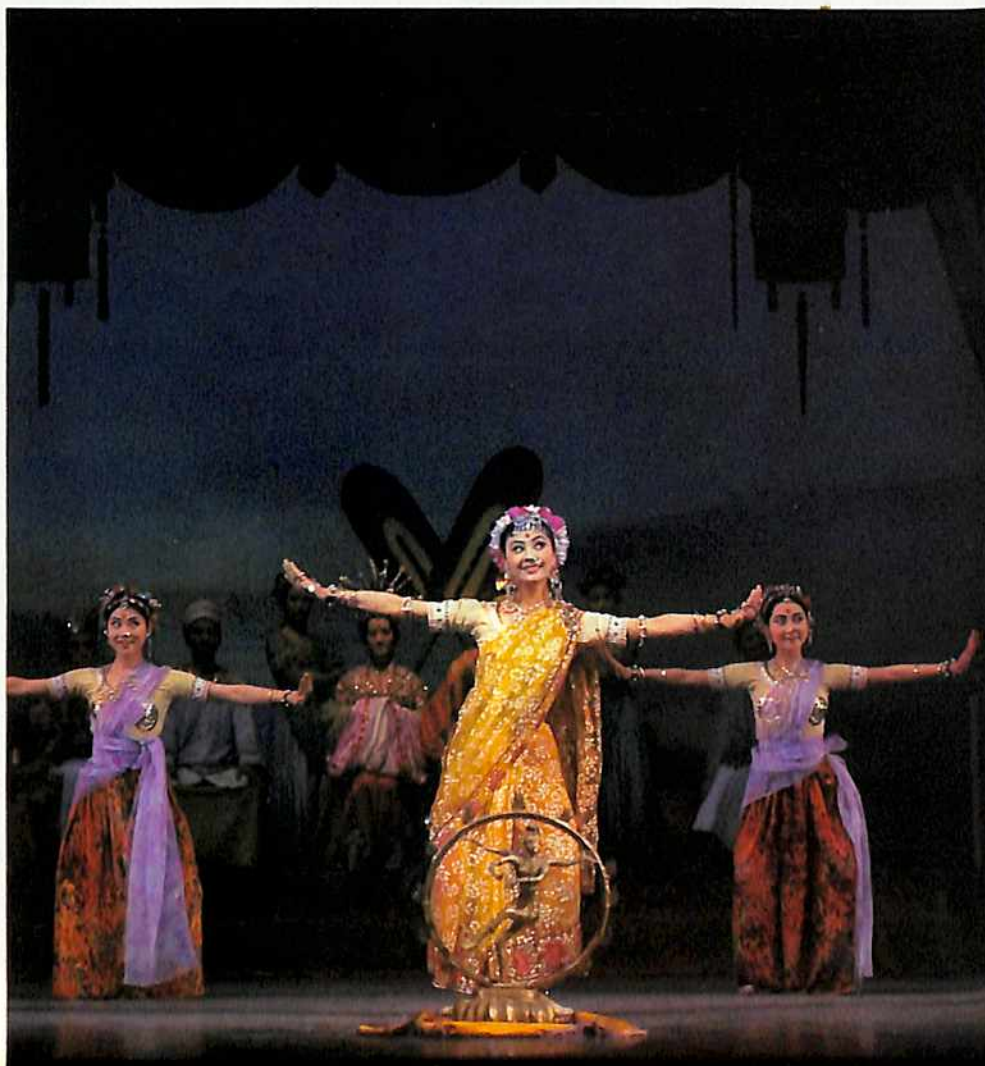
Dances from central Asia.



Photos by Wang Hongxun



Yingniang's return with the merchant, now Persian envoy to China.



nificent Chinese palace and a tranquil Persian garden.

For many years choreographers had longed to bring the riches of the Dunhuang murals to life, but had only done experiments with a single solo dance or part of a dance. Celestials had appeared on the stage before, but only as figures on the painted backdrop or firmly based on the ground, never as in this production "floating" as they are pictured in the murals.

Clues in Poems

The choreographers made a careful study of the poses in the murals, and called on historians and specialists in the Tang period to aid them in developing the dances. They made an extensive study of historical records and literature of the time, particularly of references in the works of well-known Tang poets. The Dance of the Many-Colored Veils was very

popular at the time. The music is said to have been adapted by Tang dynasty Emperor Xuanzong (685-762) from a famous Indian song. But the dance had long been lost. Fortunately it is described in a poem by the great Tang poet Bai Juyi (772-846) and this was of great value in recreating the movements.

By drawing on the riches of the past the choreographers have made many new additions to China's dance vocabulary. The dances in *Along the Silk Road* are entirely different from those based on the Chinese classical dance which have been presented on the Chinese stage of late, but are also truly national in style. □



DO YOU KNOW?

What About Ownership in China?

TODAY there are two main kinds of ownership in China of the means of production. Both are socialist in nature.

Ownership by the whole people. Mineral deposits, waters, and those forests, undeveloped lands and other marine and land resources owned by the state are the property of the whole people. Units and enterprises which play a vital role in the national economy, such as large industrial plants, mines, railways, post and telecommunications, navigation, aviation, banking and foreign trade came to be owned by the whole people and operated by the state after the founding of the People's Republic of China in 1949. Today 97 percent of China's industrial fixed assets are of this nature.

Socialist collective ownership. The main means of production of rural people's communes, such as land, machinery, draft animals and

big farm tools, as well as farm products and income belong to commune members collectively. At present the people's communes have a three-level ownership — by the commune, the production brigade below it and the production team, a subdivision of the brigade, with the production team as the basic accounting unit. About ninety percent of the farmland, irrigation and drainage equipment, and about 80 percent of tractors and big livestock in the rural areas are collectively owned. The bulk of the rest is in the state farms which are owned by the whole people.

In cities and towns, some enterprises are under collective ownership, such as small factories, handicraft and service cooperatives, teams or stations run by neighborhood or resident's committees. The means of production

and the product and income belong to the members of the enterprises collectively.

In China's countryside, commune members are allowed to work on small private plots and engage in household sideline production (in pastoral areas, commune members may keep a small number of livestock). All products from these plots and sideline occupations are owned privately and can be sold at fairs.

Individual non-agricultural workers are permitted to engage in legitimate businesses without exploitation of others, such as shoe-repairing and barbering. Income from this work belongs to the individual.

China's Constitution provides that the state protects the right of citizens to own lawfully earned income, savings, houses and other means of livelihood. □

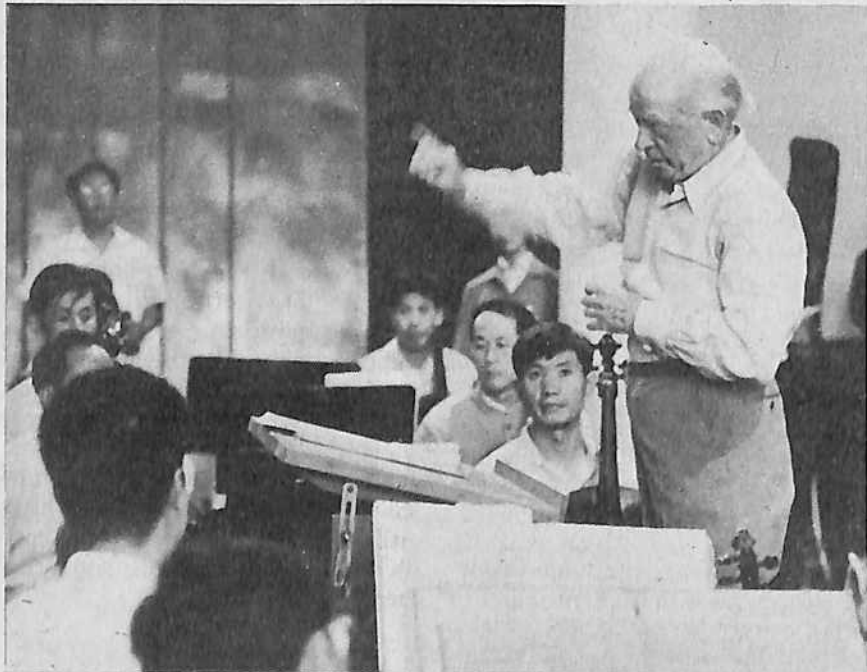
Reminiscences of Chinese-American Friendship

SU KAIMING

IN the early spring of 1940, the Philadelphia Orchestra was having one of its regular rehearsals at the Academy of Music in the center of that city. As secretary of the newly-formed Philadelphia chapter of the China Aid Council, a national organization with headquarters in New York, I had been urged by its executive committee to ask the musicians to give a benefit concert. The proceeds would be sent to Soong Ching Ling (Madame Sun Yat-sen) of the China Defense League in Hong-kong to help continue the medical work begun by the late Dr. Nor-

SU KAIMING (Frank Kai-ming Su) earned degrees from the University of Wisconsin and Harvard University. After living 26 years in the United States, he and family returned to new China in 1953. He has been on the staff of China Reconstructs.

Eugene Ormandy, conductor of the Philadelphia Orchestra, rehearsing with China's Central Philharmonic in Beijing, 1973. Zhu Yongqing



man Bethune in the guerrilla areas in northwest China. One of the executive committee members knew that if the Philadelphia Orchestra would agree to give such a concert under the batons of Leopold Stokowski and Eugene Ormandy, one of the leading broadcasting companies would be willing to put it on coast-to-coast hookup.

I went to the Philadelphia Academy of Music where the orchestra was rehearsing and, during a break, was given the opportunity of speaking to them. In a brief talk I likened China's war against the Japanese invaders, then going on, to America's own war for independence and the Chinese guerrilla fighters to the ragged and hungry soldiers under George Washington at Valley Forge. "The Chinese people are the frontline

fighters against fascism in defense of democracy in the Far East," I said. "They will eventually triumph, and will be forever grateful to you for your generous help in their days of trial." Then and there, the members of the orchestra voted unanimously to give a "China aid concert." The word that our funds would be forwarded to Soong Ching Ling, whose patriotism and integrity were known to all, brought agreement to conduct from both Stokowski and Ormandy. The orchestra of the city's famous Curtis Institute of Music and four outstanding soloists, including violinist Joseph Szigeti and singer Rose Bampton, also took part. The performance was truly a grand one. The whole program was broadcast live from coast to coast and helped to make the name of the China Aid Council known in many American homes. Soon afterwards, Mrs. Sara Delano Roosevelt, mother of U.S. President Franklin D. Roosevelt, became its national honorary chairman.

Early Support

There was widespread sympathy in the United States for China's resistance to Japanese aggression from the first invasion of her northeastern provinces in 1931. Soon after Japan set up her puppet government of "Manchukuo" there, a group known as American Friends of the Chinese People and members of some trade unions marched to and picketed the New York docks to protest the shipment of scrap iron to Japan. In July 1937 when the entire Chinese people rose to resist the Japanese imperialist attempt to swallow up all China, the majority of Ameri-

cans regarded China's war of resistance as just.

As field representative of the China Aid Council I traveled far and wide explaining the vital importance of the Chinese people's struggle to the peace and security of the American people. I found sympathy everywhere. Coal miners in a West Virginia town donated a day's wages, and members of a black congregation in Lexington, Kentucky, contributed their dimes and pennies at a church service. They identified the Chinese people's struggle with their own.

Soong Ching Ling's name opened many doors. To cite a few examples: In Northampton, Massachusetts, Mrs. Grace G. Coolidge, wife of the former U.S. president, poured tea at a party for China aid. In Harrisburg, Pennsylvania, Governor Earle received me and expressed his sympathy and support for China's cause. In the middle west, students and faculty of universities in Wisconsin, Ohio, Illinois and other states formed China aid groups to collect funds for China.

In many cities I was asked to speak on the radio to explain to wide audiences China's cause and the guerrilla tactics used by the Chinese people against a much stronger foe, as taught by Chairman Mao Zedong. Local newspapers interviewed me about this, and some wrote editorials predicting China's eventual victory, which they had previously doubted because of the superior armed power of Japan.

In Philadelphia where I lived, one event after another was arranged to keep the Chinese war in the public eye and raise funds. In May 1941 a "Stars for China" concert was held in a large hotel ballroom at which the great Negro singer Paul Robeson and the popular Calypso Troubadours performed for thousands. Robeson's memorable singing of *Chee Lai!* (*March of the Volunteers* with words by Tian Han and music by Nie Er which later became new China's national anthem) brought down the house. He refused any fee and even travel expenses. Later that year, Edgar Snow and



Maud Russell.



Ida Pruitt (right) with friend in Philadelphia.

his first wife Nym Wales passed through Philadelphia on their return from China. We arranged a large meeting in the Town Hall auditorium, where he spoke on the Chinese people's unyielding spirit and showed a film on Japan's barbarous bombing of Chongqing (Chungking).

There were many other organizations appealing for funds for China. Among the major ones were the National Council of Churches' Committee for China Relief and Committee for Christian Colleges in China, the American Bureau for Medical Aid to China, the Committee for Indusco headed by Ida Pruitt to help build the Chinese industrial cooperatives in which Rewi Alley was playing a leading role, the Committee for Chinese War Orphans (later combined with China Aid Council), the American Friends Service Committee and the Unitarian Service Committee. Being approached by several to give aid to China was confusing to many people, so there was a move to unite these organizations. This was done in June 1941 as the United China Relief. The China Aid Council became a participating member.

On December 7, 1941, Japanese warplanes bombed Pearl Harbor without warning, shocking the American people into action. The United States entered the war and China became her main ally in the Far East. To help China against the common enemy became United States government policy.

The surrender of Japan on August 15, 1945 did not bring unity and peace to China. Chiang Kai-shek, bent on wiping out the Chinese Communists and their armies, launched a civil war. In the gigantic trial of strength between the old and a new resurgent China, many farsighted and honest Americans stood out and courageously took the side of the new China despite the fact that contrary winds were dominant for many years.

True Friends

Among the many true friends of the Chinese people, I well remember General Stilwell, who stated that he was eager to shoulder a gun under the command of General Zhu De (Chu Teh) to fight the diehards in China. Professor Owen Lattimore, then director of the Page School of International Relations at Johns Hopkins University, linked the interests of the United States with a democratic and forward-looking China. A tireless champion of the Chinese democratic cause was Maud Russell. She became the spark plug in the progressive American Committee for a Democratic Far Eastern Policy set up at the end of the Second World War. Through its publication, *Far East Spotlight* and many other activities, she called for a change in U. S. policy toward China. Courageous and indefatigable, Maud traveled from coast to coast asking her listeners to organize and demand that the



Talitha Gerlach on the Great Wall.

Zhang Shuicheng

United States adopt a realistic and friendly policy toward China.

In the Philadelphia area I gratefully remember the Society of Friends for giving me the opportunity to tell the truth about what was going on in China at that time to churches, men's and women's clubs and other organizations. Members of the ambulance unit organized by the American Friends Service Committee during the anti-Japanese war, returning to the United States, took the same view as I did. Later, in the summer of 1951, after the People's Republic of China had been founded, the organizers of the Friends' International Seminar at Lakeville, Connecticut, were to invite me to speak on the Chinese situa-

tion to students and young people from many parts of the United States and abroad.

China Welfare Appeal

For two decades after the founding of the People's Republic of China, the United States made no move to reestablish diplomatic relations. To maintain the traditional friendship for the Chinese people, some progressive Americans set up the China Welfare Appeal, of which Talitha Gerlach, a good friend of Soong Ching Ling and a longtime YWCA worker in China, became chairman. It collected money for "friendship cargoes" of medical supplies and other things to support Soong Ching Ling's

work for Chinese women and children through the China Welfare Institute in Shanghai. As a member of its board of directors, I collected medical journals for China among Philadelphia doctors.

After Miss Gerlach accepted an invitation to join the China Welfare Institute staff in Shanghai, Ida Pruitt, daughter of a missionary family in Shandong province and another devoted friend of the Chinese people, took over the chairmanship of the China Welfare Appeal and continued its activities. Today both are still active in their old age on behalf of new China.

In November 1971 the People's Republic of China regained its lawful position in the United Nations. Realistically, President Richard Nixon visited Beijing in the spring of 1972. The Shanghai communique laid a new foundation for understanding and friendship between the two countries. The resumption of diplomatic relations and the signing of a trade pact between the two governments in 1979 augur well for the future. The goal for which many American friends fought for years is being attained. As I look back, I am filled with warm feeling and gratitude toward them all, and am confident that the traditional friendship between the Chinese and American people will develop even more under today's new conditions. □

Veteran Coach Wants Taiwan Athletes to March with Mainland

WEI XIUTANG

I KNOW that athletes on both sides of the Taiwan Strait love their country and wish to bring honor and glory to their land. It is my fervent wish that at the 1980 Olympic Games they march together into the arena in one contingent."

That was what Taiwan-born Lin Chaoquan, a leader in national and Taiwan sports circles, said at a tea party held in Beijing late last November to celebrate the restoration of the legitimate seat on the International Olympic Committee to the Chinese Olympic Committee of the People's Republic of China. He said that he also earnestly hoped to see the 30-year split of Taiwan province from the rest of the country ended very soon. "The separation goes against the interests and aspirations of the people," he said.

Lin Chaoquan, who made the trip to Beijing especially for the occasion, used to be a member of the China National Amateur Athletic Federation, director-general and standing committee member of its Taiwan branch, chairman of the Taiwan Boxing Association and honorary chairman of the Taiwan Baseball Association. Today, in addition to being a member of the All-China Sports Federation, he is a member of its Shanghai branch, vice-director of the Shanghai branch of Chinese Baseball and Softball Association and a research fellow of the Shanghai Institute of Physical Culture Sciences. The party was attended by Vice-Premier Deng Xiaoping, Vice-Chairman of the Standing Committee of the National People's Congress Deng Yingchao and luminaries of the sports world.

After the meeting I went to interview Lin Chaoquan.

Despite his 74 years, Lin Chaoquan is extremely fit so that it is not hard to visualize what he was like in his youth. His father and brothers were all keen sportsmen and at the age of seven Lin Chaoquan was already a promising young catcher in a children's baseball team. Later he was a good man on the football field, too, but that did not hinder him winning the pole vault in Taiwan at the age of 18. By the time he graduated from the Tokyo University of Physical Culture in 1937 he was an all-round sportsman. From 1938 to 1944 he was a professor in Beijing Teachers' University and head of its physical culture department. He went back to his native Taiwan in 1946 to continue teaching and other activities in his chosen field. In 1950 he returned to the mainland and has been doing all he can in the sphere of physical culture for the country.

"The IOC's executive board resolution is an acknowledgement of the fact that there is only one China and that Taiwan is only one of its provinces," Lin Chaoquan said. "In view of the situation with regard to Taiwan, the resolution leaves the way clearly open for athletes from Taiwan to take part in the Olympic Games together with the athletes from the mainland. It is a good resolution, fair and reasonable. It accords with the general trend of the times and concurs with the aspirations of the Chinese people including sportsmen and other people in Taiwan."

Sporting Family

Lin Chaoquan's ancestors came from Quanzhou in Fujian province. In the middle of the 17th century they had followed the

Ming dynasty general Zheng Chenggong to Taiwan to fight the Dutch invaders, and had later settled down there. Patriotism flows strong in the Lin family. Teaching Chinese in a middle school when the island province was under Japanese occupation, Lin's father instilled into his pupils and his own children a love for their motherland and their forbears. The father had been a keen cyclist and had once won the island championship.

The children took after their father. Lin Chaoquan's elder brother set a record for Taiwan in the 20s for the men's 100-meter dash. The "Dong Ning Tuan," the first mass sports organization in Taiwan, was organized by the Lin brothers with the help of their father. The elder brother, who headed the organization, sold almost everything he had to equip and run it. All the outstanding athletes on the island were members. The organization did much to popularize sports in Taiwan and helped train many athletes. Although it was forced to close down in 1931 when the Japanese invaded the mainland, people still remember the organization and its organizers for their contributions to Chinese sports.

Taiwan Sports

Being a native of Taiwan and having been active in sports for years on the island, Lin Chaoquan is well-known in the sports circles in Taiwan. In the days when the "Dong Ning Tuan" was in existence it included many prominent sportsmen who Lin thinks are still alive and active. Among them is Xie Zhennan, an

Cartoons



Safety Award
Liu Qingtao

Don't be afraid. He rarely shoots.
Hua Junwu



outstanding baseball pitcher and Li Shiji, a member of the Taiwan middle school students' baseball team which came second in a tournament held in Japan. "These two played a key role in making Taiwan baseball what it is today," Lin said.

Track and field athletes in the organization included Zhang Xingxian, who represented China in the 1932 and 1936 International Olympic Games. He is now

engaged in sports activities in Taiwan under Xie Dongmin. "Mr. Xie Dongmin is another old acquaintance of mine," Lin Chaoquan said. "When the Taiwan team took part in the All-China Sports Meet on the mainland in 1948, he was the delegation head and I was deputy head." Wang Xiang is another outstanding athlete in the organization. He came over to the mainland in the 50s.

Rong Gaotang (second left), deputy director of Physical Culture and Sports Commission, with Lin Chaoquan (first left) at a party in Beijing marking China's return to the International Olympic Committee. Guan Tianyi



Winner of Second Asian Women Volleyball Championships, the Chinese women's team will represent Asia at the 1980 Olympic Games. Huang Benqiang



Lin Chaoquan's uncle, Yang Zhaojia, had recommended Wang Xiang and Zhang Xingxian to Japan's Waseda University. Both had won first and second places in short-distance running at school and in national meets in Japan. "Another member of the 'Dong Ning Tuan' was Bing Mingtian, of Gaoshan nationality. He once won the shot put in Waseda University," Lin recalled. "There are many more. And how I wish I could see them all again!"

Besides being a well-known athlete, Lin Chaoquan is also of note in the field of physical culture education and has taught and trained many Chinese athletes. "I have taught students on both sides of the Taiwan Strait, but they have not been able to meet each other. I am sure they will meet when the country is no longer separated. And I hope it will be soon," the old sports teacher said wistfully.

Some of Lin's students had gone to Taiwan to find their teacher after his return to the island in the 40s. Among them were Qi Peilin, Yang Jirong and Lu Huiqin. Qi Peilin, who is now the head of the physical culture department of Taiwan University, had taken part in the last All-China Sports Meet held by the Kuomintang on the mainland in 1948 and had won the discus and shot put. Yang Jirong, who made a name in track and field, is now a coach with Taiwan Teachers' University, Lu Huiqin, a woman, is a physical culture instructor in Taiwan University.

Mainland Associates

Many of Lin's former students on the mainland today are key figures in the field of physical culture. Zhai Jiajun is an associate professor in Qinghua University, deputy head of its physical culture department and was No. 1 football referee at the recent Fourth National Games. Liu Shiliang is a Beijing Teachers' College associate professor, and head of its physical culture department, and was chief judge of field events at the Fourth Na-

tional Games. Liu Shiying is a professor and heads the physical culture department of Beijing University. Liu Jingcun is a professor in Hebei Teachers' College and a member of the All-China Sports Federation.

"It is a good thing to have taught a lot of students," said Lin Chaoquan, "because I get a lot of satisfaction from seeing them doing their bit for the country. I run into them very often and it is always a pleasure."

Lin recalled how he celebrated his 34th birthday at the North-China Sports Meet held in Shanxi province's Taiyuan in 1939. He and sixty of his students in the physical culture department of Beijing Teachers' College who were taking part had gathered together to have a noodle dinner—a Chinese custom, because noodles are long and therefore denote "longevity." In Taiwan, too, his students would always celebrate the occasion with their teacher. In March 1979 when Lin was in Beijing for a meeting of the All-China Sports Federation, 24 of his friends and former students invited Lin to dinner at a Beijing duck restaurant. When Lin Chaoquan had his 74th birthday last year, the Fourth National Games was in progress and Lin met with a dozen of his former students to celebrate the occasion.

The veteran physical culture instructor treasures his former students like a connoisseur his collection of fine wines. If wishes could come true, he said, he would wish a huge get-together with all his friends, colleagues and former students now scattered all over China, to celebrate the reunification of the country.

"Athletes on the mainland and in Taiwan province have made great progress in the last three decades," he pointed out. "Over 100 new world records have been established. Ji Zheng of Taiwan province, who broke three women's world records in one day at a 1970 sports meet in the United States, was acclaimed an athlete of the year. Yang Chuanguang who once established a world rec-



Zhong Shitong at press conference held by the Chinese Olympic Committee thanks friends everywhere for their support. Guan Tianyi

ord for the decathlon, later came in second in the event at the 17th Olympic Games. Baseball has improved and a Chinese team has come first three times in world junior baseball. Athletes on the mainland have done even better. "We are behind world standards in many events," Lin Chaoquan said, "but, in some, we have very good prospects."

"China's seat on the International Olympic Committee has been restored. That was something we've all been hoping for," Lin Chaoquan said, smiling. "My biggest wish now is to see Chinese athletes from Taiwan and from other parts of the country join forces to win honor for the motherland and the nation." Deng Yingchao, Vice-Chairman of the Standing Committee of the National People's Congress, has asked us all to give a big welcome to athletes from Taiwan who join us at the International Olympic Games. Personally, I look forward very much to seeing Taiwan athletes participating in the 1980 Olympic Games with us at Moscow. I have been active in sports for many years in Taiwan and here and I'm eager to meet with and talk to my colleagues

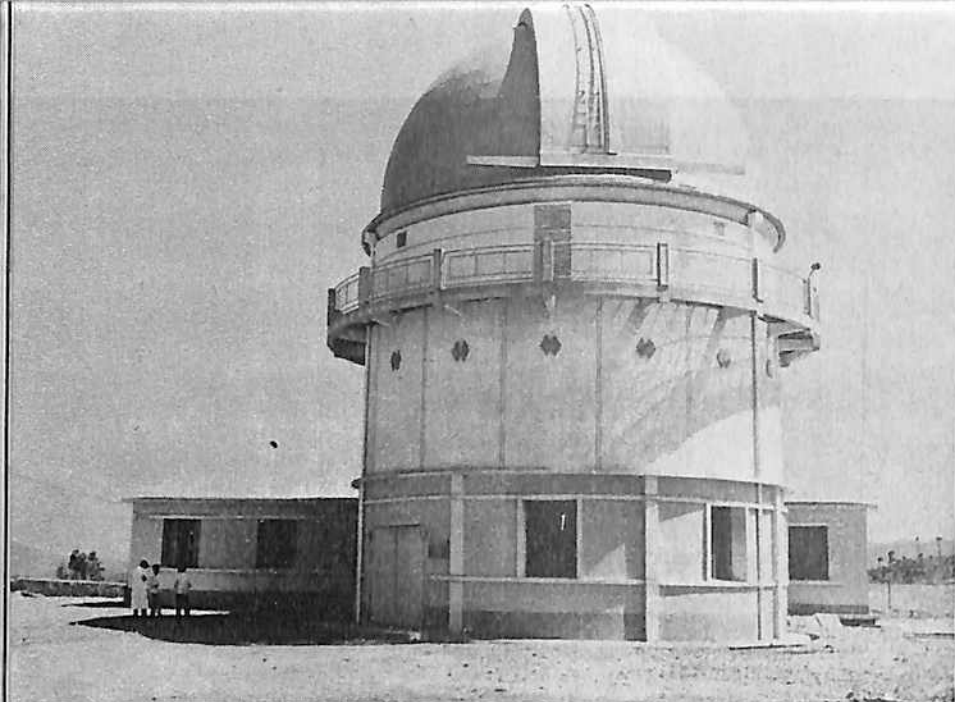
working in Taiwan. I have already spoken to leaders of the Physical Culture and Sports Commission about this. I'd like nothing better than to help build a bridge linking up the sports circles on both sides of the strait. I think it is high time that sportsmen on both sides took the initiative in eliminating any antagonism, arrange exchanges as soon as possible and make progress together. It is our responsibility to do all we can toward the reunification of the country."

Lin Chaoquan lives with his wife and three children. Three other children and three brothers reside in Taiwan. He has one daughter living in America. He hopes to have a huge family reunion on the day the country is unified. □

Corrections

In the December 1979 issue on p. 58 the Bullets player with a Chinese colleague is Wes Unseld, not Elvin Hayes.

Oops—on the cover of our February 1980 issue there are three schoolgirls of Jinuo nationality, instead of the two stated in the caption before the picture was changed.



China's first observatory fitted with a one-meter diameter telescope.

New Observatory in Yunnan

A new observatory atop Phoenix Mountain, 2,000-some meters above sea level in Yunnan province, has begun its work following completion of a part of its construction. Work on the project was begun in 1975. Located in the eastern suburbs of the city of Kunming, it is a general-purpose observatory with emphasis on astrophysics, including solar and stellar physics.

A view of the Yunnan Observatory.



Centimeter wave length data on solar radio eruption of solar activity.



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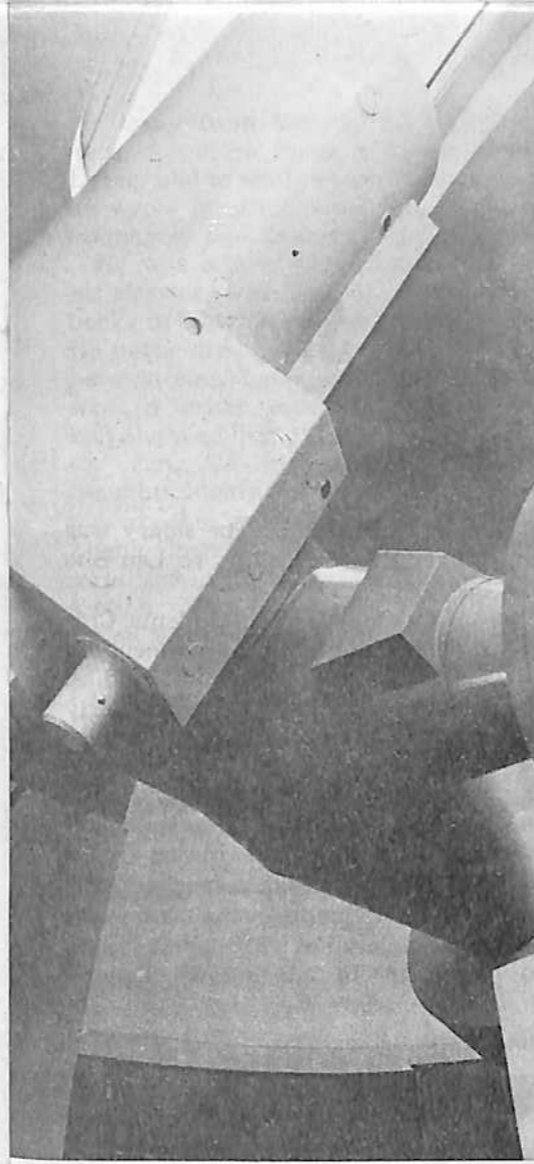
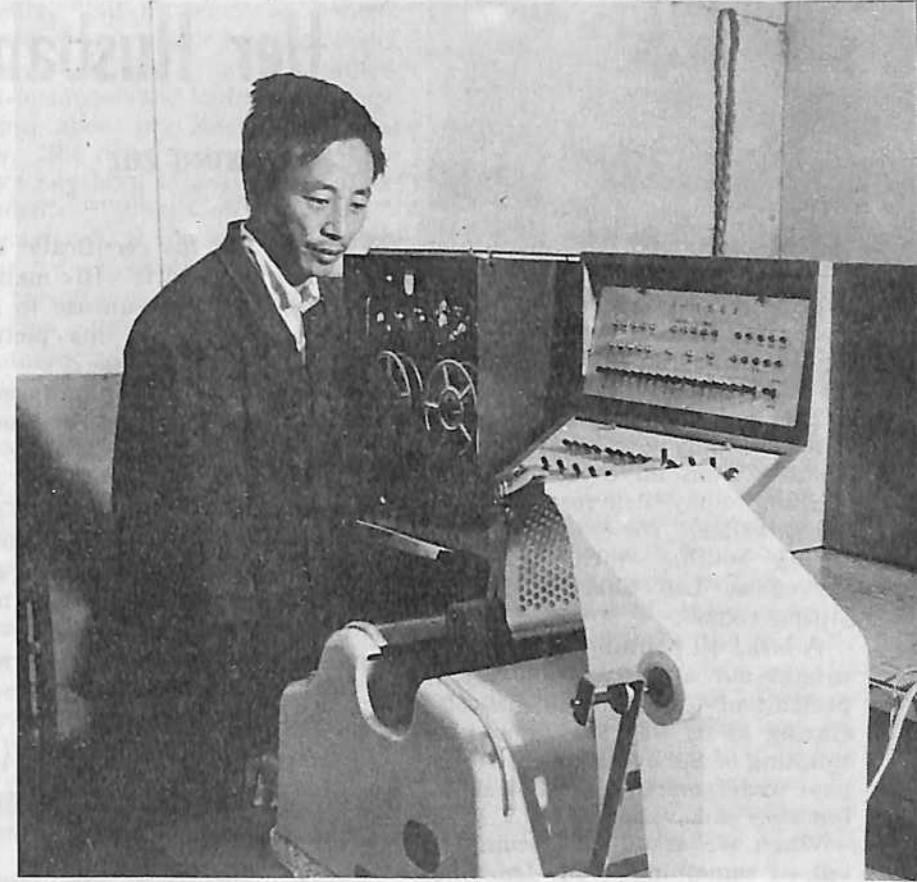
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* With color pictures.			

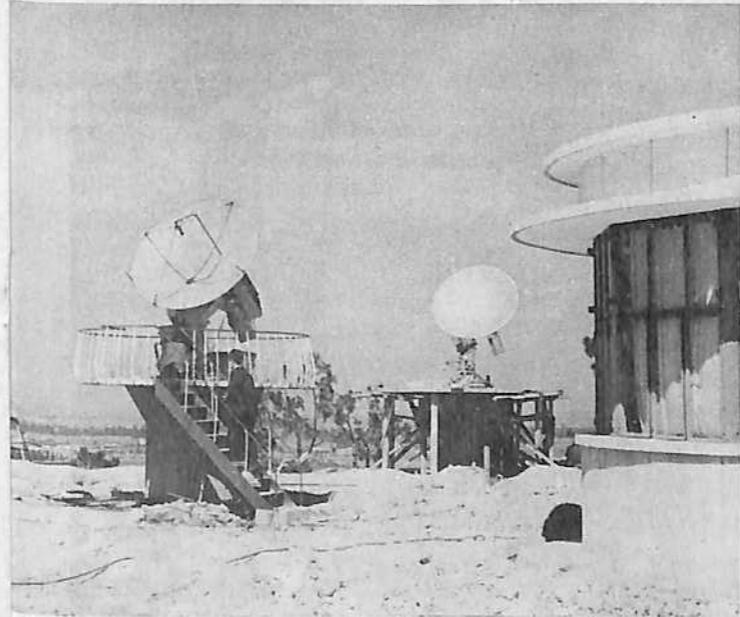
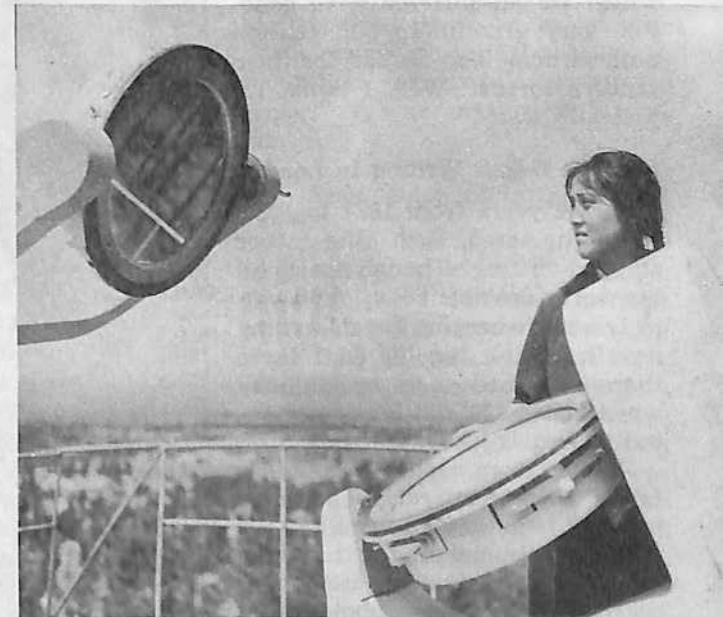
The one-meter telescope at the observatory used for wide field astrophotography and spectroscopy and photometry of individual celestial bodies.

Observation data is processed by computer.



solar radio telescope which can be used to obtain ions for the study of solar physics and the predic-

Adjusting the horizontal solar telescope.
Photos by Min Fuquan



Hu Jieqing Talking About Her Husband Lao She

XING ZHI

ONE morning after an autumn rain, we visited the house where Lao She, a celebrated writer, had once lived. We were welcomed by his wife, Hu Jieqing, now over 70 and a noted artist.

This ordinary Beijing courtyard, surrounded by rooms, has attracted visitors from all over the world wishing to pay their respects to the great writer. We entered a room facing south, which had once served as Lao She's study and sitting room.

A large oil painting immediately caught our attention. It was a portrait of Lao She in his 60s. Gazing at it, we could not help thinking of the awful time he must have undergone in his last year. We felt very sad.

When we asked Hu Jieqing to tell us something about Lao She, a shadow of sadness flitted over her face. Having poured us tea, she said, "Those terrible times in which we all suffered have gone. I'm very grateful to our friends both at home and abroad for their concern for us. Well, I think, I'll just talk away."

Lao She Began Writing in London

For 42 years from 1924 to 1966, when he died, Lao She never stopped writing. Though nearly all his works are about Beijing, it was in London where he began writing novels, completing his first three there. He had gone to England when he was 20, not for education, but to earn a living teaching.

He was from a poor family. His father died very early, and his mother had to take care of the whole family mending and sewing. When he left school, Lao She was asked to hand in two photographs

of himself for his certificate. But he couldn't afford it. His mother had to sell an old suitcase to get the money to have his picture taken.

When he graduated from a teachers' training college, he was only 19 years old. Unfortunately he could not afford to continue his education. In order to support his family, he began to teach Chinese in middle schools in Beijing and Tianjin. In 1924 he luckily met a British professor teaching at Yanjing University who, recognizing his talents, sponsored him to

teach in England. The salary was higher than in China, so Lao She accepted.

He taught British students Chinese and the Beijing pronunciation at the School of Oriental Studies, London University. He regularly sent home most of his monthly salary of 30 pounds. Apart from preparing his lectures, with the aid of a dictionary, Lao She spent all his time in the library reading English books, especially fiction. Gradually, some characters and stories of his own began to form in his mind. Though

Lao She and Hu Jieqing on their wedding day in Beijing, 1931.



far away from Beijing, he could never forget his home and people. Lonely and to while away the time, he wrote his first novel *The Philosophy of Lao Zhang*.

He was a fast writer and soon his drawer was full of exercise books in which he wrote his story. He never dreamed that this would be a success. Later, when Xu Dishan, a writer, came to London, Lao She read him a few paragraphs for fun. To his surprise, Xu thought highly of it, and then posted the manuscript back to Zheng Zhenduo in China. It was serialized in the magazine *Monthly Fiction*. The first part was published under his name, Su Sheyu, but afterwards he adopted the pen-name of Lao She. Then he wrote two more novels, *Zhao Ziyue* and *Two of the Ma Family*.

He made many British friends during his five years' stay in London, one of whom was his roommate, Mr. Clement Egerton. They roomed together for three years and got on very well. Unfortunately they later lost touch with each other.

A Chinese friend remembers having listened to a Chinese language Linguaphone course when he was in Britain fluently read by Lao She in the idiomatic Beijing pronunciation. That record, or perhaps a set, was probably for teaching purposes. Hu Jieqing sighed for a moment, "I wish I could have heard him!"

Our Marriage

When he returned home, Lao She first lived in Shanghai and continued writing novels. Then he moved to Beijing in the late spring of 1930.

I was then in my last year at Beijing Normal University. Some of my classmates and I were very interested in literature and so we formed a small literary society and had our writings published in the supplement of the *Capital Daily*.

When we learned that Lao She had come back to Beijing, we decided to invite him to give us a talk. I was sent to contact him. I met him in the house of Bai Dizhou, the dean of the university. Lao She accepted readily after exchanging

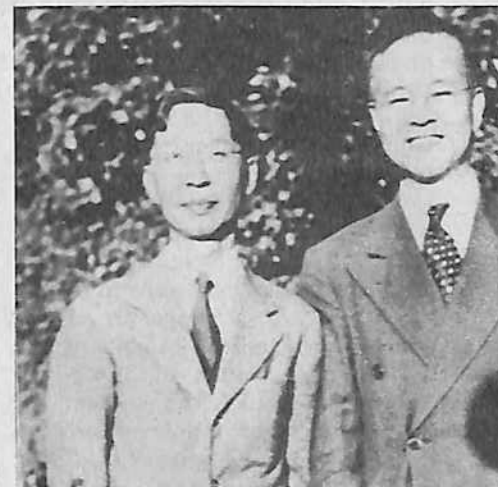
a few words with me, and then we fixed the date for the talk.

When I got home that day, my mother asked me if I had met Lao She and what he was like. "He was thin and weak," I told her briefly, "but he seems an honest man." I was puzzled by her keen interest in him. She was rather old-fashioned and hadn't been very happy about my going to university. She often warned me not to have anything to do with the boy students. "What's on her mind?" I wondered. It was some time later that I discovered she had her eye on Lao She as a possible husband for me. She had also asked my brother's friend, Luo Xintian, to help her in this matter, as he had been Lao She's schoolmate and was a very close friend. Both he and my mother thought that Lao She and I had a lot in common, our temperaments and interests were about the same. Besides, both of us were Manchus with the same customs. However, they had kept the whole thing a secret. And it really was a coincidence that our society had sent me to contact him.

When Lao She gave us his talk, neither he nor I had the faintest idea what was afoot. It was not until Lao She became a professor in the Literature Department of Qilu University some time later in Jinan, that my mother confessed and told me all about it.

As his life became a little easier, Lao She's mother and some of his friends persuaded him it was time to get married. When he returned to Beijing for the winter vacation in 1930, Luo Xintian invited him and me to a dinner. Then Bai Dizhou and Dong Lu'an each threw dinner parties for us. It was clear what they were up to—matchmaking! So Lao She wrote me a letter, saying that we didn't have to always meet at other people's dinner tables. We could confide in each other through letters. After he went back to Jinan, he wrote me at least one letter a day, sometimes even two or three.

In 1931 I graduated and we were married that summer in Beijing. The wedding ceremony was held in a fashionable restaurant, with



With Luo Changpei (right) in the United States, 1947.

over 100 relatives and friends present. Bai and Luo were our witnesses. You can say our marriage was neither traditional nor modern, for though it was arranged, both of us were willing. Lao She had hoped to rent a room in the Fragrant Hill or the Summer Palace for our honeymoon so as to avoid the complicated ceremony and being teased. But as my mother wouldn't listen to it, he had to give in. On such matters, he didn't want to disappoint the old lady. That year, he was 33 years old and I was 27.

Some days ago, Comrade Bai Chuan, Bai Dizhou's son, gave me a copy of our wedding photo. We used to have one ourselves, which had survived the wars, but it was taken away during the cultural revolution as "evidence of a crime!" I was very grateful to him.

From Jinan to Qingdao

Before he was 50 years old, Lao She was always on the move. However, there were short periods of peaceful and happy times. The years Lao She missed most later were those from our wedding to the outbreak of the anti-Japanese war in 1937 in Shandong province.

After our marriage, Lao She was a professor in Qilu University in Jinan for four years and Shandong University in Qingdao for three years, while I taught in middle schools. Our house on Second Jin-

kou Road in Qingdao was only ten minutes' walk from a beach. Many of our friends often changed their clothes in our house before going swimming. But Lao She never went swimming even once, because he just couldn't tear himself away from his desk. His lame excuse was, "We are too thin. Better not show our old bones on the beach!" Even the cherry blossoms in spring in Qingdao's Zhongshan Park, which attracted a lot of people, didn't appeal much to him. Occasionally, he took the children for a walk around the cherry trees on the university campus. That was how he enjoyed the wonderful spring!

He spent all his time and energy on teaching and writing. During term-time, he was busy all day long reading books, looking for reference materials, preparing lectures, planning the curriculum and talking to students. He was never satisfied with his knowledge and feared he might let the students down. Only in the vacations could he find the time to write fiction. So virtually he hadn't had a single day's rest all year round. As a result, he suffered from anemia, aches and pains in his later years. Then he regretted not having paid enough attention to his health earlier.

The seven years in Shandong were a most prolific period. He wrote several dozen novels and short stories including *Divorce*, *The Life of Niu Tianci*, *Camel Xiangzi*, *Doctor Wen*, *Black Li and White Li*, *On Duty*, *The Death-Bearing Lance*, *The Woman from Liu Village*, *Vision*, *Sunshine*, *The Crescent Moon* and *This Life of Mine*. He wrote even more humorous prose and poems. Qingdao was not the setting for most of his writing, for he didn't have much time to enjoy the beautiful scenery there. Still one can find traces of the place in his collections of short stories, such as *Cherries and the Sea*, *Clams and Seaweed* and *Stories Written by the East Sea and under Bashan Mountain*. All their titles have something to do with the locality.

It was also in Shandong that he made many close literary friends.

He also got to know some boxers, performers, rickshaw pullers and pedlars, who often dropped in for a chat. By the way, Chinese boxing and exercises with a spear and stick were also his forte.

Lao She was extremely busy and naturally felt very tired those years. Time went too fast for him. Moreover, I had three children in seven years. The eldest was a daughter, Shu Ji, then a son Shu Yi and then another daughter Shu Yu. The two eldest were very naughty and created lots of trouble for their father, who could do nothing but sigh. But he never lost his temper. When he was pestered too much, he would put down his pen smiling and join in their fun. He was very fond of children, and our friends' children liked him too, because he was very good at telling stories and jokes.

Vow to Serve the Country

In mid-August 1937, when Shu Yu, my second daughter, was just two weeks old, we moved from Qingdao back to Jinan, for Lao She was invited to teach again in Qilu University.

It was only one month after Lugouqiao (the Marco Polo Bridge) Incident near Beijing, and life in the university was seriously disrupted. Teachers and students, who were going south or home, kept coming to say goodbye to Lao She. As the war loomed near, this large campus, without laughter and songs, seemed empty and desolate.

Lao She was very worried about the situation. He read the newspapers every day, anxious to get as much news as possible, and the Jian Nan Poems by the Song dynasty poet Lu You. He repeated again and again those lines: "Although there were only three families left in the state of Chu, They could overthrow the power of Qin./ How can a big country like China be without talents?" "At night I look at the Taibai Star, Which seems to have withdrawn its splendor./ Though I resolve to die for my country, There is no battlefield where I can go." Pacing the room, Lao She sighed, some-

times, looking at the sky through the window, tears quietly coursing down his cheeks. I knew that he had decided to join in the war effort, but he didn't know what to do with his family. Should he take the whole family with him or go alone?

That night when the news of the fall of Cangzhou reached Jinan, we had to make an immediate decision. Lao She was still hesitating, for he couldn't bear to leave behind his old mother, the children and me. The scene of that night is still vivid in my mind. Fondling his children's hair, he couldn't utter a word for some time, keeping his head down lest they should see his tears.

"Don't worry about us," I told him. "You'd better leave right away. So long as I don't get hit by bombs, I can manage. I can teach and bring up the children. If your mother should die, I will arrange a proper funeral for her. I will never let you down. But in case I should die in the war. . . ." Looking at my children, I broke off. My mind was in a turmoil. All I could hear was his voice, "Qing . . . Dear Qing. . . ."

I packed his luggage, but he just couldn't bear to leave us. By then the Japanese invaders had already reached the northern side of the Huanghe (Yellow) River and the retreating Kuomintang troops blew up Luokou Bridge on the railway, which was only several miles away from Jinan. The buildings in the town trembled at the sound of the great explosions. People thought that Japanese must have entered the town. Jinan was in chaos. I thrust a small suitcase at Lao She, urging him to leave at once. Carrying the two older children in his arms, he looked at me and his three-month-old daughter, not knowing what to say. Then he put the children down, picked up the suitcase and went to leave. At the door he turned back and said to me, "If there's no train at East Station, I'll be back at once!"

He hurried off and soon the sound of his steps died away. The two eldest children waited for their father to return, refusing to sleep no matter what I said. I too

sat through the night, worried to death. It began to get light and he still didn't appear.

It was five years later that we were reunited. He had left us a little money and asked me to look after his mother. He himself only had 50 yuan in his pocket.

I learned later that he had first gone to Wuhan where he had taken part in the struggle against the Japanese aggressors. When the All-China Art Workers Union for the Fight Against the Enemy was set up, he was elected a standing committee member and the director of the general administration department because of his nonparty background. He was so enthusiastic, it was felt that he would surely be able to win over more writers and artists. In fact he was actually the leader of the union. Led and helped by Zhou Enlai, he did what he could for the war of resistance.

After Japan was defeated, Lao She wrote a long article entitled "Wind and Rain," which was a detailed account of his experiences during the anti-Japanese war. This article was serialized in the newspaper *Xin Min Bao* in the spring of 1946. It was also included in the first issue of *Historical Materials for New Literature*, edited and published by the People's Literature Publishing House last year.

During the war, Lao She was always concerned about us. In 1938, in a letter to a friend, he wrote, "I'm missing my wife and children and feel sorry for them. I can only express my gratitude to Qing. I must work desperately hard, so as to live up to her expectations. I turn my worries about her into encouragement. A woman who is not modern cannot help a man like me! As husband and wife, we depend on our mutual understanding and assistance. In times when our nation is suffering from foreign aggression, the relationship between husband and wife is based on vows made through tears; they respect each other and work hard for the country together."

For our part, we, too, worried about Lao She's poor health. In



Lao She (right) in a discussion about the play "Teahouse" in 1962 with Xia Chun (center) and Tong Chao (first left).

1942 his mother died, and after her funeral arrangements, I went with my three children to join Lao She. After much hardship, we broke through the Japanese blockades and traveled for 50 days until we finally reached Chongqing, where we were reunited.

When we got to Chongqing, Lao She was just out of hospital and recuperating in Beipei. Although we had not seen each other for five years and he seemed much older and thinner, I felt he had become tougher. The ideological changes were more striking than the physical ones. He told me how he had represented the writers' union in legal struggles with the Kuomintang. Zhang Daofan, head of the Kuomintang propaganda department, tried hard to foment disunity and dissent among the writers, doing his utmost to destroy the resistance literature and making trouble whenever he had the chance. "When I have some problems," Lao She said, "I con-

sult Guo Moruo and Mao Dun in Zhou Enlai's place and ask their support and help. Zhang Daofan is just like the grasshopper in the fable which wants to stop the chariot. He only exposes himself more. In recent years perhaps I haven't made much progress, but I've come to know who's right and who's wrong. To save China, we must rely on this —" He drew the figure 8 (referring to the Eighth Route Army led by the Chinese Communist Party).

Thus, the Kuomintang regarded him, a person without party affiliations, as becoming more and more "Red" and sent secret agents to spy on him. Very often Lao She saw their spies as he left his house. He was always prepared to be arrested by their secret agents. If he went out to do some business, he would ask his son Shu Yi, who was less than ten years old, to tail him, so he could tell us if something happened to his father. (To be continued) □

Ancient Drama and New Friendship

—Greek National Theater in China

ZHAO JIAN



At a reception for the Greek National Theater given by the Greek Embassy in China, Chinese cultural workers read a poem in honor of the Greek artists.

Ko Linwei

THE first-ever staging in China of two classical Greek tragedies, *Prometheus Bound* and *The Phoenissae*, premiered in China in late October, when members of the Greek National Theater toured Shanghai, Nanjing and Beijing.

Their performances, ten in all, evoked strong interest among theater-goers and drama circles. Packed houses, and the hushed, rapt viewers following the actors' lines in translation through earphones dispelled any fears that a Chinese audience might not be able to appreciate dramatic works so vastly removed from their usual fare in terms of time, distance and language. They were obviously stirred by the ideas of the tragedies, the actions of the heroes, the clear-cut loves and hates and the beautiful language.

IN retrospect, however, one finds that the Chinese people are not so unfamiliar with the Greek

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lators in China have also translated classical Greek dramas or written articles on them for literary and theatrical journals.

At the Central Drama Institute where I teach, the Greek tragedies have always figured prominently in our courses on the history of foreign drama and literature and are compulsory subjects for students. Students in the directing and acting departments have performed excerpts from *Oedipus the King*.

DESPITE our interest in classical Greek drama, few of us, even among the older generation of translators of foreign literature, had ever seen a Greek tragedy performed. We had found it hard to visualize how these 2,400-year-old dramas looked on stage. It was with this question that many of us went to see the performances by the Greek National Theater.

We were, of course, familiar with the heroic image of Prometheus, that benevolent god punished by the Olympian ruler Zeus



The cast at the Ming tombs outside Beijing.

Zhao Tianpin

for stealing fire of heaven for the benefit of mankind. As the curtain rose our fancies were stirred by the succinct, explicit and archaically simple stage setting, immediately recognizable as the cliffs of the Caucasus. The opening gong sounded and in a solemn atmosphere the play began: the binding of Prometheus, followed by dances and dialogue by the chorus and long speeches by Prometheus. We were carried away by the uncomplicated yet profound

action that unfolded before our eyes. In this drama, based on a legend, the playwright Aeschylus has embodied the hopes, will and sympathies of the Greek *demos* of his time, and as such it is enormously edifying and educational.

The 2,400-year-old play represents a relatively early stage of the development of the drama and that makes it all the more difficult to perform. Prometheus is bound to a symbolic cliff at the center of the stage, masked and unable to move, so that the actor must rely solely on the way he speaks his lines to bring the meaning across. But Alexis Minotis, a famous actor now in his seventies as well as art director of the Greek National Theater, is a true master. His speeches expressively conveyed Prometheus' fearlessness in the face of tyranny and death. His delivery was sincere and meticulously nuanced; lyrical and rhythmic as well as deeply expressive of the philosophical depths. Our Chinese stage actors gained much from the plasticity and durability of his vocal techniques and superb breath control and diction.

EURIPIDES' *The Phoenissae* takes as its central theme the tragic story of the legendary royal family of Oedipus. With Euripides the drama reached new heights in both ideas and dramatic technique. The present staging, while retaining the ancient form, endeavored to create new effects.

The stage setting of *The Phoenissae* was highly original. Its main body consisted of an arched stone structure open at both ends like a bridge. With remarkable symbolism and versatility, the top of the bridge could be used to represent a gate tower, mountain summit or throne; the steps beneath it a hill slope, riverbank, terrace or staircase; the opening in the structure a gateway in a city wall, the doorway of house or a mountain pass. The platform under the structure and between the steps on both sides served as a versatile and spacious performing area.

In this play the director and actors made ingenious use of the

stage setting to achieve a multiplicity of effect, whether by the positioning of the actors or through maneuvering the chorus. At the same time full scope was given to the audience's imagination.

Moving performances by the actors contributed to the esthetic charm of the drama. The treatment of the ending left a deep impression: After the tragic melee, Antigone buries her dead brother Polyneices and resolves to go into exile with her father. One sees the blind Oedipus, supported by Antigone, walk off with halting, despairing steps as on this intensely

tragic and emotional note the lights dim. The acting of Alexis Minotis and Maria Skountzou, who played the role of Antigone, was superb in this last part.

Last summer when the first Chinese Beijing opera troupe to visit Greece performed the *White Snake* — a traditional item on the repertoire of Beijing opera — Greek audiences were generous with praise. Now the Greek National Theater's visit to China has broadened our horizons. A new chapter has been added to the history of cultural exchange between the two ancient civilizations of Greece and China. □



Scenes from *Prometheus Bound* (Prometheus in back, and members of the chorus) and *The Phoenissae* (Oedipus on right) as performed in China by the Greek National Theater.

Zhang Jingde



Tibet's Potala Palace

OU CHAOGUI

THE Potala Palace, in the heart of old Lhasa, capital of the Tibet Autonomous Region, was built in the seventh century by King Songtsan Gambo (617-650), unifier of Tibet, for his bride Princess Wen Cheng sent to him from the Tang dynasty court in Chang'an (today's Xi'an). Extensive renovations have restored the palace to its ancient splendor. Now each year many visitors from in China and abroad visit this once-forbidden place.

The 13-story palace, standing atop a cliff in 3,700-meter-high Lhasa, is the world's highest palace. It is a rare piece of architecture in traditional Tibetan style. The original Potala had 1,000 chambers. It acquired its name later as Buddhism spread in Tibet. The Buddhists believed the palace site to be "Buddha's Mountain," a place sacred to them so the palace began to be called Potala, as this is pronounced in Sanskrit.

Little is left of the original palace. It was first damaged by fire caused by lightning during the eighth century and then destroyed again in a war in the ninth century. The Potala we see today was reconstructed in the 17th century. It was rebuilt by the Fifth Dalai Lama (1617-1682) who established the Tibetan local government at the Zhebang monastery in 1642 and started to rebuild the Potala in 1645. He moved the government into it when the main part, the White Palace, was completed in 1653. Constructions of new sections on either side, known as the Red Palace for the color of their walls, was begun in 1690 and completed three years later. The stone tablet erected in front of it

at the inauguration ceremony still stands there today.

The reconstruction of the Potala Palace was a grandiose project. To mix the mortar for its walls, so much earth was taken from behind the hill on which it stands that a deep depression was created. This was made into a lake and became known as Dragon King Pool after a temple built for that deity in its center. Historical records show that over 7,000 serfs worked daily on construction of the Red Palace, and still more worked at quarrying stone and felling trees in the mountains. Transportation of the tree trunks and huge blocks of stone was done by human power and many serfs died in the process. The construction scene is recorded in a mural

in the palace. Although the laborers brought their own food and worked without pay, the cost of building the Red Palace came to 2,134,138 taels of silver, an astronomical figure for those days.

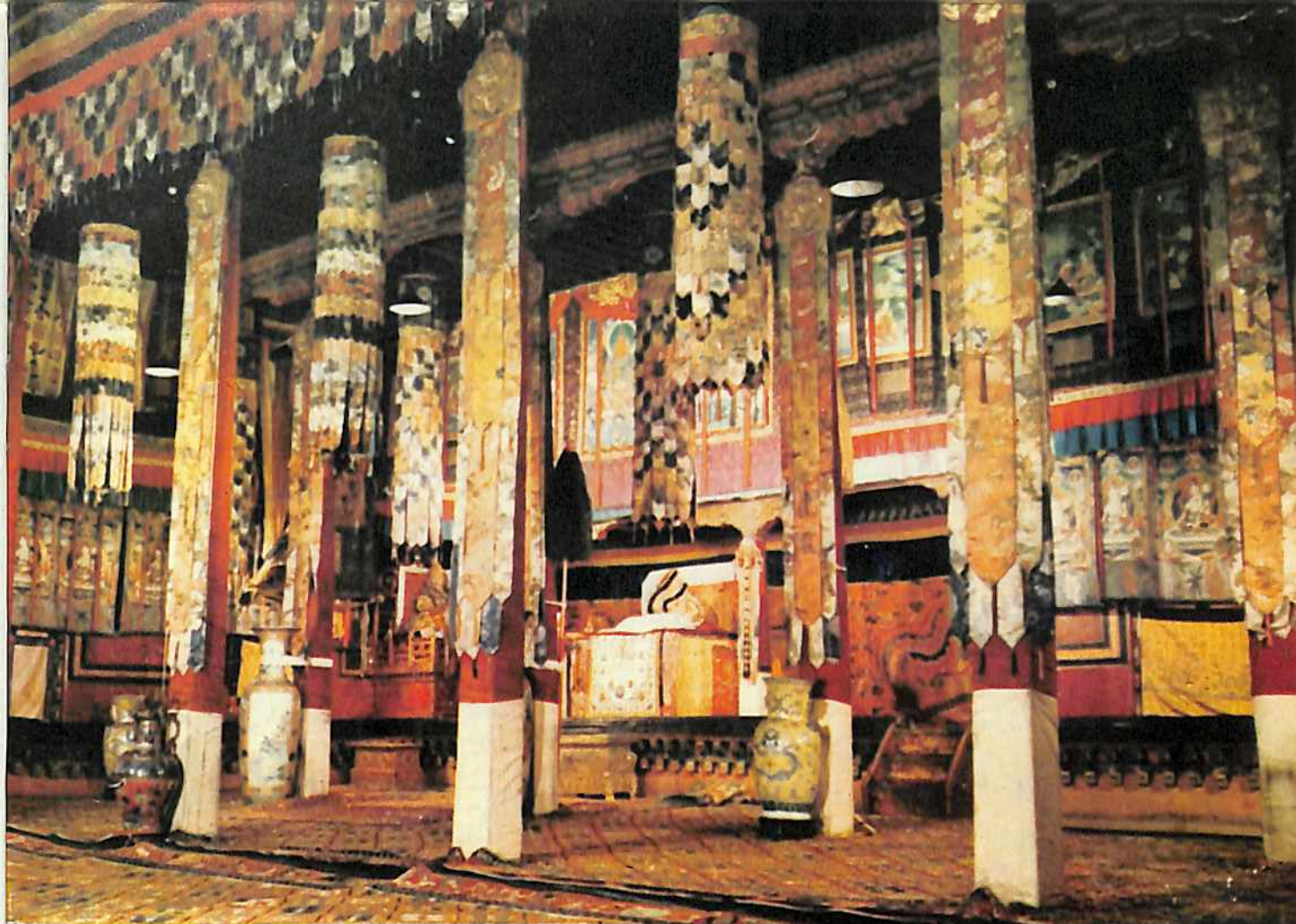
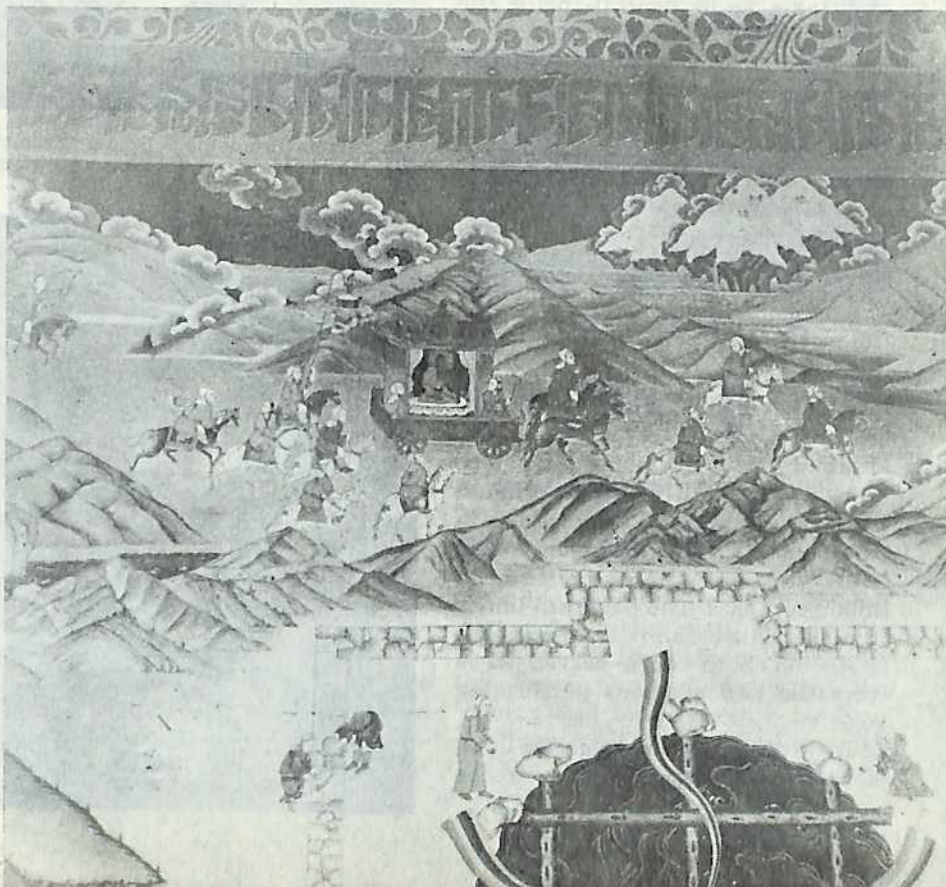
Massive Structure

The foundation of the palace lies at the southern foot of the hill. The main building rises against the hill slope for 110 meters to the top of its gilded roof tiles. The palace is the biggest and best-preserved ancient structure in Tibet.

After mounting the stone stairs at the front of the palace, one enters the eastern gate and reaches a wide platform halfway up the hill. Celebrations used to be held here on holidays or religious oc-

Mural of Princess Wen Cheng's arrival in Tibet.

Zhaquoluo



A room in the Dalai's living quarters.

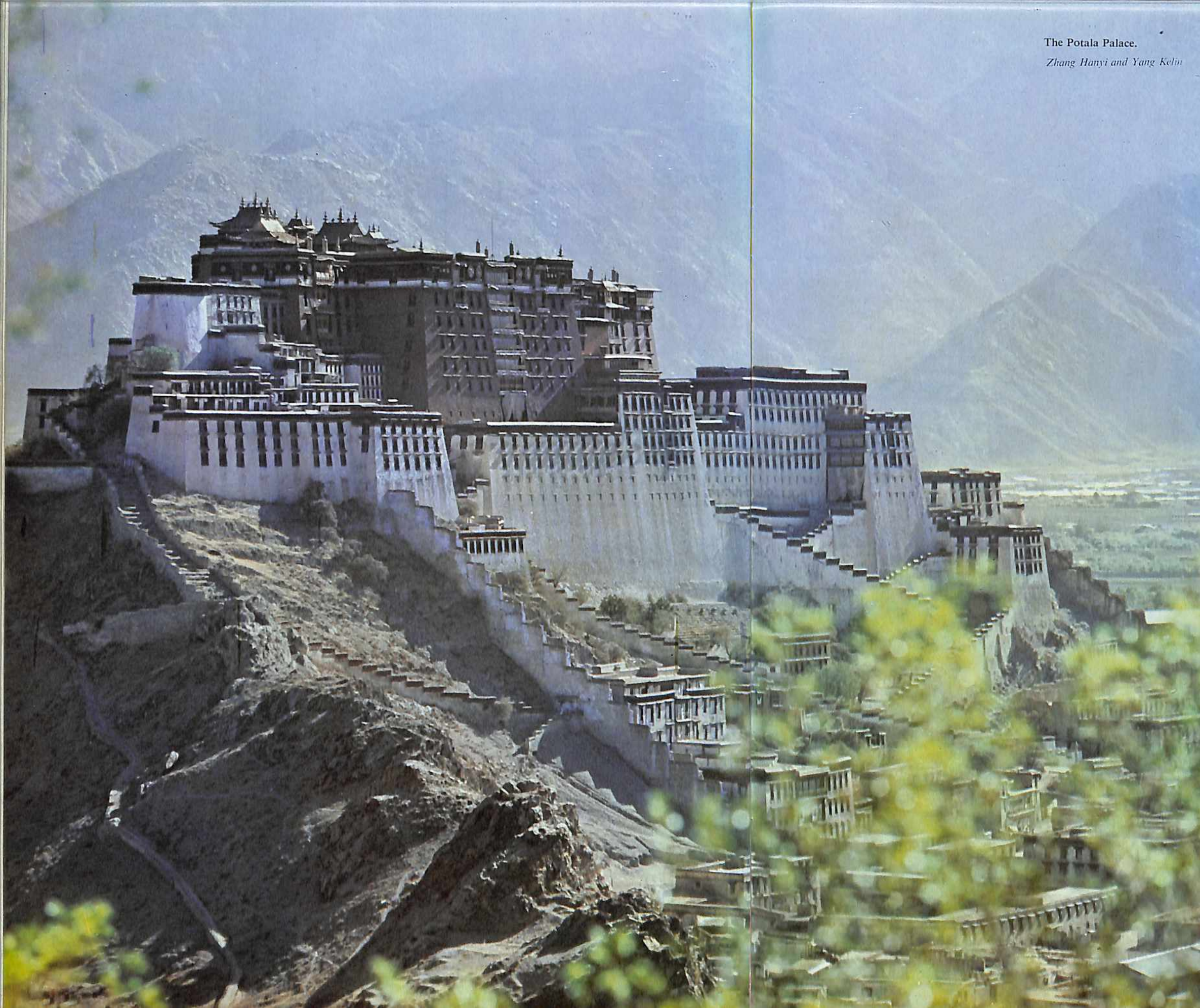
Kangsong



A mural showing the Fifth Dalai (left) presenting himself to Qing dynasty Emperor Shun Zhi.

Zhang Hanyi and Yang Kelin

OU CHAOGUI does historical research with the Committee for the Management of Cultural Relics of the Tibet Autonomous Region.



The Potala Palace.
Zhang Hanyi and Yang Kelin



Detail from mural of the four lokapalas
inside the east gate of the palace.

Gu Shoukang

Outer wall of the Red Palace. *Zhaguoluo*



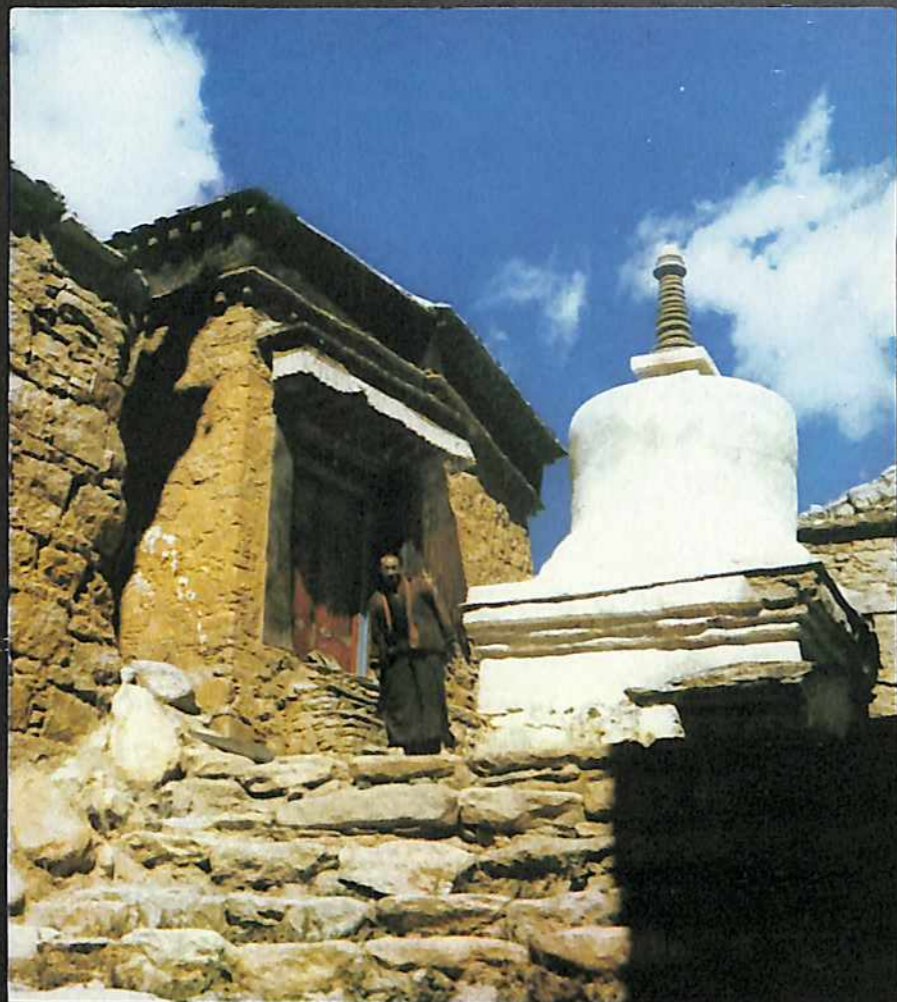
The White Palace completed in 1653.

Zhaguoluo





Stupa containing the remains of a Dalai Lama. *Li Dehui*



Lama in front of a chanting room fronted by a Tibetan-style dagoba.

Gu Shoukang

The portrait of Qing dynasty Emperor Qian Long and the tablet in the highest hall of the Potala.

Zhang Hanyi and Yang Kelin



Brackets under the eaves.

Gu Shoukang

Intricately carved beams.

Li Dehui



casions. Songs and dances, including the one to dance out devils, were performed here for the Dalais and their officials. East of the platform is the former seminary for senior monks. On its west are chanting halls and dormitories where the palace's 154 lamas lived.

Moving upward from the platform through a winding corridor one comes to the East Main Hall. With 64 pillars, it is the biggest hall in the White Palace. Here ceremonies for the assumption of office by the Dalai Lamas were presided over by ministers from the Qing dynasty (1644-1911) central government. The West Main Hall is the Hall of Sacrifice, the biggest building in the Red Palace with a floor space of over 700 square meters. Here are the stupas containing the salt-dried and embalmed remains of most Dalai Lamas, including the Fifth, the Seventh through the 13th. The stupas, similar in shape, but of different sizes are covered with gold leaf and studded with jade and precious stones. It is recorded that 110,000 taels of gold were used on the stupa of the Fifth Dalai and that the jewels inlaid on it were worth ten times more. In front of the stupas are incense burners and ever-burning butter lamps.

Dalai Lama's Rooms

The Dalai's living quarters were at the top of the White Palace. They included prayer halls, halls housing the Buddhist sutras, sitting rooms and bedrooms, all luxuriously furnished and decorated with jewels and other valuables. They are now open to visitors. On the gate hangs a pair of maces which used to be covered with tiger skin—symbols of supreme authority. The throne the Dalai sat on while chanting scriptures was situated north of the sutra hall. Beside the throne are drums made of human skin and wine containers made from human skulls. Only high-ranking officials were allowed to come here to discuss official business.

The earliest extant building in the Potala is Guanyin Hall now



Buddha in a chapel in the Potala.

Wang Shouliang

part of the northeastern section of the Red Palace. It is said to have been the nuptial chamber of King Songtsan Gambo and Princess Wen Cheng. The original stove is still there. The elegant and graceful statues in the room are rare art treasures. On the second floor is a statue of Songtsan Gambo. A legend about it says that a lama passing through a forest in southern Tibet came upon a shining tree which could speak. He felled it and began cutting it into sections in order to take it home. Each section turned into a Buddha statue. The fourth was later moved into the Potala Palace and is said to be this statue.

In the highest hall of the Potala hangs a portrait of the Qing dynasty Emperor Qian Long who reigned from 1736 to 1796. Before

it stands a memorial tablet inscribed with the words "A long, long life to our emperor" in Han, Tibetan, Manchu and Mongolian script. On New Year's Day the Dalai would come here to pay his respects.

From this hall one climbs to the roof of the palace. From it one looks over the ramparts down the steep cliff. In the past, on January 2 of the Tibetan calendar, this was the scene of daring ventures on ropes. Four leather ropes more than 100 meters long were let down with one end fixed to the palace wall and the other tied to a pillar at the foot of the hill. The participants, chosen from among the serfs, wore a short jacket with a piece of rawhide affixed to the front of it. Suspended by them and holding a white flag in each hand, they slid down the ropes head

first. If a man was able to repeat this three or four times, he was exempted from corvée labor for a year. But many were also killed in such attempts.

Valuable Murals

The Potala's stone foundations go deep into the hill so that it seems to grow out of the solid rock. The outer wall, several meters thick, had copper poured into its interstices to make it stronger and earthquake resistant. The upper walls are girdled with bundles of the stalks of a local plant, dyed red, so as to create the effect of a colorful sash.

The upper structure of the palace is made of wood, consisting of pillars surmounted by beams and rafters, and laths spread with a type of local earth containing lime to form the floors and ceilings. The roofs of the main buildings are in traditional Han architectural style with upturned eaves with tinkling bells at each corner. The brackets and eaves are fitted together without using a single nail.

The colorful murals inside the palace, outstanding as works of art, were done by Tibetan artists in the 17th century. Some are on religious themes, others show the

life of the Tibetan people at the time. There is archery from horseback and wrestling, and a weightlifting scene showing men raising stones of different sizes.

Many of the wall paintings tell interesting stories. One of them is about the envoy sent by the king of Tibet to Changan, the Tang dynasty capital, to ask for the hand of a Chinese princess. The envoy had to win the princess by answering five difficult questions put to him.

Another mural tells the story of Tang Princess Jin Cheng who was sent to Tibet to be married in 710. She is said to have had a magic mirror which could foretell good or bad fortune. Learning that she was going to be married to a Tibetan prince, she wanted to have a look at him first. She said the right things to the mirror and saw the visage of a handsome young man in it. She was delighted. Then, on her way to Tibet, one day she unaccountably felt very uneasy. She looked into the mirror again, but this time saw an old man with gray hair. It so happened that the prince, leading a delegation to welcome her at the Tibetan border, had fallen from his horse and been killed, so on reach-

ing Lhasa the princess had to marry the old king she saw in the mirror.

Many of the palace murals are of considerable historical value. One shows the Fifth Dalai presenting himself to Qing dynasty Emperor Shun Zhi. Another shows a 1908 meeting of the 13th Dalai with Emperor Guang Xu and Empress Dowager Ci Xi. All the frescoes are drawn in perspective, with distance indicated through shading and color. Figures are outlined with a line usually of black or gold, and filled in with the sharply-contrasting colors, typical of Tibetan style. But some characteristics of Han painting can also be seen in them.

Protection and Research

Protection of this ancient edifice has received considerable attention from the Communist Party and the people's government. There is an annual allotment of funds for its repair. In 1959 it suffered serious damage during the short-lived armed rebellion staged by the Tibetan reactionary upper strata. When the rebels fled they took away many valuable relics, including a priceless robe made of pearls.

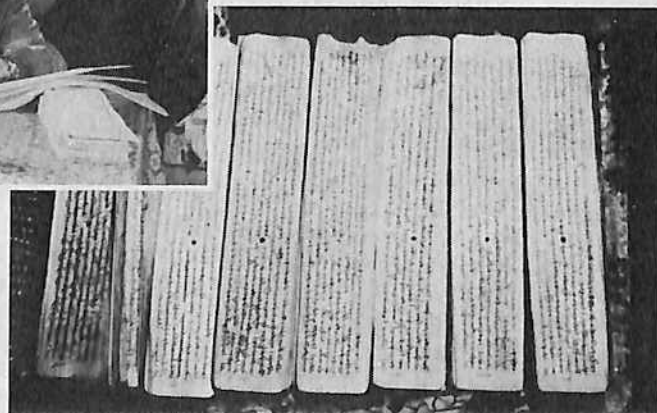
In 1961 the State Council placed the Potala on the list of cultural sites to be given special protection, and set up a research group to sort out and study the innumerable objects preserved and stored there. Tens of thousands of them have been identified as valuable historical relics.

(Continued on p. 69)



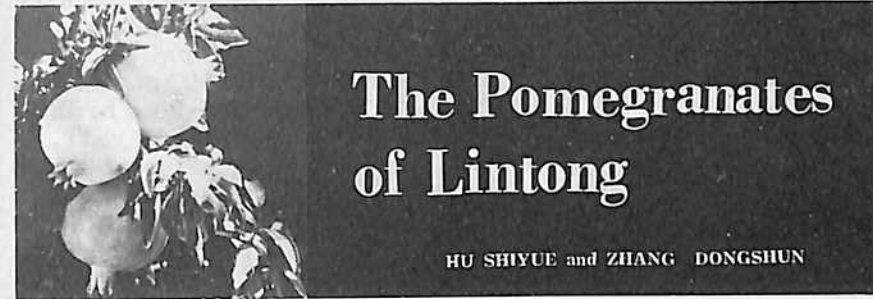
Ancient copies of the Buddhist sutras stored in the Potala being analyzed and sorted.

Wang Shouliang



The well-preserved Sanskrit sutras in the Potala Palace.

Kangsong



The Pomegranates of Lintong

HU SHIYUE and ZHANG DONGSHUN

WHEN you think of Lintong you think of pomegranates" is a well-known saying in north China. Lintong is a county 15 kilometers northeast of Xi'an, capital of Shaanxi province. It has long been famous for this fruit. It is also known for two other things: for the life-size pottery statues of warriors and horses unearthed at the tomb of Qin Shi Huang (259-210 B.C.), the first emperor who brought all China under one rule, and for the Huaqing Hot Springs, imperial spa and resort best known for its most famous resident, the beautiful Yang Guifei, concubine of Emperor Ming Huang of the Tang (618-907) dynasty.

The pomegranate was introduced into China, according to historical records, in the second century B.C. by Zhang Qian, the famous envoy from the Western Han dynasty court who established contacts with many regions to the west of China. He brought back the seeds on his return from Persia and Afghanistan. Pomegranates were first grown around the capital, Changan (present-day Xi'an) and later spread elsewhere. By the time of the Tang dynasty they were widely grown around Changan.

The dozen varieties of pomegranates fall roughly into two groupings: sweet and tart. Best of the sweet are Dahong (Big and Red), Jingpi (Clean Skin) and Sanbai (Three Whites). The first two have red or pink skin and thick, juicy pulp. Each fruit weighs from 200 to 360 grams. The top quality is the Three Whites — so

named for its white flowers, white skin and white vesicles. Because of its extreme sweetness it is sometimes called "rock sugar pomegranate."

First among the tart group are Lintong Tart and Luyu Egg, with thick skin and soft, juicy pulp. A fruit usually weighs 100-500 grams, but sometimes up to 800 grams. These two types have a high resistance to cold, drought, insect pests and disease.

The Lintong pomegranates usually have a 11 percent sugar content and 0.77 percent acid content. They have twice or three times the vitamin C of pears and apples, and are also high in phosphorus and calcium. Pomegranate juice is a refreshing drink. From the skin and leaves are extracted tannin, used in tanning and cotton and wool dyeing. The skin also has medicinal properties for stopping dysentery and diarrhea.

The pomegranate flowers, dazzlingly beautiful with a rather long blooming period, have long been regarded as a garden decoration in China. They have been the subject for poets through the centuries. In Lintong pomegranate bushes blanket the hills near Huaqing Hot Springs. The flame-red flowers blooming in May and June make a sharp contrast to the green of the hillsides.

The trees begin to bear fruit somewhere between the ages of 3 and 10 years. Each yields about 30 kilograms per year and goes on fully bearing for 40 to 60 years. Even after this a plant will bear for another 20 or 30 years, but with smaller output. It can live for a century. With good care it

can last for 200 years with an annual yield of 100 kg.

Symbol of Fecundity

Because it is so full of seeds, the pomegranate became a symbol for what was in the past viewed as the good luck of having many children. In Chinese the character for "seed" also means "sons". A popular New Year poster used to be that of a fat baby holding a pomegranate split open with many seeds exposed. It evolved from an earlier picture in use some 3,000 years ago of the first king of the Zhou dynasty surrounded by his many children. Today a pair of pillow cases embroidered with pomegranates is still given as a wedding gift, though the meaning today is not having many sons but having one soon, son or daughter.

Pomegranates are also considered propitious food for family reunions. On the night of the traditional Mid-autumn Festival, families sit around the table enjoying the full moon and eating mooncakes and — pomegranates. □

Pomegranate harvest. Zhong Zheng



The Song Dynasty

3—The Jin Conquest and Southern Song

JIAO JIAN

THE Nuzhens (also known as the Nuchen Tartars), who were to control most of north China as the Jin dynasty (1115-1234), became known to history in the tenth century as nomads living along the Heilong and Songhua (Sungari) rivers and the Changbai Mountains of the northeast. A branch of the Mohe people, in summer they lived along the rivers in tents of bark, and in winter in dugout shelters. They were superb hunters, horsemen and archers, famed for their ability to lure a deer out of hiding by imitating its call on a horn of birch bark. They bartered horses, trained falcons, gold, pearls, ginseng and beeswax with neighboring peoples in exchange for iron implements and other articles.

In the 11th century the Wanyan clan of the Nuzhens learned to farm and began to lead a settled life. They also learned to make weapons of iron. Gradually they united all the Nuzhen clans. They were treated as vassals by the Qidans (Khitans), an earlier group of northern nomads who had settled down and developed the powerful Liao state across north China (916-1125). From the Nuzhens the Liao rulers extorted high tribute in falcons and other products. Early in the 12th century the daring and astute Nuzhen leader Akutta led his people in revolt. In 1115 he set up the Jin (or Kin, meaning gold) kingdom with capital at Huining (in present-day Acheng county in Heilongjiang province). Fierce conflict between Jin and Liao followed and Jin seized much Liao territory.

The Liao regime had lost its early vigor and its court was becoming increasingly corrupt and deca-

dent. While the emperor lived in luxury and indulgence, the people suffered greatly and many also rose in revolt. Jin made an alliance with the Northern Song dynasty, which ruled central and southern China, to attack Liao from both sides. In the spring of 1125 Jin troops captured the Liao emperor, ended the dynasty and laid claim to much of north China.

The Song troops had proven inept in the fighting. Seeing this, the Jin ruler continued to march southward against Song. In the winter of 1125 Song generals north of the Huanghe (Yellow) River either surrendered or fled. For a while the Northern Song capital Kaifeng was heroically defended by troops under Prime Minister Li Gang (1083-1140), appointed to do so by the Emperor Qin Zong under pressure from the army and the people. But then, yielding to a faction at court who favored peace at any price, the emperor secretly sent emissaries to the Jin camp and dismissed Li Gang.

Jin took the capital in January 1127, burned the city and captured Emperor Qin Zong and his father Hui Zong, who had abdicated to his son. Gao Zong, another son, fled south with some of his ministers and eventually made his capital at Linan, today's Hangzhou in Zhejiang province. Thus began the Southern Song dynasty (1127-1279).

Resistance to Jin Invaders

Jin's overrunning of north China by plunder and carnage aroused strong resistance, particularly in the Huanghe River region. In Hebei and Shanxi prov-

inces the people built fortresses and fought the Jin troops. Seven thousand Song soldiers led by Wang Yan burst through Jin encirclement and set up headquarters in the Taihang Mountains where they gathered a rebel force of 100,000.

They became known as the "Eight Character Army" from the motto they tattooed on their faces: "Defend our country with heart and soul and pledge to kill the Jin invaders without mercy." They were a serious threat to Jin so that for a long time it could neither consolidate control over the central plains nor expand southward as it liked. Such armed resistance lasted for over a century.

General Yue Fei

In 1129 Jin crossed the Changjiang (Yangtze) River and continued raiding southward, even burning the capital Linan. They were given a hard time by a fleet of Song ships on the Changjiang under General Han Shizhong. Some generals, of whom Yue Fei (also spelled Yo Fei, 1103-1142) is most outstanding, led their troops northward and with help from the people recovered much lost territory. Yue Fei's army of northern peasants were famous for their discipline. "Don't tear down a house for firewood even though freezing, nor steal from the people even when hungry" was their motto.

In 1140 Yue Fei's troops dealt a crushing blow to the Jin forces at Yancheng in Henan province. In high spirits, with rebel forces in north China cutting Jin supply lines, they were prepared to roll Jin back to its headquarters in the northeast. His words to his troops have become famous: "We'll march straight to Huanglong and there drink together to our heart's content."

But Southern Song Emperor Gao Zong ordered them to withdraw, and even sent him 12 urgent messages to do so. He and Prime Minister Qin Hui had been carrying on secret negotiations for peace with Jin, and in fact feared their armed people more than they feared Jin. "The achievements of ten years are being thrown to the winds in a day" was Yue Fei's sorrowful comment. Both the people and army were

sad and indignant. Yue Fei was imprisoned on a trumped-up charge and murdered, but he is still remembered by the people today.

The Jin army reoccupied many areas from Yue Fei's army and in 1141 a peace treaty was concluded under which Southern Song agreed to be a vassal of Jin and pay it an annual tribute of 250,000 taels of silver and 250,000 bolts of silk. All territory north of an east-west line from the Huaihe River to a point in western Shaanxi province was ceded to Jin. Thus China was again divided between north and south for many years.

Throughout this period, Jin, to strengthen its domination, had brought many Nuzhen troops from the northeast to garrison the central plains. A script for the Nuzhen language had been created shortly after the Jin kingdom was set up. Now, exposed to the more highly-developed political, economic and cultural influence of the Han people, the Nuzhens gradually took on the habits and attitudes of Han feudal society.

Peasant Uprisings

In the south, Southern Song officials increased extortion from the people in the name of fighting the invaders. Even those who had no homes were forced to pay a property tax, and those with no sons a head tax on them. Retreating imperial troops often looted, raped and committed all sorts of crimes against the people. This provided fertile ground for peasant rebellion. The largest uprising began in 1130 under Zhong Xiang and Yang Yao.

Zhong Xiang had attempted to organize an uprising around Lake Dongting in today's Hunan province toward the end of the Northern Song period. Recalling slogans which Wang Xiaobo and Li Shun had raised in nearby Sichuan at the end of the tenth century, Zhong Xiang said, "It is a vicious law that divides people into rich and poor, high and low. I would even them off if I had the power." This appealed to the peasants' desire for political and economic equality. Poor peasants from hundreds of miles around had rallied under his banner.

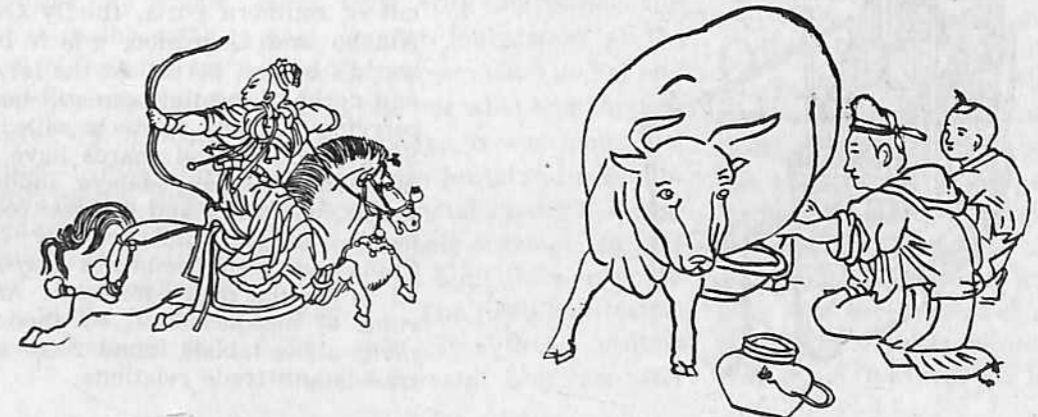
Split bamboo fan with lacquer openwork handle from Southern Song tomb in Jintan county, Jiangsu province.



Coat worn in Southern Song times of yellow crepe and one of its black borders painted with gold and multi-color designs, Fuzhou, Fujian province.



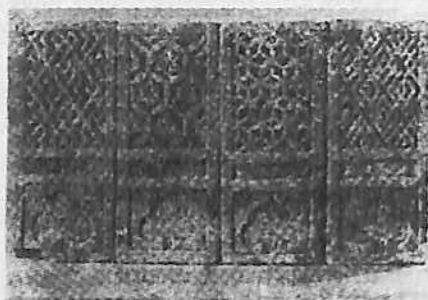
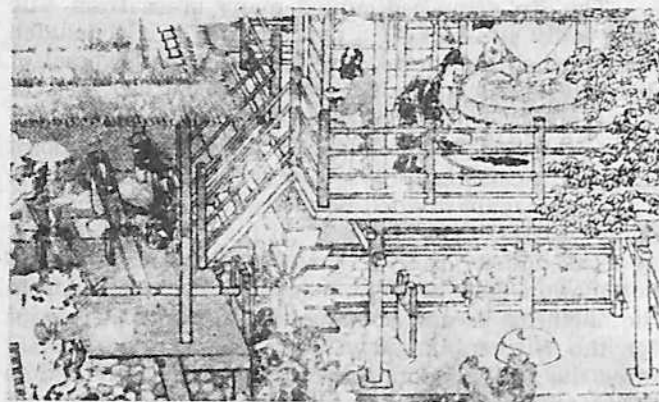
Sketches of details from Buddhist tales in Jin dynasty Yanshang monastery, Shanxi.



A finely-decorated Southern Song lacquer box with gold inlay unearthed in Jiangsu province.



Water-powered millstone in mural of contemporary life in Yanshang monastery in Fanzhi county, Shanxi province.

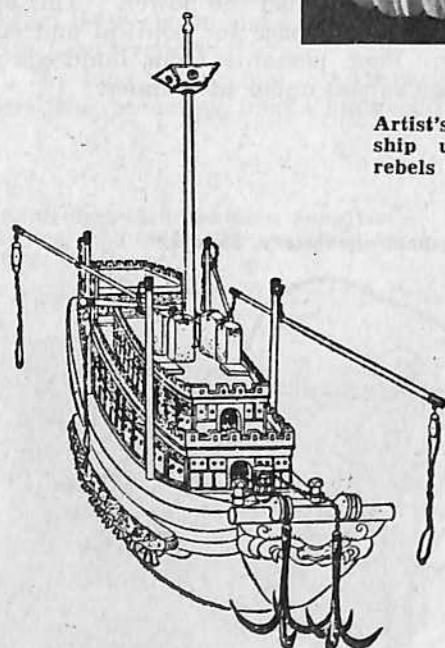


Carved bricks in form of latticed doors found in a Jin-period tomb in Wuzhi county, Henan province.

Deer design on jade-carving pendant from tomb of the Jin period in Heilongjiang province recalls Nuzhens' hunting past.



Artist's re-creation of ship used by peasant rebels under Yang Yao.



In the spring of 1130 their uprising proclaimed the state of Great Chu. Within a fortnight they had captured 19 counties around Lake Dongting. A proclamation by the insurrectionary army declared that all who had joined the uprising were freed from the burden of taxation and labor service and were no longer bound by the laws of the Song government. They seized and divided up the estates of big landlords and officials, many of whom fled in panic.

Zhong Xiang was captured in battle and killed and leadership of the army was taken over by Yang Yao. In 1135 Yue Fei was sent by the Song government to suppress the rebels. Yang Yao was captured and executed and the uprising petered out.

Southern Song Economy

The people's struggle to keep Jin from expanding further south gave the economy in the south a chance to develop. It was also helped by the fact that many people from the north migrated south to escape the war.

Both acreage of land under rice and per-area rice yields increased. Two crops a year were grown along the lower Changjiang River and Lake Taihu, with those around Suzhou and Huzhou (now Wuxing) in the lake area constituting an important part of the country's production. There was a rhyme which went, "When Su-Hu's grain is ripe/All under Heaven is all right." Cotton planting had spread from Guangdong and Fujian along the coast to the Changjiang River valley.

Handicraft industry also developed, particularly cotton textiles and shipbuilding. Textile manufacture was carried on widely in the cotton-producing areas. A well-preserved cotton blanket unearthed recently from a Southern Song tomb in Zhejiang province is thick, soft and closely-woven, an indication of the level of cotton weaving at that time.

Along the coast and rivers ships of many types were built, including seafaring vessels that could accommodate 200 to 600 people. Using the compass they could continue to navigate even in fog. A sturdy Southern Song ocean cargo ship was excavated near Quanzhou in Fujian province in 1973. Judging from the 24-meter-long remains of the hull, it must have been quite large and had a carrying capacity of over 200 tons.

Despite disruption in the north, trade flourished out of southern ports, chiefly Guangzhou (Canton), Ningbo and Quanzhou, which became one of the world's biggest ports. At the latter remains of piers and docks of the time can still be seen today. Ships carrying Chinese products sailed as far as Africa. Song porcelain and shards have been found in excavations in Japan, Malaya, Indonesia, Pakistan, Sri Lanka, west Asia and the east coast of Africa. Economic, cultural and friendly exchanges between China and foreign countries increased. This is attested to by the many tombs of Arab merchants and ruins of mosques built by them in Quanzhou and many stone tablets found there with descriptions of travels and trade relations. □



Tomb of Yue Fei, Song Dynasty Hero

CHANG SHAOWEN

repair and renovation it was reopened to the public.

The tale of how Yue Fei's body was found is an interesting story in itself. The prison warden Kui Shun, out of respect for Yue Fei, risked his life to remove the body and have it buried outside the city. With it he placed a jade ring Yue Fei had worn, and a bucket containing Yue Fei's belongings, so that the body could be identified later. On the grave he planted two orange trees. The warden kept the secret till on his death bed he told his son, "One day when the wrong done Yue Fei is righted, you must report that you know where the body can be found." When the Emperor called for information, the warden's son spoke out, and the next year the body was moved to its present site.

ON the front of the temple hangs a black tablet with gold characters reading "Yue Wang (King) Temple." In the main hall has been placed a new 4.3-meter statue of Yue Fei in martial dress and a general's helmet.

Legend has it that his father gave him the name Fei (meaning to fly) because as he was being born a roc flew over the house. It

YUE FEI (also spelled Yo Fei) (1103-1142), a famous Song dynasty general became a patriotic hero for driving back the troops of the Jin Kingdom in the north, which had carried its invasion far into the south. Almost immediately afterward Qin Hui, the Southern Song Prime Minister who had secret dealings with the Jin rulers, had Yue Fei locked up on trumped-up charges and murdered in prison at the age of 39. As a rallying point for resistance to Jin, Yue Fei had been too dangerous to Qin Hui's cause.

Yue Fei was not forgotten by the people. Twenty years later, Southern Song Emperor Xiao Zong, to curry favor with the people and quiet popular indignation at the frame-up, exonerated Yue Fei and tried to find out what had happened to his body. It was found and given a proper burial in the Southern Song capital, today's Hangzhou in Zhejiang province. In 1221 a temple was built there in honor of Yue Fei. The tomb and temple have seen countless visitors through 700 years. Last year after

Portrait of Yue Fei on a stone tablet.

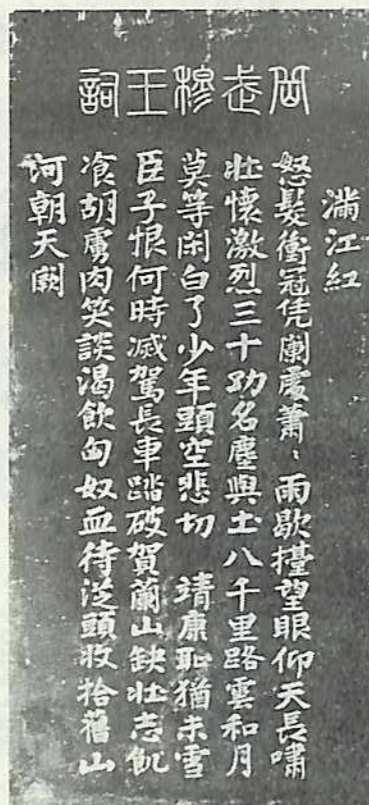
was probably with this legend in mind that an ancient artist decorated the ceiling of the main hall of the temple with 373 cranes in different poses. The crane is a symbol of steadfastness. A month after he was born the Huanghe (Yellow) River flooded and his mother, holding him, floated about in a big pot until rescued.

Yue Fei was credited with enthusiasm for study as a child, with *Master Sun's Art of War* written by the famous military strategist Sun Wu in the Spring and Autumn Period (770-476 B.C.) as his favorite book. By the age of 19 he was reputed to be able to pull a bow requiring a force of 150 kilograms. When he joined the army at the age of 20 his mother had tattooed on his back four Chinese characters *jing zhong bao guo*, meaning "Dedicate oneself to the service of one's country." These are the four characters carved on the main hall of the temple.

Hanging above the statue is another set of four: *huan wo he shan*, meaning "Recover our lost territories" made after characters in Yue Fei's own handwriting. And

The iron statues of Qin Hui and his wife, chief murderers of Yue Fei.

Wang Hongxun



Yue Fei's poem, "Man Jiang Hung", in the handwriting of Wen Zhengming, a famous Ming dynasty calligrapher.

this is the cause to which he dedicated his life.

The tomb encircled by ancient pines stands left of the temple. The walk to it is flanked by six stone figures of people and two each of tigers, sheep and horses. Before the tomb itself are four statues of iron. They are the Prime Minister Qin Hui, his wife, and two accomplices in the murder cast so that they are forever kneeling. A couplet behind them reads: "Fortunate is the green hill that harbors his loyal bones; Unfortunate the iron to be cast in the figures of traitors." The stone before the tomb reads "Tomb of Song Yue King E" (a title given Yue Fei 63 years after his death).

To the left is the tomb of Yue Fei's adopted son Yue Yun (1120-1142), who fought with his father and was later also imprisoned and murdered. Last year it was re-

stored to its original form as first built in 1163, that is with bricks placed directly on the ground and covered with a mound of clay, and weeds growing on top as was the custom then.

NORTH and south of the walk to the tomb are 125 stone tablets. Some of them were made after his own handwriting, and include his own poems and articles he had copied. He was a gifted poet and calligrapher as well as a military man. His poem *Man Jiang Hung*, an outstanding literary work full of patriotism was carved in the handwriting of Wen Zhengming, a famous Ming dynasty calligrapher. Thirty-seven of the tablets were moved to the site last year from the memorial hall in his native town in Tangyin county, Henan province. They bear copies of two articles by the famous strategist Zhuge Liang in the Three Kingdom Period chiselled in Yue Fei's vigorous and forceful handwriting. Thirteen tablets record the details of the victories and his exploits in the drive against the Jin invasion. Others cite evidence of how Yue Fei fought against Emperor Song Gao Zong, Prime Minister Qin Hui and other capitulationists. Still other tablets on the south bear inscriptions by noted persons in tribute to Yue Fei.

Near the entrance to the tomb is a pavilion containing several sections of a fossilized tree trunk, which originally stood near a pavilion in the Southern Song dynasty prison. The legend grew up that it was a pine tree that had withered and died when Yue Fei was killed beside it. In 1922 the remaining sections were moved for display near the tomb. Scientific analysis has found that it was actually fossilized much earlier, about 120 million years ago, but its legend remains as proof of the people's love and respect for the loyal Yue Fei. □



Memorial temple built for patriotic hero General Yue Fei who fought the Jin invasion.

Wang Hongxun

Newly-created statue of Yue Fei in the heroic style. Photos by Zhang Keqing

Tomb of Yue Fei in Hangzhou.



Harbin



Tower in Riverside Park commemorates victory over the 1957 flood, biggest in history.

Wang Hongxun



Turn-of-century 'ginger-bread' on waterside cafe recalls old Harbin.

Wang Hongxun



The Children's Railroad.

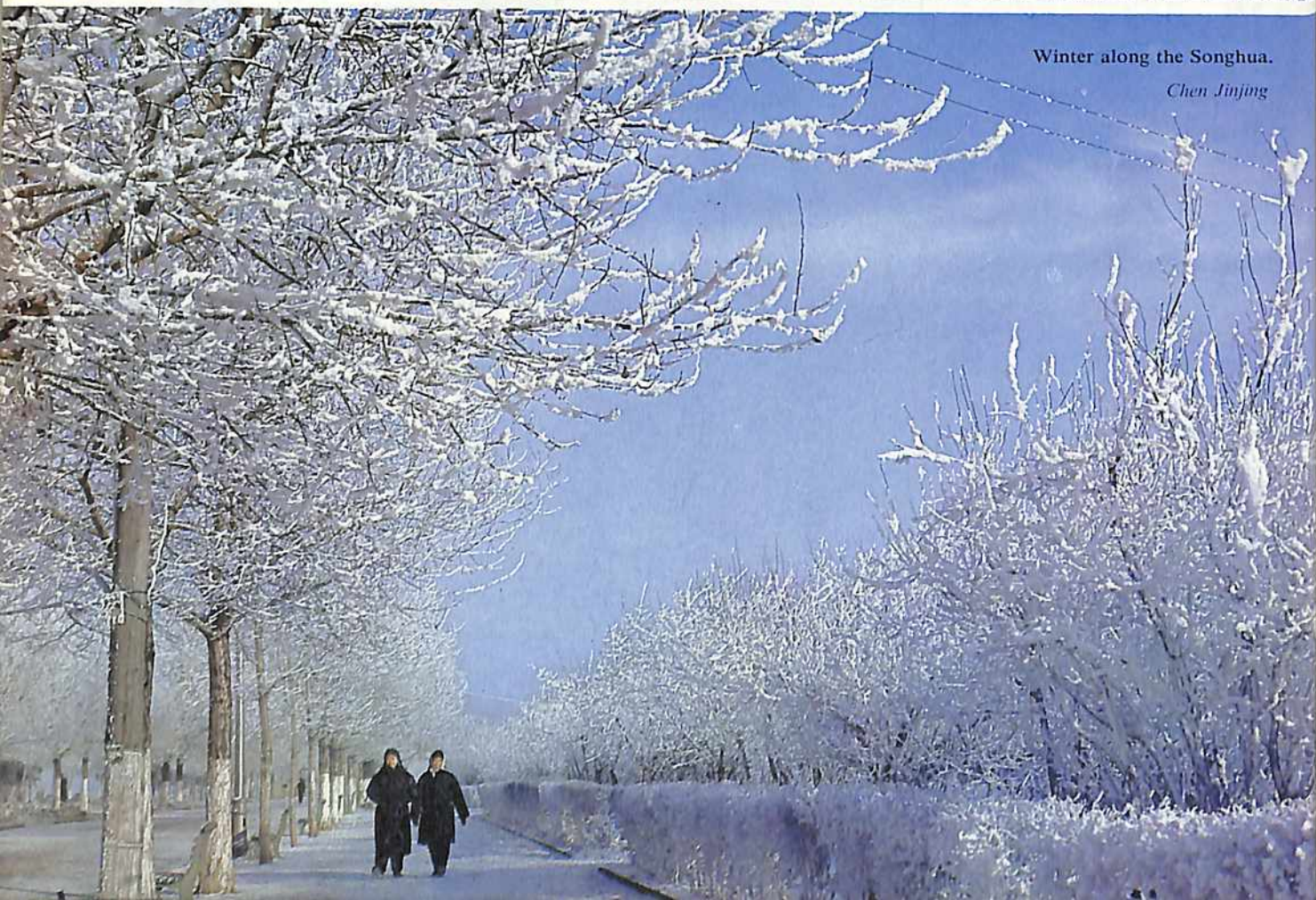
Wang Hongxun



Errenzhuan, a song and dance duet popular in the northeast.

Wang Hongxun.





Winter along the Songhua.

Chen Jinjing

HARBIN

—Metropolis of the Far North

LI JIYANG

A fishing village only 80 years ago, Harbin on the bank of the Songhua (Sungari) River has grown into an industrial center with 2,100,000 inhabitants. It is an important land and water transport center as well as a scenic spot in China's northeast and capital of Heilongjiang province.

Historical records show this area was inhabited by the Nuzhens, ancestors of the Manchu nationality in the 11th century. The name Harbin was evolved from "Alejin," the name of the fishing village then.

In 1896 Tsarist Russia made a secret treaty with the Qing dynasty government to build the Chinese Eastern Railway from Manzhouli (Manchouli) on the Chinese-Russian border through Harbin to the Russian city of Vladivostok on the coast. With the indemnity extorted from China and cheap Chinese labor it built the railroad with Harbin as the administrative center for the rail line. With navigation on the Songhua River and several other rail connections, the city gradually developed into a transport hub.

With the railroad, Russian merchants, adventurers and missionaries swarmed into the city and set up their stores, factories and churches. Today one can still count the cupolas and spires on top of thirty Eastern Orthodox churches.

Following the Tsarist aggression many other imperialists also came to Harbin. Harbin became an international metropolis. Consulates were established by 15 countries, including Japan, the United States, Britain, France, Germany and Italy. Banks and business firms siphoned off the wealth of the Chinese people. There were

plush hotels, dance halls, bars, gambling-dens and villas of the imperialists, and foreigners from many parts of the world. At one time there were 100,000 foreign residents from 36 countries in the city.

After the Japanese occupation of northeast China in 1931, Harbin became the invaders' base for further aggression and plunder of her rich resources. On the other hand, the city was also an important base for the Chinese Communist Party underground which carried on armed struggle against the Japanese. On April 28, 1946, Harbin returned to the people thanks to the Chinese People's Liberation Army.

Home of Power Equipment

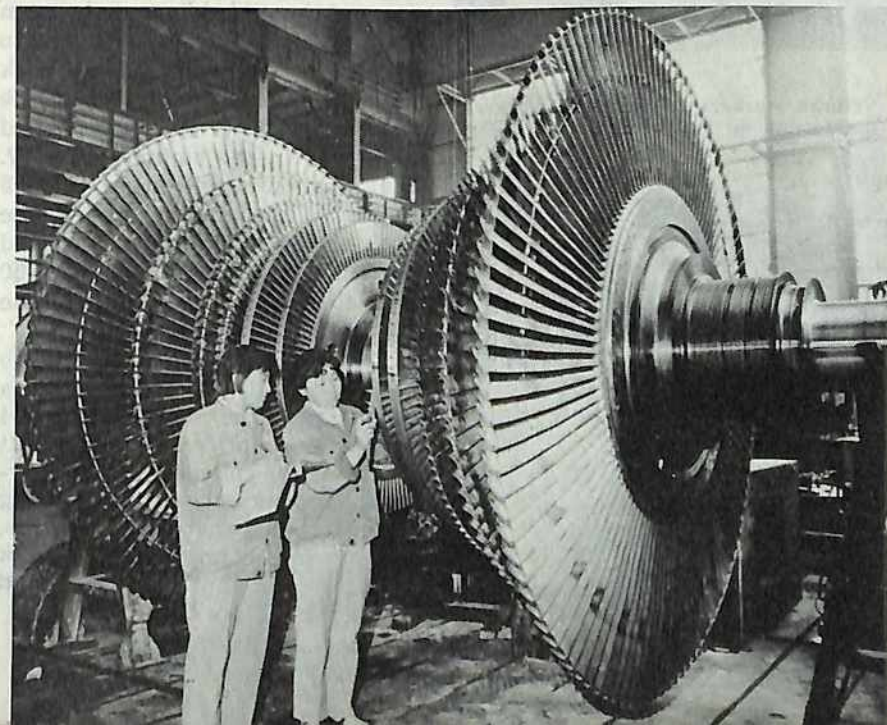
After liberation Harbin, from a colonial and consumer city, developed into a new industrial center with mainly power equipment and engineering enterprises.

The southwestern suburbs of the old city, formerly overgrown with brambles, used to be a race course for the imperialists, officials and the rich. Today many big factories line along a 4.5-kilometer asphalt road. Among them are China's three big power equipment enterprises, the Harbin Electrical Machinery Plant, the Harbin Boiler Factory and the Harbin Steam Turbine Plant. They produced China's first big water turbogenerator, first high-pressure boiler for a power plant and first big steam turbogenerator. The city has thus earned the name "home of power equipment."

The three big plants, together with other factories making electric meters, insulating materials, and electric wires and furnaces form Heilongjiang's power equipment manufacturing industry. Over the past 20 odd years it has provided complete sets of equipment for more than 120 big

Rotor for a 200,000 kw. water turbogenerator made by the Harbin Steam Turbine Plant.

Wang Hongxun



LI JIYANG is a staff reporter for the Harbin Daily.

MARCH 1980

and medium-sized power stations, including the ones at Liujiaxia in Gansu province, Xinanjiang in Zhejiang province, Shizitan in Sichuan province, Foziling in Anhui province, Guanting in Hebei province and Xiaofengman in Jilin province.

Before liberation Harbin could not produce a single machine tool or even a cutter. Now it has more than 3,000 factories, manufacturing over 1,000 types of products, among which are heavy mining and metallurgical equipment, giant power-plant boilers, as well as small bits, electric wire, roller bearings, high-precision measuring tools and electric meters.

The city's light industry has also developed, producing chemicals for daily use, glassware, plastics,

Former slums being turned into new residential areas. Wang Hongrun



Veteran workers resting at a workers' sanatorium on Taiyangdao. Wang Hongrun



rubber and leather goods, textiles, sugar and pharmaceuticals. Harbin's total annual industrial output value now is 36 times that before liberation.

City of Parks

Harbin is noted for its proper distribution of factories and large-scale tree-planting. The city now has 13 parks, 154 flower nurseries and afforested areas with a total of 3,000,000 trees. Beautifully-pruned elms, poplars and pines along the streets have become one of the city's characteristics.

The names of some of the streets, parks and sites in Harbin are those of heroes including Yang Jingyu, Zhao Shangzhi, Zhao Yiman and Li Zhaolin who gave their lives in the war against Japanese aggressors. Where once stood the police headquarters of the Japanese puppet Manchukuo regime on what is now Zhao Yiman Street, is a memorial hall to those killed fighting against the Japanese invaders in the Northeast. It serves to educate the people in the revolutionary tradition of those days.

The beautiful Songhua River runs from west to east through the city. Riverside Park, 10 hectares in size along the southern bank, is a favorite place for the people to spend their days off. In it are a youth palace, a riverside restaurant, a clubhouse and a sports station. A large bridge can be seen spanning the river from north to south. In the center of the park stands the tower in memory of the great victory over the biggest flood in history in the summer of 1957. That year the river rose to 46.5 meters, three meters above the city's streets. The people worked night and day to build a dyke 50 kilometers long, thus protecting the city from the turbulent waves.

The 1,300-hectare Taiyangdao (Sunny Island) in the river is a famous summer resort. It has 14 sanatoriums and rest homes built by factories, colleges and universities. In summer people bring their families here for picnics, boating and swimming. At peak times several hundred thousand people visit it in a day.

The city's Children's Park has China's one and only Children's Railroad. Built in 1956, it is two kilometers long with "Beijing Station" at one end and "Harbin Station" at the other. The small train, drawn by a diesel locomotive, has seven gaily-colored coaches which can carry 200 passengers. The railroad staff, including the station masters, conductors, train guards, locomotive drivers, ticket sellers and collectors and head of the train crew are all school children under 13, who work in turn. Over the past 24 years the railroad has carried 3,400,000 "passengers."

City of Ice

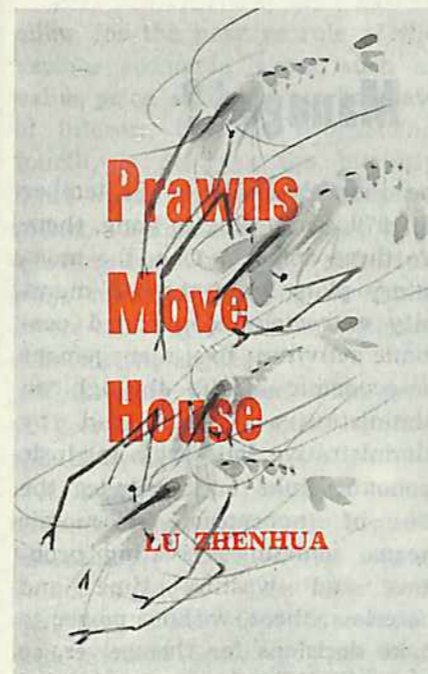
During Harbin's six-month winter the temperature is usually 30°C. below zero, and there are heavy snowfalls. The people have found many ways to adapt to cold. Milk is sold in frozen bricks. As it is difficult to store and transport fresh pears, they are sold on the market frozen. Harbin frozen pears, after being thawed in cold water, have their own special flavor and are a popular delicacy at the Spring Festival.

Another Harbin custom is to make a lot of *jiaozi* of dough-wrapped meat, fast-freeze them in the open air and preserve them in bags till they are eaten.

Winter is Harbin's golden season for ice sports. As early as November, many offices, factories and schools make their own rinks by flooding a piece of low land. The city's Red Star Skating Rink is the ice-skaters' favorite. In the streets or lanes children play merrily on skates made by themselves.

Another winter attraction in Harbin is the annual ice-lantern exhibition*. The crystal-clear lanterns in various shapes — flowers, animals, pagodas and pavilions, draw many visitors in spite of the bitter cold. When they are illuminated inside, they create an enchanting atmosphere as beautiful as a fairyland. They are the joint work of gardeners and artists. □

* CR carried a story about the ice lanterns in Jan. issue, 1980.



THE old fisherman held out his cupped hands to show several lively young prawns. "Look!" he exclaimed, "I found these in an inlet by the shore. If they can grow there, they ought to grow in salt-water ponds too."

This took place 20 years ago in the office of an agricultural producers' co-op near today's Xiaoguan commune in Wendeng county, Shandong province. Today, the commune with its eight seaside ponds containing millions of prawns is an up-and-coming prawn raising ground, one of the many in China.

It was not an easy job to get prawns to resettle in ponds; in fact it took all of 20 years of experimentation. The delicious Chinese prawn, an important food of the Chinese people and a major export product, has its natural habitat in the Huanghai and Bohai seas along the northern and eastern coast of China. After spending the winter in the Huanghai Sea, in March they swim in shoals up to the Bohai Sea hundreds of miles away, where they spawn, hatch and grow. Not

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many of the young, however, survive the buffeting of the elements and the depredations of large fish. Those that do, grow to the size of their parents and mate in September, by which time the temperature of the Bohai Sea begins to drop and the prawns start out on the long swim back to the Huanghai.

Prawn fishing takes place in spring and autumn, but catches were always limited. Prawn fishermen faced the same problem as the fishing industry in general: the world's fishing fleets keep growing in tonnage but with little increase in the size of their catches. This has forced more and more seaboard countries to turn to artificial breeding and raising to supplement their sources of seafood.

China had long been famous for pond-breeding of fish. Could the same be done with prawns? Experiments were being made, in Japan for instance, but at that time none had been successful in China. What the old fisherman had found seemed to indicate that prawn-raising was possible, and so the agricultural cooperative decided to try.

First Try

Their first pond was constructed northwest of the village by putting up a dam across an inlet of

the sea. The first year the prawn fry were eaten by fish. The second year the grown prawns froze to death due to delay in bringing them in. In 1958 the villagers finally succeeded in producing several dozen kilograms.

Large-scale prawn-raising at the Xiaoguan commune began in the winter of 1974, when members of the commune built a seven-kilometer-long dam across the sea to form eight ponds with a total surface of 160 hectares. Advice was sought from teachers at a marine products school and from experienced prawnmen round about. Commune members worked hard to keep the ponds clean, weed out fish enemies and find sources of prawn food, such as small oysters and clams.

In 1975 they managed to raise only 4,000 kilograms. But by 1978 the figure was 38,000, and in 1979 it reached a record 55,000 kilograms.

On a sunny morning early last autumn I was taken by boat to see the biggest of the commune's ponds, rectangular in shape and covering 130 hectares. As our boat advanced, shoals of startled prawns sprang out of the water. About ten centimeters long, they would grow another four or five centimeters to optimum length being collected 50 days later.

The water in the pond is renewed with a fresh flow from the ocean every day by lifting a

Feeding prawns at Xiaoguan commune in Shandong province.



How Should China's Economy Be Managed?

HOW is China to improve her economic management? What kind of economic management should she follow? These are questions people in economic and academic circles are asking. Many people today believe that the expansion of the country's productive forces and her modernization hinge on finding the correct answers to these questions. There have been widespread discussions and newspapers and journals have been publishing the various views expressed.

The present system of economic management is based on ownership by the entire people, in the form of state ownership, and was introduced from the Soviet Union in the early 1950s. The chief characteristic of this system is its use of a highly centralized administrative apparatus to direct economic activities and run enterprises. In this, the state organizes and directs economic activities through the central departments imposing rigid norms and regulations on regions and individual enterprises,

for outputs, funds, machinery and equipment, marketing, salaries and so on. Many in China today feel that this system in use over the past 30 years does not fit the present situation, when the country is moving forward to achieving socialist modernization. They frankly point out that the main defect in this system is an over-concentration of power resulting in undue emphasis on administrative means. This method sometimes ignores economic laws and has now become an obstacle to expanding the productive forces and attaining modernization. "There must be changes made," they conclude. Such changes, wrote Commentator in the influential *People's Daily*, "will bring about a radical change in our economic life."

What are the defects of the present system of management? Fang Weizhong, a vice-director of the State Planning Commission, answered this in an article, "Thoughts About Reforms in Economic Management," published in

the *People's Daily* of September 21, 1979. According to Fang, there are three defects. One, the mandatory plans from the top mummify extremely complicated economic activities; two, management of economic affairs through an administrative system and by administrative fiat severs intrinsic economic links and excludes the use of appropriate economic means, sometimes creating problems and wasting time and materials; three, without power to make decisions for themselves, so that everything has to be decided from above, enterprises are bound hand and foot and employee initiative and enthusiasm are stifled.

Dong Fureng, a vice-director of the Institute of Economics of the Academy of Social Sciences, listed four weaknesses in the present system of economic management.

First, it does not allow economic rewards the role of stimulating economic development; second, it does not allow each enterprise to function as an independent accounting unit; third, it does not

allow for the positive role of the various economic levers, such as value, price, currency, market, rate of interest, tax and profit; and fourth, it destroys the intrinsic links within the economic organization. Reforms must start with allowing the law of value full play, namely, applying economic levers to regulate the national economy, he argued.

This being the case, what type of economic management system should be adopted?

A number of proposals were advanced and animatedly argued. Essentially, there were three points of view. One view held that the "classic type of centralized planned economy" practised during China's First Five-Year Plan (1953-57) should be restored, because relatively rapid economic progress was made during that period. Moreover, as China's level of productivity is still very low and the cultural, scientific and managerial level of cadres in general are low, a decentralized system would be inappropriate.

Another view favored a decentralized type, "regional planned economy" as against "centralized planned economy", in which the provinces, municipalities and

autonomous regions draw up and are responsible for their own economic plans. Each regional authority would then be free to as great an extent as possible to maximize utilization of their region's resources and manage their own financial affairs.

A third view advocated separating state administrative bodies from economic bodies, a decentralized form, in which each enterprise functions as an independent accounting unit, having much greater powers of decision, and organizing economic activities according to economic laws. Some experts proposed setting up special companies which would not be confined to departments or within administrative boundaries, but would organize production according to the demands of large-scale socialized production. The state would be responsible for giving each enterprise the general orientation and laying down broad guidelines to ensure sound development of the whole national economy in a planned way. Mandatory plans, however, should be kept to a minimum. Instead, economic means should be employed more and more to manage economic affairs and to bring

about coordinated adjustments to plans and the market.

Holders of the third view claimed that a centralized type of management engenders complex contradictions between the central authorities, the regions, and the enterprises, and upsets harmony in production. A decentralized type would only transfer these problems down to the provinces, municipalities and autonomous regions. But a decentralized system with individual enterprises as the center, would not have the salient defects of the other two, while allowing enterprises and their employees far more initiative and thus enliven the whole national economy.

So far, the prevalent view is that China's economic management system should be reformed along the lines of the third type. But to find the most suitable and most beneficial system of economic management for China, the economists point out, reform would have to be done under the guidance of Marxist economic theory and on the basis of summing up China's experience and learning the best in economic management from other countries. □

water gate. A fine-meshed nylon net guards the gateway to stop enemy fish from entering. Feed for the prawns is spread from old-fashioned wooden boats and not from motorized boats which would pollute the water. Experienced breeders keep tabs on water salinity and amount of feed consumed.

This last is one way of keeping informed of the condition of the prawns. One year, for instance, the growers put 700,000 prawn fry in one of the ponds, but when giving them the appropriate amount of food were puzzled to find that something was always left over. Several days of observa-

tion led to the discovery that the prawns were diminishing, a type of croaker fish which had gotten into the pond was eating them. Since then special care has been taken to keep out harmful fish.

Higher Yields

After lunch I went to see other ponds in the commune and met Jin Wenkan, a technician from the Huanghai Aquatic Products Research Institute. He has engaged in marine breeding ever since he graduated from Shandong University in 1954. He has been working in the commune since 1977 experimenting on increasing prawn production. The next year, working

with four test ponds each two *mu* (roughly 1/7 hectare) in size, in two of them he achieved prawn yields of over 1,000 kilograms, a figure then unrivaled in China and among the best in the world. The other ponds also produced more than 400 kilograms each.

He and his fellow workers have written several articles, two of which, "Prawn Breeding" and "How to Get High Production by Raising the Survival Rate," have been nationally recommended as reference material. They supply valuable data on rational density of prawn population, feeding and pond management and methods of destroying fish predators.

Speaking of high prawn yields he said, "One ton per pond shows us what the prospects are for pond-breeding. This type of breeding has developed rapidly in China during the 70s and consistent high yields have been gained in small-sized ponds.

"We want to find ways to produce still more prawns for the consumers. One way is by careful selection and breeding. The other is by setting up centers to breed large quantities of prawn fry which will be put back into the sea and allowed to grow naturally. These methods should prove effective if kept up year after year." □

Good prawn harvest.



Photos by Lu Yingdeng



Village street.

by Luo Xingyuan

Sketching and Splashing with the Dais

WANG SHUHUA

The art students in front of the big waterfall on the Nanla River.



THE water-splash festival in April is the big traditional holiday of China's Dai nationality. Last year 20 first-year students and teachers from the fine arts class of the Simao Secondary Teachers' Training School in Yunnan province had the opportunity to spend it with the Dai people of Menglian county, which borders Burma on the west, sketching and getting to know the people.

The full name of the place is the Menglian Dai, Va and Lahu Autonomous County. These nationalities as well as people of the Hani minority are concentrated in the area.

We were charmed by both the scenery and the customs of the different nationalities. The county town is situated beside the Nanla River. Both modern buildings and traditional Dai bamboo huts stand among bamboo groves along its banks. All around are thick subtropical forests. Tucked away among giant banyan trees are some ancient temples. The layers of unusual-shaped mountain peaks are multiplied by their reflections in the blue water of the river. Overhead water fowl wheeled and soared. It is an ideal place for the landscape painter.

WE lived in the homes of the Dai commune members. Before the festival in the mornings we went to the fields to sketch them as they transplanted rice shoots, plowed or leveled the fields. The Dai girls in their bright dresses were like flowers dotting the green fields. They were always laughing and chattering.

The graceful lines of the girls' colorful clothes and their light, rhythmic movements were a fine inspiration for artistic creation and moved each student to try his or her best. In the daytime we sketched in the fields and the village, and in the evenings in the bamboo huts. Everything about the place seemed to us to have an aura of romance, people, scenery,

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the vegetation, houses and even everyday household equipment.

We made a toolshed beside the threshing ground into our "studio" and asked some of the people to pose for us. We drew quite a crowd of onlookers so that soon our studio became like the village recreation center. The people would tell us where to find the most scenic spots—a mountain slope with beautiful big trees, the hot springs, the high waterfall near the hydropower station—and we made day-long excursions to these places.

Soon nearly every home in the village was hung with our sketches—by the end of our stay every student had made two or three hundred. The village became one big exhibition with the commune members going from house to house laughing and passing judgement on the entries.

AS the water-splash festival approached the villagers became extremely busy: the men butchering hogs and sheep for feasts, setting up frameworks from which fireworks would be shot off and making the vari-colored masks used in the traditional dances, the women buying cotton prints and making them into garments, and purchasing new brightly-colored parasols, for already then the sun is hot at midday, the children pounding joyfully on the gongs and

Festival scene beneath the banyan tree: dancers, parasols and vendors.



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Dancer with elephant-foot drum.
by Wang Shuhua



elephant-foot drums (so called for their shape) in the temples.

Finally the three-day holiday arrived. In Dai custom, sprinkling water at each other is like the exchange of wishes for good luck and happiness. The proper way is to use an olive branch, dip it in a silver bowl and gently flick off a few drops. But now the occasion has become one mainly for fun and the young people simply slosh basins of water at each other.

We became the target of their "attacks," and we ourselves counterattacked with basins and bucketfuls. The air rang with laughter, and water flew in every direction. All of us were soaked from head to foot.

This activity presented another opportunity for art—many new

postures, and the beauty of the human figure revealed by the clinging wet clothing. Some of the students tried to take shelter behind the trees to do some sketching, but soon they were discovered and splashed by the laughing girls, so finally all sketching of the event had to be done from memory.

In the evening there were fireworks, and the young people formed a circle to dance to the beat of gongs and elephant-foot drums. They did the traditional Dai dances—the red deer dance, peacock dance, mask dance, sword dance, monkey dance, shadowboxing dance and others all through the night. □

Sketch of a Dai woman.

by Wei Qicong



View of Menglian.

by He Kun



Shi Fengshou and His Calculating Method

CAI BIAN



Shi Fengshou.

Yang Wumin

WHAT is 48,241 multiplied by 35,482?"

"1,711,687,162." A young man on the platform of a closely-packed classroom gave the answer before a woman with a calculator at the other end could even finish pushing the keys. When the woman announced the answer, the same as that of the young man, the audience burst into enthusiastic applause.

"What is 569,733 divided by 832?"

"684.77524 and with a remainder of 0.00032." The young man held his lead and was again confirmed by the calculator.

This was a competition between a calculator and mental arithmetic held in the Chinese University of Science and Technology in May 1978. On question after question put by the audience, in every case the man won.

He was 24-year-old Shi Fengshou who became a student at the university in 1978. Using a method invented himself, he can add, subtract, multiply and divide figures with any number of digits and compute fractions, powers, roots, logarithms and trigonometric functions with only the help of his fingers. His method may prove helpful to accountants and others who have to do a lot of rapid calculation without the aid of a calculator. It will be a long time before there will be calculator for widespread use in China.

Shi Fengshou was born in a peasant family in Liangyi commune in Shaanxi province's Dali county. His father is a doctor in a commune hospital and his mother works in the commune. In September 1966 at the age of ten Shi entered the village primary school. A thoughtful boy Shi Fengshou liked to ask all sorts of questions. He was especially interested in arithmetic and his marks were always outstanding. By second grade he was doing multiplication and division as well as the usual addition and subtraction.

WHILE doing his homework he would gaze at his exercise book and ponder: people always read, write and hear large numbers beginning from the high order digit, that is from the figure on the left, to the low order digit, that is the figure on the right. But when calculating they do it the other way round. Couldn't new methods be invented combining the two? Shi Fengshou told his idea to his teacher who said, "These methods have been used for thousands of years. The new methods you talk about you will have to invent yourself." After that Shi Fengshou was always thinking of how to invent new methods.

The next year Shi Fengshou noted that in daily life when adding small sums of money in

their heads people began from the high order digit, or left, unlike as was taught in his texts. This inspired him to try to multiply multidigit numbers by a single digit number in this way. He found it simple and easy mental arithmetic. But he also ran into a problem — carrying. For example, 36 multiplied by 3 is 108. When calculating from the left, to the 9 (product of 3×3) had to be added the 1 from the 18 (product of 3×6). This showed to him that the key to this method lay in the carrying.

To make a breakthrough on this problem, he tried arranging numbers in all kinds of ways. For a month he went to the village store after school to watch the assistants use their abacuses. The way they multiplied 5 by 2 gave him an idea. He concluded that when the multiplier is 2, if the end digit of the number multiplied is 5 or greater there will be a number from the right-hand product which must be added to the left-hand product.

He kept searching for the rules for multiplying by 3 through 9. Whenever he had time he would practice his method. Sometimes he used up two or three notebooks a day. He found notebooks too expensive and began to use waste paper, wrote on his hand or scratched on the ground with a stick. Once he even used chalk on the walls of his home. "That boy must be possessed!" the villagers exclaimed.



Cover of Shi's book 'Quick Calculation.'

AFTER two years of hard work Shi Fengshou finally codified the rules for mentally multiplying by 2 through 9. He compiled them into 29 pithy phrases similar to rules that children learn in school for flipping their abacus beads.

Once when his production team was distributing sweet potatoes in the fields, Shi Fengshou happened to be standing beside the team accountant.

"How many in your family?" the accountant asked one of the commune members.

"Seven."

While the accountant was still figuring on his abacus, Shi Fengshou announced the amount the peasant should get. When the accountant finished his calculation he was surprised to find that Shi was right. He thought the boy was just lucky, but Shi gave the amounts correctly for the next two families as well. The accountant was astounded. Soon Shi was known far and wide for his ability to calculate quickly. People began calling him a "child prodigy."

Accountants often asked him to help them with their books. Shi found that many problems had a multiplier of more than a single digit. He decided to work out a method for multiplying multidigit numbers.

Endless days of trial and error followed. By the time he graduated from primary school Shi Fengshou had found methods for mental addition, subtraction, multipli-

cation and division of multidigit numbers. One day several teachers from Northwestern Industrial University came to his village with their electronic calculators to compete with him. Ten multiplication problems involving 10 pairs of six-digit numbers took 8 minutes with the calculator at the rate the operator worked, but Shi Fengshou finished in 4 minutes, including the time for recording the answers.

Still Shi thought that he was not proficient enough. He used every opportunity to practice. Chinese license plates have seven-digit numbers, he practiced squaring them. At first vehicles would have traveled several dozen meters before he had the answer. But by 1972 he could announce the answer as soon as the vehicle had passed.

The British mathematician Dr. B. V. Bowben wrote that the famous Dutch lightning calculator William Klein was quicker than a desk calculator at multiplying two numbers of up to six digits. Two ten-digit numbers took him 64 seconds, but Shi Fengshou only took 8-9 (not including writing the answer).

IN his middle school days Shi Fengshou developed methods for calculating powers and roots. His work soon attracted attention in scientific circles. When Shi Fengshou came to Beijing in 1972 he was warmly greeted and encouraged by Zhou Peiyuan, Wu Youxun, Hua Luogeng and other noted scientists.

In January 1978 the Institutes of Mathematics, Computing Technology and Applied Mathematics under the Chinese Academy of Sciences confirmed that Shi's method was ingenious, fast and accurate, a rarity in any country. In 1978 the Chinese University of Science and Technology waived the examination requirement to enroll Shi Fengshou in its mathematics department. Shi has studied higher mathematics there, and applied his methods to Maclaurin series for calculating trigonometric functions and logarithms. He has now written a book *Quick Calculation* which has been well received throughout China.

Potala Palace

(Continued from p. 50)

Mandates and seals preserved in the Potala provide further proof that Tibet has long been part of China. The official seal presented to Songtsan Gambo by Tang dynasty Emperor Gao Zong has disappeared, but there are many seals and mandates from Yuan, Ming and Qing dynasty emperors. One of the most valuable is a jade seal conferred to Sajia aristocrats by the Yuan court. There are also petitions from Tibetan chiefs requesting mandates. The title Dalai Lama* was formally recognized by the central authorities in 1652 when the Fifth Dalai paid a visit to Emperor Shun Zhi in Beijing. Since then every choice of a new Dalai had to be ratified by the central government which could also remove his title if he went against its will. The title of the 13th Dalai was taken away twice, in 1904 and 1910, for going abroad without permission from the emperor.

Now all these imperial seals and mandates have been put on display in Norbu Lingka Park in Lhasa under auspices of the Tibet Committee for Management of Cultural Relics. Among the exhibits is a gold vase presented by the central authorities and used in the ceremony of selecting a Dalai Lama, which was presided over by ministers of the central government in Tibet. Into it were placed the names of infants born at the exact time the late Dalai had died, and one name was drawn to represent his reincarnation and be his successor.

The Potala Palace also houses a large number of early copies of the Buddhist sutras in Sanskrit, which both the climate and the social conditions in Tibet made it possible to preserve. They are of great value in studying the politics, economy, religion and culture of ancient times. □

*Originally a religious title conferred in 1578 on a noted Tibetan Buddhist by the Mongolian Chieftain Altan Khan. Dalai is Mongolian for "ocean" and Lama, Tibetan for "man of profound wisdom," hence, Ocean of Wisdom. □

Lesson 15

Shanghai Children's Palace

(加拿大访华旅游团部分
 (Jiānádà fǎng Huá lǚyóutuán bùfen
 (Canada visit China tourist group (a) portion

成员经过一片美丽的草坪, 四周
 chéngyuán jīngguò yí piàn měilì de cǎopíng, sìzhōu
 members pass a piece (of) beautiful lawn, all around

栽满了鲜花和树木, 来到
 zāimǎnle xiānhuā hé shùmù, láidào
 planted full (with) fresh flowers and trees, come to

一座楼房前。
 yí zuò lóufángqián.
 a building front.)

主任: 这是少年宫的主楼。
 Zhǔrèn: Zhè shì Shàoniángōng de zhǔlóu.
 Director: This is (the) Children's Palace main building.

旁边还有科技楼,
 Pángbiān hái yǒu kējìlóu,
 Beside also have science and technology building,

天象厅和剧场。
 tiānxiàngtīng hé jùchǎng.
 astronomy hall and theater.

勃朗: 上海少年宫是哪年
 Bólǎng: Shànghǎi Shàoniángōng shì nǎ nián
 Brown: Shanghai Children's Palace is which year

成立的?
 chénglì de?
 set up?

主任: 一九五三年, 由宋庆龄
 Zhǔrèn: Yījiǔwūsān nián, yóu Sòng Qīnglíng
 Director: (In) 1953 year, by Soong Ching Ling

副委员长主持的中国
 fù wěiyuánzhǎng zhǔchí de Zhōngguó
 Vice-Chairman directed China

福利会创办的。到今年
 Fúlìhuì chuàngbàn de. Dào jīnnián
 Welfare Institute established. Till this year

已经二十七年了。
 yǐjīng èrshíqī nián le.
 already 27 years.

史密斯: 这里有多少教师? 有
 Shímìsī: Zhèlǐ yǒu duōshǎo jiàoshī? Yǒu
 Smith: Here have how many teachers? Have

多少学生来参加
 duōshǎo xuéshēng lái cānjiā
 how many students come (and) take part in

活动?
 huódòng?
 activities?

主任: 这里共有二十多个活动
 Zhǔrèn: Zhèlǐ gòng yǒu èrshí duō ge huódòng
 Director: Here altogether have 20 more activity

小组。专职教师有五十多
 xiǎozǔ. Zhuānzhí jiàoshī yǒu wǔshí duō
 groups. Full-time teachers have 50 more

名, 还有一百多名从外
 míng, hái yǒu yībǎi duō míng cóng wài
 names, also have 100 more names from outside

单位来的业余辅导员。来
 dānwèi lái de yèyú fūdǎoyuán. lái
 units come sparetime counselors. Come

参加定期活动的有
 cānjiā dìngqī huódòng de yǒu
 take part in regular time activities have

一千三百个少年儿童,
 yīqiān sānbǎi ge shàoniánértóng,
 a thousand three hundred children,

不定期来的就更多了。
 bú dìngqī lái de jiù gèng duō le.
 not regularly come (are) even more.

(大家走进主楼)
 (Dàjiā zǒujìn zhǔlóu)
 (Everybody walk into main building)

王: 你们看, 这是文学小组。
 Wáng: Nǐmen kàn, zhè shì wénxué xiǎozǔ.
 Wang: You look, this is literature group,

雕塑小组, 对面是体育小组。
 diāosù xiǎozǔ, duìmiàn shì tǐyù xiǎozǔ.
 sculpture group, opposite is athletics group.

史密斯: 来这里参加活动, 需要
 Shímìsī: Lái zhèlǐ cānjiā huódòng, xūyào
 Smith: Coming here take part in activities, need

什么条件吗?
 shénme tiáojiàn ma?
 what conditions?

主任: 一般是孩子们根据自己的
 Zhǔrèn: Yībān shì háizimen gēnjù zìjǐ de
 Director: Usually is children according to own

爱好, 由学校推荐来的。
 àihào, yóu xuéxiào tuījiàn lái de.
 interest, by school recommend come.

萨克斯: 听! 这乐曲多么优美!
 Sākèsi: Tīng! Zhè yuèqǔ duōme yōuměi!
 Sachs: Listen! This melody how beautiful!

主任: 这是民乐队在演奏。
 Zhǔrèn: Zhè shì mǐnyuèduì zài yǎnzòu.
 Director: This is folk orchestra playing.

(他们来到民乐室)
 Tāmen lái dào mǐnyuèshì
 (They come to folk music room)

玛利: 孩子们演奏得不错。看上去
 Mǎlì: Háizimen yǎnzòu de búcuò. Kànshàngqu
 Marie: Children play not bad. (It) looks (like)

他们的年龄都不大。
 tāmen de niánlíng dōu bú dà.
 their ages (are) all not great.

主任: 参加少年宫活动的
 Zhǔrèn: Cānjiā Shàoniángōng huódòng de
 Director: Taking part in Children's Palace activities

孩子都是七岁到十六岁
 háizi dōu shì qī suì dào shí liù suì
 children all are 7 year old to 16 year old

的中、小学生。这
 de zhōng, xiǎo xuéshēng. Zhè
 middle (and) primary (school) students. This

位指挥是二十年前在
 wèi zhǐhuī shì èrshí nián qián zài
 person conductor is 20 years ago at

这里学过二胡的学生, 现在
 zhèlǐ xuéguò èrhú de xuéshēng, xiànzài
 here learned erhu student, now

是上海音乐学院的教师。
 shì Shànghǎi Yīnyuè Xuéyuán de jiàoshī.
 is Shanghai Music Conservatory teacher.

他每星期来少年宫
 tā měi xīngqī lái Shàoniángōng
 He every week come (to) Children's Palace

一次, 辅导孩子们演奏。
 yí cì, fūdǎo háizimen yǎnzòu.
 once, guide children (at) performance.

(大家来到科技楼)
 (Dàjiā lái dào kējìlóu)
 (Everybody come to science and technology building)

主任: 这是无线电小组。
 Zhǔrèn: Zhè shì wúxiàndiàn xiǎozǔ.
 Director: This is radio group.

史密斯: (对学生) 你们在做什么?
 Shímìsī: (Duì xuéshēng) Nǐmen zài zuò shénme?
 Smith: (To students) You make what?

学生: 测试我们自己组装的电视机。
 Xuéshēng: Cèshì wǒmen zìjǐ zǔzhuāng de diànshìjī.
 Students: Testing we ourselves assembled TV-set.

玛利: 快去那边看, 孩子们做的
 Mǎlì: Kuài qù nàbiān kàn, háizimen zuò de
 Marie: Quick go there (and) look, children made

小飞机、小舰船好玩极了!
 xiǎo fēijī, xiǎo jiǎnchuán hǎowánjǐle!
 small airplanes, small ships fascinating!

史密斯: 少年宫的活动很丰富。
 Shímìsī: Shàoniángōng de huódòng hěn fēngfù.
 Smith: Children's Palace's activities very rich.

勃朗: 孩子们真幸福。今天的参观
 Bólǎng: Háizimen zhēn xìngfú. Jīntiān de cānguān
 Brown: Children really fortunate. Today's visit

太使我们高兴了。
 tài shǐ wǒmen gāoxìng le.
 very made us happy.

Translation

(Some members of the Canadian China tour group pass by a beautiful lawn which is surrounded by flowers and trees and come to the front of a building.)

Director: This is the main building of the Children's Palace. Over there are the science and technology building, astronomy hall and theater.

Brown: What year was the Shanghai Children's Palace set up?

Director: It was established in 1953 by the China Welfare Institute under the direction of Vice-Chairman Soong Ching Ling. It has been in existence 27 years.

Smith: How many teachers are there? How many children come to take part in the activities?

Director: There are altogether more than 20 activity groups, over 50 full-time teachers and over 100 spare-time counselors from other units. One thousand three hundred children are members of regular activity groups and even more come occasionally. (They walk into the main building)

Wang: Look, this is the literature group. This is the sculpture group, across the way is the athletics group.

Smith: Are there any requirements for children who take part in the activities?

Director: Usually the children have some special interest and are recommended by their schools.

Sachs: Listen! What a beautiful melody!

Director: This is the folk instrument orchestra playing. (They arrive at the folk music room)

Marie: The children play quite well. They seem quite young.

Director: Primary and middle school children between the ages of 7 to 16 come to the Children's Palace. The orchestra conductor learned to play *erhu* here 20 years ago. Now he is a teacher at the Shanghai Music Conservatory. He comes here once a week to coach the children. (They arrive at the science and technology building)

Director: This is the radio group.

Smith: (To students) What are you making?

Students: We're testing the television set we made.

Marie: Look over there at the little planes and ships made by the children. How cute!

Smith: The Children's Palace has a very rich program.

Brown: The children are really lucky. We are so happy to be able to visit here today.

Notes

1. **Shàonián-értóng** In general **értóng** 儿童 means pre-school and primary school children, and **shàonián** 少年 those a few years older, as in junior middle school.

2. **Saying how somebody does a thing.** **Tā chàng de hěn hǎo** 她唱得很好 (She sings very well) tells how she sings. In Chinese a **de** 得 must follow the verb when using this form. Other examples: **Háizimen yǎnzòu de búcuò** 孩子们演奏得不错 (The children play quite well); **Tā pǎo de hěn kuài** 他跑得很快 (He runs very quickly).

When the sentence has an object it must be said in this way: **Tā chàng gē chàng de hěn hǎo** 她唱歌唱得很好 (She sings songs very well — literally: When she sings songs, she sings very well). The verb appears twice.

The negative form is **Tā chàng gē chàng de bù hǎo** 她唱歌唱得不好. (She does not sing songs well). □

STAMPS OF NEW CHINA

Taiwan Landscapes

SIX special stamps showing the beautiful scenery of China's Taiwan province were issued by the Chinese Ministry of Post and Telecommunications last October 20.

Stamp 1, 8 fen. Yu Shan (Jade Mountain).

Stamp 2, 8 fen. Riyue (Sun and Moon) Pool.

Stamp 3, 8 fen. Chikan Halls.

Stamp 4, 8 fen. Su'ao-Hualian highway along the coast.

Stamp 5, 55 fen. Tianxiang Waterfall.

Stamp 6, 60 fen. Full Moon over Banping (Half-Screen) Mountain.

All six stamps measure 40 × 30 mm. Perf. 11. Color photogravured. Serial numbers T. 42 (6-1) to (6-6).

Writers and Artists' Congress

TO celebrate the opening of the Fourth National Congress of Writers and Artists, the Chinese Ministry

of Post and Telecommunications issued on October 30, 1979 a set of two commemorative stamps.

Stamp 1, 4 fen. A design combining motifs of a palette, lyre, book and a dancer to show the blossoming of art, music, literature and dance in China.

Stamp 2, 8 fen. A design symbolizing literature and art in the service of workers, peasants, soldiers and the four modernizations. On either side are the impressions of two seals. Characters in them read: "Let a hundred flowers blossom" and "Let a hundred schools of thought contend."

Both stamps measure 40 × 30 mm. Perf. 11. Color photogravured. Serial numbers J. 39 (2-1) to (2-2).

Railway Construction

A SET of three special stamps depicting railway construction was issued on October 30, 1979.

Stamp 1, a passenger train passing through a tunnel drawn by Shaoshan-type electric locomotive.

Stamp 2, a new railway through mountains and valleys.

Stamp 3, oil tank cars passing over a railway bridge.

All stamps measure 40 × 30 mm. and are of 8 fen denomination. Perf. 11.

Etched and photogravured. Serial numbers T. 36 (3-1) to (3-3).

Norman Bethune

TO commemorate the 40th anniversary of the death of Norman Bethune on November 12, 1979 the Chinese Ministry of Post and Telecommunications issued a set of two stamps. The first shows the statue of Norman Bethune at his grave in the cemetery of the fallen heroes in Shijiazhuang, Hebei province.

The second shows Dr. Bethune operating on casualties from the Eighth Route Army on the battlefield.

Measuring 30 × 40 mm. the two stamps have a face value of 70 fen and eight fen. Perf. 11. Photogravured. Serial numbers: J. 50 (2-1).

China's Thriving Agriculture

A set of five stamps issued last August 10, illustrates the good situation in the country's farm areas. Stamp 1, 4 fen, mechanized harvesting. Stamp 2, 8 fen, planting trees. Stamp 3, 8 fen, raising ducks. Stamp 4, 8 fen, basket weaving. Stamp 5, 10 fen, fishing. Measurement 62 × 26 mm. Perf. 11.5, serial numbers: T. 39 (5-1) to (5-5). □



