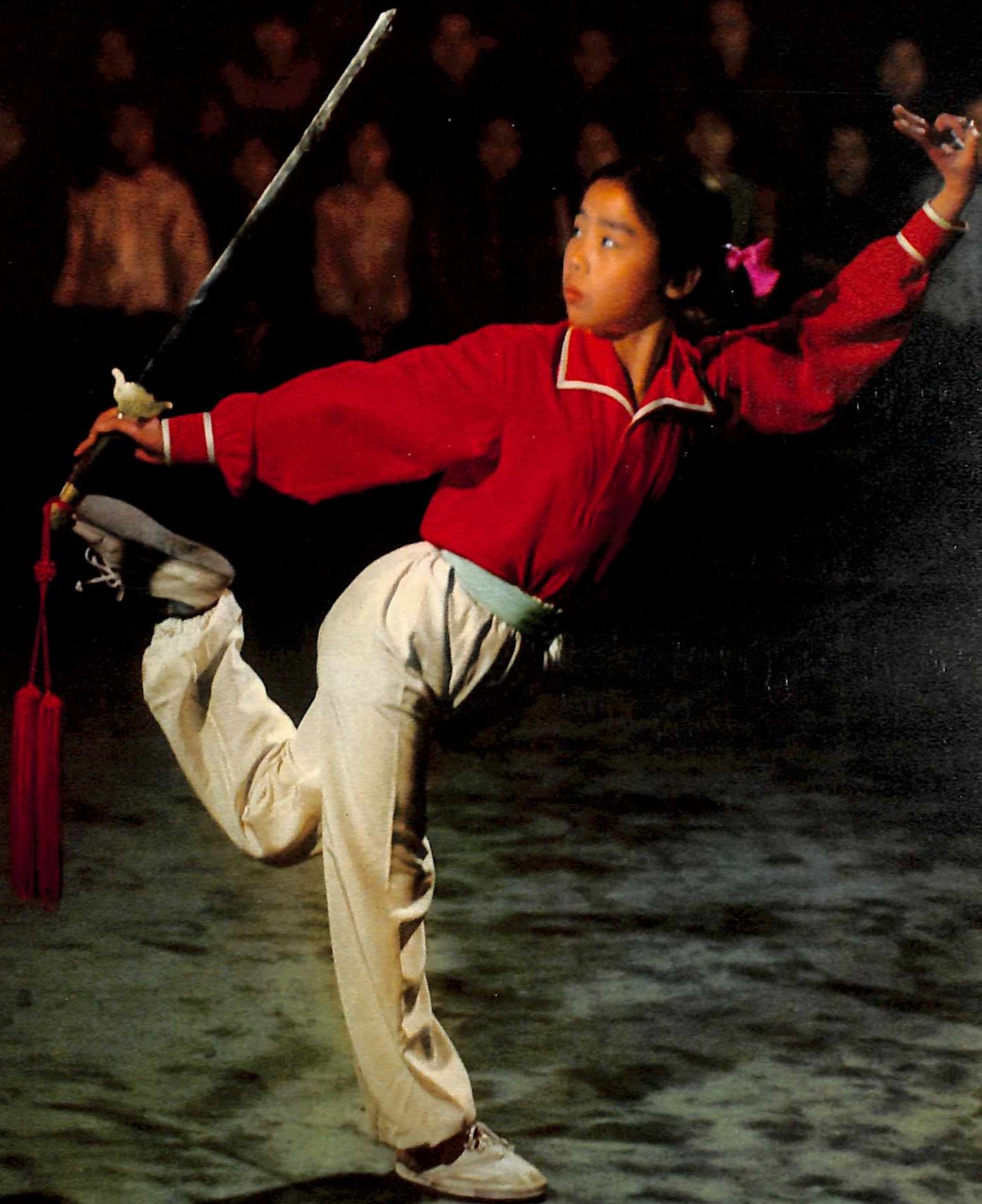


China Reconstructs

VOL. XXI NO. 6

JUNE 1972





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Front: Traditional sword-play by a student of *wushu* at the Peking Youth Amateur Athletic School (see story on p. 33).

Inside front: Before the puppets go on stage.

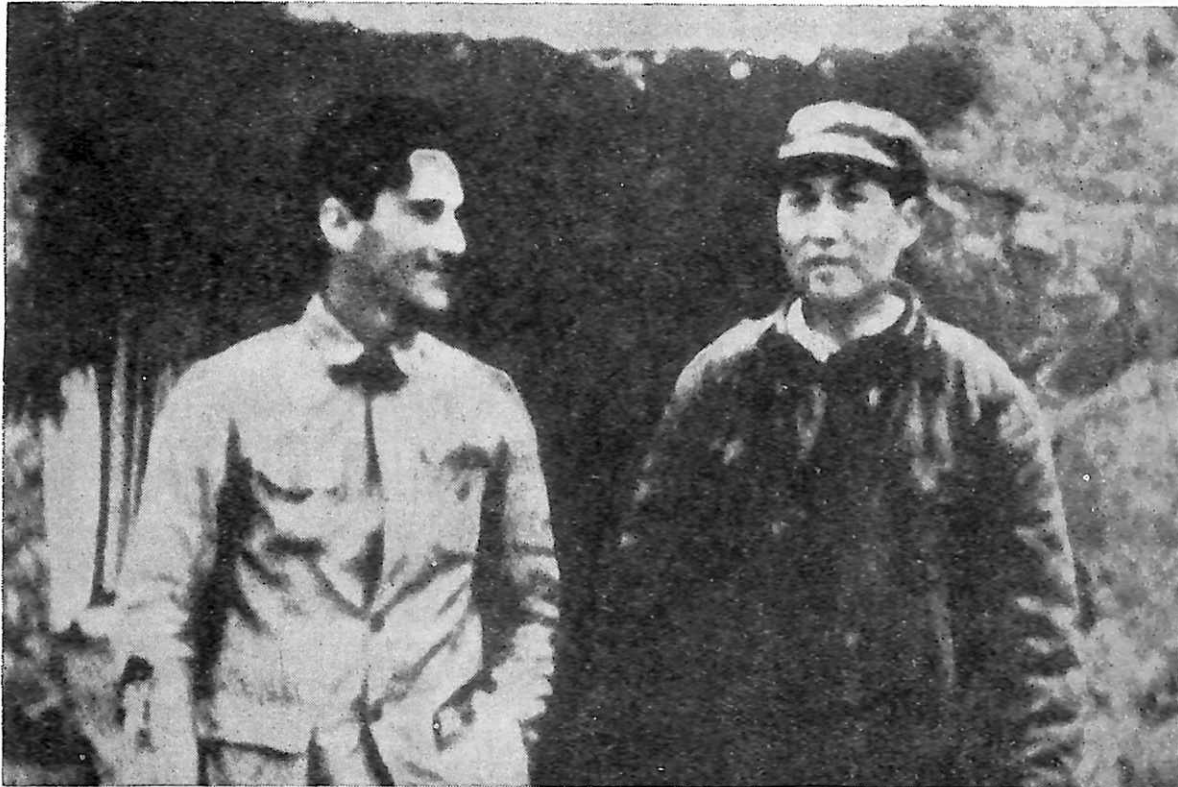
Back: Sanya Harbor, Hainan Island.

Inside back: On the Yu-shui River, Huayuan county, Hunan province.

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EDGAR SNOW — IN MEMORIAM

Soung Chung Chung



Chairman Mao and
Edgar Snow in
north Shensi, 1936.

EDGAR SNOW, the life-long friend of the Chinese people, struck down by cancer, peacefully breathed his last on February 15, which this year was the Spring Festival, today's name for the New Year according to China's old lunar calendar. In the first few days of this "old" new year, President Nixon came to China. Though it was not given to Edgar Snow to be around during this visit, his life's work thereby came to a full cycle.

Over forty years ago at the age of 22, after graduating from the school of journalism, Edgar Snow came to China and reported the facts as he found them. For a while he worked for an American weekly in Shanghai and contributed articles to various publications in the United States. In 1936 he had the courage to go to "the other side of

the river" and seek out the Chinese revolution in its new base. This base had been reached after the incredible hardships of the Long March over 25,000 *li*. In *Red Star Over China* Edgar Snow reported his findings: that the Communist Party and the leaders of China's revolution — who had so often been "reliably" reported dead by the hirelings of imperialism out of wishful thinking — had made this trek a vibrant victory despite terrible loss of human life and were giving the Chinese people a new hope, showing them a new road forward through collective effort and struggle.

In his unquenchable thirst for truth and knowledge, Edgar Snow wrote down what he saw and heard and learned in China's northwest, and it is a fitting epitaph for him

that today his book stands up well against the background of intervening history. In the northwest he found Chairman Mao and the other leaders of China's revolution living in loess caves like everybody else. He interviewed Chairman Mao at length and in this way learned much about China's past, present and future. It meant a great enrichment for him — historically as well as philosophically.

In his years of stay in China, while teaching at Yenching University, Edgar Snow befriended the Chinese, learned their language and recognized as his life's work the search for friendship between the people of China and the American people. In those years he came in contact with a number of underground Communists. His writings of that period, including transla-

tions from contemporary short stories, gave poignant glimpses of the life of the Chinese people and made them understandable abroad although they had been callously called "inscrutable".

To me and a few Left-wing comrades who went to Hongkong after Shanghai was invaded by Japanese militarists, Edgar Snow was a great help in starting the China Defence League, forerunner of the China Welfare Institute. It was through this organization alone that news of the war in China was enabled to spread abroad, and medical supplies and other contributions for guerrilla regions were requested and received. These we sent with great difficulty to their destination in the interior. He was also an enthusiastic co-initiator of Indusco, Chinese Industrial Cooperatives, or the "Gung Ho" (work together) movement during the war, which helped people to overcome, through

productive labor, the ravages and hardships they suffered.

His sympathy for the Chinese "Reds" gained Edgar Snow many enemies. During the witch-hunt period in the United States he was maligned and few papers or magazines dared publish his articles. But nothing could change his determination to bridge the gulf between the peoples of China and America.

After liberation Edgar Snow paid three visits to the People's Republic—in 1960, 1964 and 1970. Indefatigably he retraced his steps over all the areas he had visited so long ago, faithfully recording the great changes he saw and how the most populous nation on earth was pulling itself up by its own bootstraps.

Although he did not know it then, the long talks he held with Chairman Mao in December 1970, in which the leader of the Chinese

people said that a dialogue with President Nixon was necessary to resolve the problems between China and the U.S.A., led to the opening of friendly contacts between the Chinese and American peoples after an interruption of more than twenty years. This was one of the objects to which Edgar Snow had dedicated his life's work.

In the midst of writing another book, the most important one of his life, illness relentlessly struck him down. The Chinese government flew doctors and nurses to help him, and he was much comforted. It is a tragedy that Edgar Snow did not live to see his endeavors brought to fruition. But the Chinese people will always gratefully remember Edgar Snow, the tireless partisan of friendship between the Chinese and American peoples, and future generations on both sides of the Pacific will be indebted to him for the legacy he left them in their researches on Chinese history.

Edgar Snow

REWI ALLEY

Looking out at me
from the morning's paper
the quiet steady face
the understanding eyes
of the American dreamer
who saw how dreams
could be made come true
and who caught some
of the fire of the Chinese
Revolution and its leadership
so that along with them,
as they so incredibly fought,
did he fight with his pen
for all he came to believe in.

Yes, he suffered all right,
not simple to face those wild
Northwest highlands in search
of the Red Army that
the then-world called bandits
only to be exterminated;
not simple to get their
story and paint it so deftly
so that it rocked around

the world in every major
language.

He did not die rich
this good American; never
with more than just
enough to get by; yet ever
with ordinary people,
millions of them,
hanging on his words
gaining through him
new clarity.

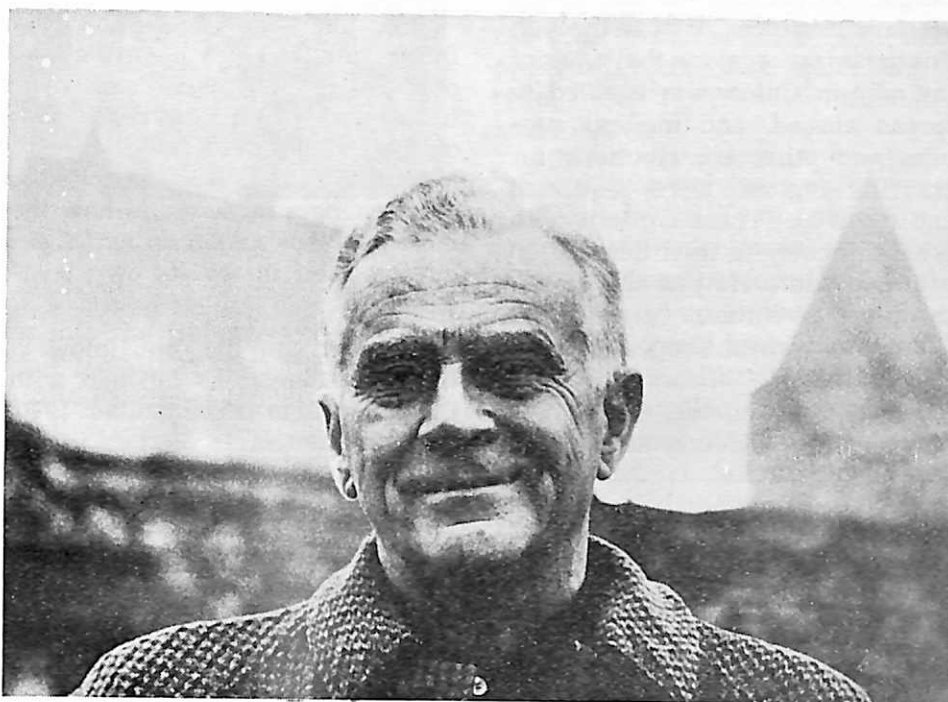
Gone from us in body
his spirit living through
his writing is this man
whose heart was with
fighters and to whom
youth of the future will look
in gratitude for the classic
"Red Star Over China"
that ever remained his star,
his hope for a saner
cleaner world to be.

A Tribute

MA HAI-TEH (Dr. George Hatem)

THIRTY-SIX years ago Edgar Snow and I went into what was then the unknown land of Communist China. What we saw and heard Ed has written and ably interpreted time and again, committedly and with great sympathy. Both of us were very young when we sat together with Chairman Mao Tsetung and heard the story of the immense struggle and problems facing the Chinese people, of how they were seeking to free themselves from the burdens of semi-feudal semi-colonial oppression internally and the growing aggression from abroad.

Ed, with his sense of historical appreciation, asked numerous questions night after night in the candlelight, painstakingly writing out in longhand Chairman Mao's brilliant delineation of the goals and aspirations of the Chinese people. I learnt about China and communism from these and many subsequent interviews, and from travel with Ed throughout the communist regions of Shensi, Kansu and Ning-sia. Ed himself thought over, examined and re-examined these new and stimulating ideas, sometimes far into the night, discussing them with me, then coming back with more questions for Chairman Mao, or comrades like Chou En-lai. He put queries to everyone from commanders at the front to the buglers and young orderlies affectionately known as "little devils", from peasants in the fields to workers in the mini-guerrilla industries. The thread that ran through all his



Edgar Snow in Switzerland in 1969.

queries was always why were these people so dedicated, why did this dedication encompass the people of the whole world?

One bitter windy day I stood with Ed on a log-supported platform attending a special meeting in honor of "international friends". All the "red armies" assembled filled no more than a football-sized field. One after another, speakers called for the downfall of imperialism, abolition of exploitation of man by man, liberation of the oppressed of China and the world. Spears, hunting guns, rifles of foreign make and ancient vintage, bullet-starved ammunition belts hung with home-made grenades and mines, here and there a rare machine gun, automatic rifle or mortar — these were their arms.

The forces seemed so meagre, just a few thousand dedicated men and women.

Ed turned to me and said, "They are immensely brave to take on the whole world."

From those early days, Ed was moved to an identification with the struggles of the Chinese people and their leaders, especially Mao Tsetung and Chou En-lai, and of course many others. He was a friend of the Chinese people, an unremitting fighter for friendship and understanding between the peoples of China and America. Speaking for one quarter of humanity, Mao Tsetung on February 16, 1972 wrote to Lois Snow: "His memory will live forever in the hearts of the Chinese people."

I saw Ed many times in the 36 years which followed, but he never changed. During his final illness when his strength was ebbing fast, he still always thought first of others. He asked repeatedly whether the Chinese nurses and doctors were being taken care of, fed, assured of proper rest. When Chinese Ambassador Chen Chih-fang and his wife Wang Ching called to deliver a message from Premier Chou En-lai and when Ambassador Huang Hua came especially from the U.N. in New York, Ed, by then very ill, expressed his concern. "You've travelled so far," he protested. "You're much too busy to be visiting me!"

With Huang Hua and myself, who had been with Ed in the *Red Star Over China* days, standing by his bedside, he referred to us jokingly as "three old bandits", harking back to the days when "bandits" was what his Chinese friends were called. He complimented Huang Hua on the great work he was doing in the U.N.

A man of immense courage, will-power and dedication, Ed fought his illness. "What are your plans for me?" he demanded. "How soon can I get back to work?" He knew he was mortally ill, but he steadfastly refused to let on to others. When, to encourage him, we said that his strength would return with the coming of spring, that travelling to the mountains with his close friends would make a new man of him, he squeezed my arm and pretended to believe me. "How idyllic," he smiled.

Ed continued to follow world events with intense interest. When he could no longer hold up the newspaper, he had Lois or Chris or Sian read to him about U.S.-China relations, about the Indochina situation. Only a man of immense

stature can rise above his own tragedy to think about the distressed people of the world.

THE past 36 years have witnessed immense upheavals, starting with the Japanese invasion of China — World War II, the Cold War, the "American Century" with its Korean escapade followed by U.S. aggression in Indochina — all sandwiched in between the hysteria and reaction of the McCarthy crusade against communism and the people and the "containment" of China.

Ed was treated very shabbily by the U.S. press and officialdom during this period, victimized for his views. But he adhered tenaciously to his principles, at considerable personal and material cost. His interpretation of the events in China, of their significance to Sino-American relations and to world affairs, was ignored. The U.S. policy of Cold War Containment nearly exhausted the reservoir of good will existing between the Chinese and American peoples.

A true representative of what is best in the people of America, Ed was greatly distressed and fought to stem this tide. He began to pick up and nurture bit by bit the flickering embers of this friendship, painstakingly and unremittingly, as much as any man could. He lived to see the beginnings of a rekindling of the friendship and mutual understanding between the Chinese and American peoples which he had fought for all his life. A great debt is owed by all to Edgar Snow.

In the brief time after my arrival in Geneva, I had the opportunity to meet Ed's friends and the members of his family. I could easily see that he had influenced everyone around him by his generous character, social awareness and exemplary modesty. Many family

friends were unstinting in their help. Literally thousands of messages poured in with offers of support, an obvious testimony to the high regard in which Ed was held.

The family showed remarkable courage. Lois was untiring and selfless in her encouragement of Ed. She hid from him the gnawing pain of knowing that the end was near, keeping up an admirable courage which inspired us all. The tender care lavished by Christopher and Sian, their vigil at his bedside, their small loving acts — these were a comfort to Ed. The family, assisted by Lois' sister Kashin Wheeler, helped to calm Ed's troubled body in a manner wonderful to behold. And the support and concern of friends was invaluable. It is a consolation to know that Ed's family and friends will surely carry on the cause for which he strove so faithfully all his life.

The Chinese doctors and nurses in attendance became deeply attached to Ed. They came on behalf of the Chinese people, government and its leaders Chairman Mao Tsetung and Premier Chou En-lai, hoping to bring Ed back to China for care and convalescence. They found this no longer possible. On request, they remained to help relieve the terminal pain and agony in an irreversible situation, in cooperation with Ed's devoted friend and family physician Dr. Robert Panchaud. The Chinese doctors and nurses manifested in every way through their tireless labors the profound concern of the Chinese people. Ed's passing was a severe blow. They wept that it had been impossible to save him. They wept in personal grief for his loss.

LET us salute those people working for progress who live a full life of accomplishment without sacrifice of principles.

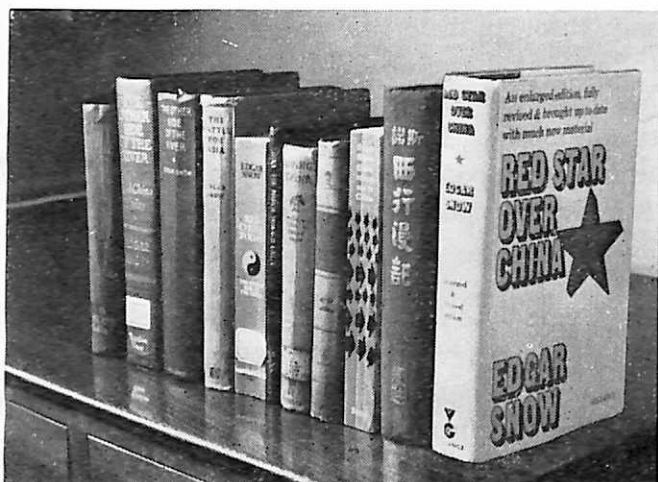
Edgar Snow was one of these.

He Saw the Red Star Over China

TALITHA GERLACH

SOON AFTER it was published in 1937, I acquired a copy of *Red Star Over China* by Edgar Snow. Fortunately this coincided with my winter vacation so I could begin reading the book immediately. What I had thought would be a smattering of travel notes, impressions gathered here and there in wandering about the interior — the interior to us who lived in Shanghai was any part of China beyond the line of Japanese fighting, then

Some editions of Snow's *Red Star Over China* and other books on China.



Edgar Snow in the north Shensi revolutionary base in 1936.

roughly everything north and west of Nanking — turned out to be an intriguing account of the author's own experiences, contacts, observations, learnings from living and traveling for four months in the north Shensi area where the Chinese Communists had settled at the end of their epoch-making Long March in 1934-35. Once reading, I could not lay down the book until I had finished it.

For us foreigners who lived in China at that time, reports from the areas occupied by the Communists in the Chingkang Mountains and Hunan and Kiangsi provinces were very sketchy, often entirely false, for the Kuomintang exercised a rigid censorship and now that Mao Tsetung had successfully led his valiant Red Army to the barren regions of far-off Shensi to fight the Japanese invaders, information was all the more difficult to come by. But here in the pages of *Red Star Over China*, Edgar Snow,

the enterprising and untiring young American journalist who had been working in Shanghai, succeeded in penetrating the KMT blockade and recorded for all to read what kind of people the Communists were, the program of the Communist Party, the rule of the Red Army, the immediate goal of uniting the Chinese people in resistance to Japanese aggression and later the long-term objective of a genuine socialist revolution.

Those months in the Yen-an area enabled the author to meet frequently and informally with a number of the outstanding personalities who were leading the revolution, chief among whom were Mao Tsetung and Chou En-lai, the former granting interviews which provided the first extensive biographical account given by this great leader to a foreign journalist. Thus Edgar Snow opened the door to an understanding of China and her people which has grown in

depth and breadth through the years. *Red Star Over China* was translated into many languages and soon proclaimed a classic on the Chinese revolution.

Since then *Red Star Over China* has maintained its status as a classic on China-in-revolution, for the author revised the book on subsequent visits to the liberated areas and since liberation on three trips to the People's Republic in 1960, then 1964 and most recently in 1970, each time bringing the original volume up to date, also correcting insofar as possible errors or inaccuracies.

Edgar Snow's contribution to a truthful accounting of the Chinese revolution, however, does not rest

on this one book alone. He has other books on China to his credit, as well as magazine articles which from time to time brought the concerned China student his most recent interviews with China's leaders and observations on the ever-developing socialist society and its reborn people. Countless Americans — and people in other countries too — have read his 1970 articles, foremost of which is his conversation with Chairman Mao forecasting the invitation which brought President Nixon to China in February 1972, and with eager interest await publication of his most recent book, said to be the companion piece of *Red Star Over China*.

Edgar Snow was a genuine friend of China and the Chinese people. He was a keen and intelligent observer, reporting accurately and positively the trends he saw emerging in China leading to the historic Chinese revolution. Since his writings are widely known abroad, it can be said that along with the American people, thousands upon thousands the world over are indebted to Edgar Snow for opening the door to a real understanding of the now rapidly-developing socialist China and friendship with the Chinese people. His passing is a great loss, but the friendship for China and the Chinese people which he fostered will live on through the centuries.

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Tsitsihar Saves Its Fish

LUNG CHIANG-WEN

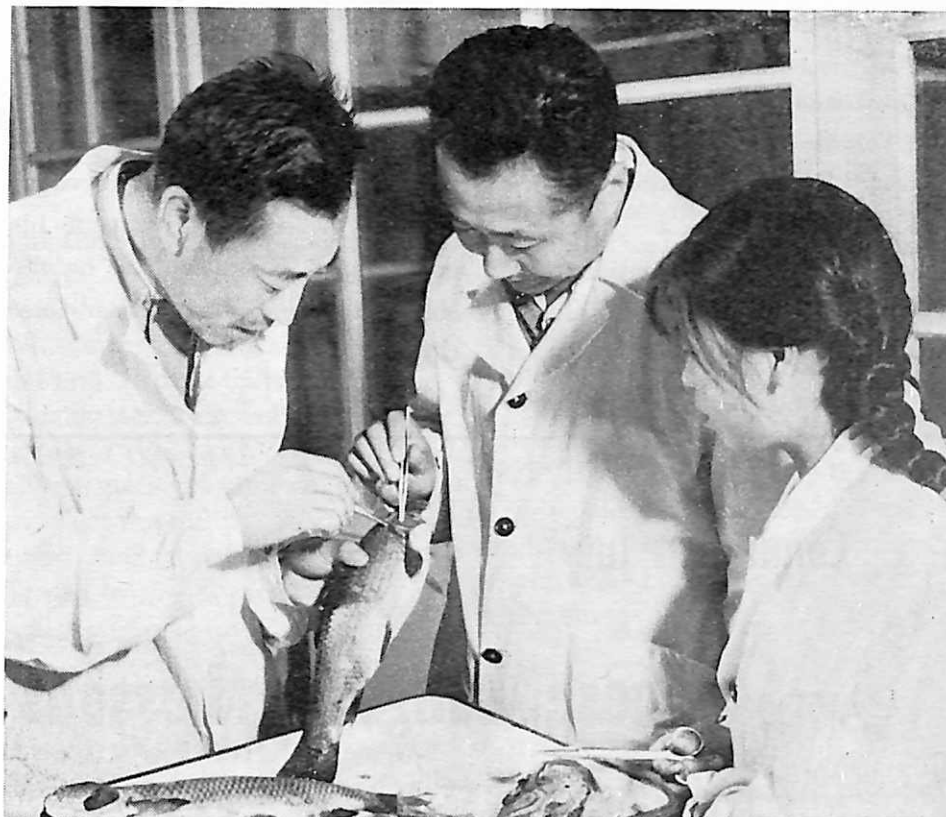
TSITSIHAR, with a population of one million, second-largest city in China's northeastern province Heilungkiang, is a fast-growing industrial center. Flowing through it is the Nunchiang River, which originates in the Greater Khingan Mountains and goes 1,379 kilometers southeast till it reaches the Sunghua River. Its clear waters abound in aquatic products, including fish of some 60 kinds. The river's catch accounts for half the output of the entire province.

In the past several years, however, the number of fish in the Nunchiang near Tsitsihar dropped markedly. In winter when the river froze over, large numbers of dead fish were found in the 400-kilometer stretch above and below Tsitsihar. The 1969 catch dropped to 17.9 percent of what it had been in 1960. What was the matter?

Polluted Water

The old city of Tsitsihar had practically no modern industry. Large-scale construction through three five-year-plan periods since the liberation built today's city — junction for transport routes from the Greater Khingan Mountains, the Hulunbuir Grassland and the plains of the Sunghua and Liao rivers — into an industrial center with modern factories manufacturing sugar, paper, food products, leather, medicine, chemicals and machinery.

It was found that industry was discharging a daily 250,000 tons of sewage and water containing chemicals into the Nunchiang River. Tsitsihar Municipal Party Committee and the city's revolutionary committee went into action. It sent



Finding out why fish died in great quantities.

investigation teams and increased support to city departments already treating waste water, liquids and residues.

In early 1968 more than 40 scientists and technicians from 14 research organizations in the country came to Tsitsihar and joined local workers, fishermen and technicians in surveying the Nunchiang River. In the bitter cold they covered 450 kilometers of the frozen river, visiting factories and villages along it and making detailed studies.

They found the following process taking place beneath the icebound surface: First the fish, swimming sluggishly, tried to lift their heads, then they lost their sense of balance

and finally became unconscious and floated downstream. Dissection and laboratory tests of the fish revealed no unusual morbid changes. If unconscious fish were taken out and put in river water with plenty of oxygen, they quickly revived, indicating that the fish were dying from lack of oxygen in the water.

The survey also found that between December and April while the river was frozen, a yellow sticky mass grew at the bottom of the river, giving the water a rank smell.

Six months of investigation and laboratory tests proved it to be organic matter composed of an

aquatic fungus. Its growth was promoted by the presence of large amounts of pulp, sugar-refining residue and nitrogenous substance. Water containing this yellow matter consumed 22.5 times as much oxygen as normal water. The decline in oxygen became more serious in winter when the yellow matter multiplied quickly and when the river froze over and did not take in oxygen from the air. Tests of the oxygen content in the river water made in January 1970 showed the following figures:

Tamin Bridge section (at Tsitsihar)	1.6 mg./liter
Fularchi Bridge section (below Tsitsihar)	0.8 mg./liter
Tailai Bridge section (below Tsitsihar)	0.4 mg./liter

Fish require 4 mg. of oxygen per liter of water for normal existence, and perish when the amount falls below this. In addition, the small amounts of such toxic matters as phenol, acid, soda, cyanogen and heavy metal ions in the water also hastened the death of fish.

Working Out a Plan

Once the cause of the death of fish was found, the Tsitsihar revolutionary committee formed a team of workers, cadres and scientists to seek measures to remedy the situation. The team solicited widely for ideas among the people. Industrial workers said the fundamental way to prevent pollution was for each factory to recover and treat its own wastes. Members of the Lungsha commune outside Tsitsihar suggested diverting and storing the industrial sewage water and purifying it for irrigating farm land. Fishermen asked that measures be taken to protect the aquatic resources.

These ideas helped the planners to establish clear principles to guide their work: Benefit to the people should be their point of departure; with future generations in mind, measures should be long-term ones and not mere expedients; and the problem should be considered from all sides so that while eliminating one hazard they would not be creating another.

According to the principle of self-reliance, they worked out several plans and placed them before the masses for discussion. The final plan specified that factories manufacturing sugar and paper should recover the harmful matter in their own waste and use it as raw material for useful products, and that sewage and waste water free of harmful chemicals should be stored in reservoirs for irrigation. Tsitsihar medical workers urged that the plan include digging of deep wells to provide clean drinking water for the communes on the city's outskirts, as the chemical water stored in reservoirs might contaminate underground water. With these improvements the plan, approved by the Heilungkiang province revolutionary committee, was put into operation.

Wastes Become Useful

In 1970 the city's factories carried out mass campaigns to turn waste to use. Large amounts of chromium, oil, acid, soda, pulp and silver were recovered.

Part of the project that diverts for irrigation sewage formerly discharged into the Nunchiang River.





The rate of survival of its fish has risen greatly since measures were taken to halt pollution of the Nunchiang.

Tamin Bridge section
8.07 mg./liter
Fularchi Bridge section
9.03 mg./liter
Tailai Bridge section
9.47 mg./liter

Both the yellow mass and the rank smell had disappeared.

The number of fish in the river has been increasing since the winter of 1970. From mid-December 1970 to mid-January 1971 the catch at the Shihjenkou fishing ground totalled 150 tons, three times the figure for the same period of the previous year, before the water was treated. Fish weighing over 2 kg. are common catches again.

The 400 hectares of fields irrigated with sewage are yielding good crops. The Lungsha commune's Chienchin brigade got increases of 1,500 to 2,250 kg. per hectare. The commune's Aikuo brigade had never grown spring vegetables because its soil was too poor. Irrigation with sewage has improved the soil so much that the brigade now has a spring crop and is getting better yields of its summer vegetables.

Tsitsihar's leaders view decontaminating the Nunchiang River and keeping it clean as a long-term project for the benefit of the people. Not resting with the good results already achieved, in the hope of completely halting pollution they are now working on problems requiring long observation and study, such as learning which crops do not thrive well when irrigated with sewage, and purification of sewage water in the reservoir so that it will not affect the surrounding environment and underground water.

To manufacture by-products from its wastes, the Tsitsihar Sugar Refinery set up a number of new shops, operated mainly by wives of the plant's workers. From lime residue they produce 1,400 tons of low-cost, quality cement a year. From cinders they turn out two million bricks annually, which are being used to construct more shop buildings. They also make alcoholic spirits from the tailroots of sugar beets and distill alcohol from waste honey, the latter averaging one to two tons a day.

A sedimentation pool near the Tsitsihar Paper Mill's water-discharge outlet traps 150 tons of pulp a year, which is used to make packaging paper.

The Hua-an Machinery Plant has taken measures to recover practically all the harmful and toxic matter in its waste water. Since 1970 it has recovered more than 10 tons of chromic anhydride.

The Tsitsihar Electroplating Factory adopted a new process which did away with the use of toxic zinc cyanide. The cost is lower and products of comparable quality. The factory's waste water, now

free of zinc cyanide, is an excellent chemical fertilizer.

The Lungsha Waste Products Purchasing Station in 1970 extracted 70 kg. of silver from waste water from photo developing and the manufacture of mirrors.

Beginning in June 1970, under the leadership of the Tsitsihar Municipal Revolutionary Committee, the city's workers, peasants, armymen, students and neighborhood residents joined in the construction of a project to divert sewage for irrigation. Every day more than 5,000 people were at the work sites. In six months they built a reservoir with a capacity of 20 million cubic meters, dug a 6-kilometer channel and erected a 6-kilometer-long dam, with the workers from the auto plant taking on the most difficult section of the dam.

After the entire plan for treating wastes was put into operation, tests showed an improvement in the water in the 350-kilometer stretch of the Nunchiang below Tsitsihar. Tests for oxygen in the water in January 1971 showed a five to ten-fold rise over a year ago:

CORRECTION

In the March 1972 issue of *China Reconstructs*, page 5, line 10, the sentence should read: Last year over 2,000 brigades in the area raised their own hybrid seed of maize and sorghum. Areas sown to them were eight times as much as in 1970.

A Chemical Plant Fights Pollution

Staff Reporter

WALKING between the shops of the Liaoyuan Chemical Plant in Shanghai, one is surprised to find the air fresh and clean, practically free of the acrid smells that usually characterize a chemical works. Its tall chimneys and towers are silhouetted against a deep blue sky instead of being veiled in smoke.

"If you had come here a year ago," a member of the plant revolutionary committee's production group told me, "you would have seen quite a different sight. 'Black and yellow dragons writhe around, in the sky and on the ground' was what the workers used to say." That was before the plant's mass campaign to reprocess the "three wastes" — gas, water and residues — to remove harmful substances. Polluting the air and streams, these had been very harmful to the people and the crops. It also meant the loss of important chemical materials. Now, instead of contaminating the area, these wastes are turned to use.

The Liaoyuan Chemical Plant stands on the south bank of Soochow Creek which runs through the city of Shanghai. It produces caustic soda and chlorine products such as hydrochloric acid, bleaching powder and polyvinyl chloride. The plant's predecessor was the Tienyuan Chemical Works, a capitalist firm opened in 1929. With primitive technology and rotten working conditions, production was low. At the time of liberation in 1949 there were 160 workers and it made three products. Year by year expansion and technical reform was undertaken by the people's government. Today it has 2,700 workers and produces more than 20 basic chemical materials. Three and a half days of the present plant's production of caustic soda is equal to its entire 1949 output.

As production expanded, wastes also increased till as much as 10,000 tons of water containing chemicals was discharged daily into Soochow Creek. The factory's exhaust poisoned the atmosphere with chlorine and vinyl chloride gases. The plant was rated as one of the factories in the vicinity causing the most harm to the environment.

Before the cultural revolution every year work was done to reform those technical processes causing the most harm, and some steps were taken in the direction of making use of the wastes. These improved working and environmental conditions to a certain extent. But under the influence of Liu Shao-chi's revisionist line which put emphasis only on production, more attention was given to meeting the production targets than to recovering wastes to end the problem of pollution. Only a

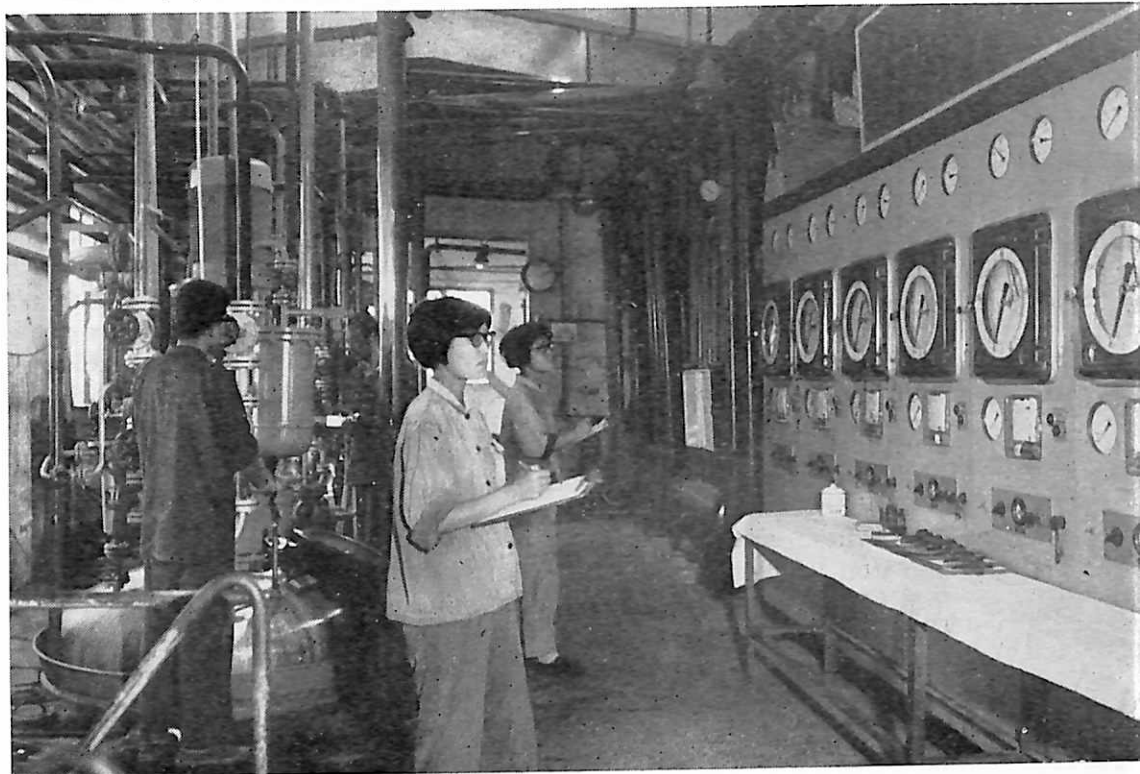
few technicians were asked to work on measures of treatment.

Masses the Key

In 1971 the Shanghai Municipal Party Committee and the city's revolutionary committee called on the factories in Shanghai to mobilize the masses to carry out in earnest Chairman Mao's directives on the comprehensive use of materials and wastes. The entire plant responded. Every shop and section formed groups to study the problem, composed of leaders, workers and technicians. Everybody offered ideas and suggested measures for dealing with the wastes he was most familiar with.

From mid-March to the end of April 1971 more than 40 measures were proposed. Many were quickly adopted and have produced good results. Improvements which had once seemed possible only if whole

The air in the polymerization section is free of vinyl chloride gas.



sets of new equipment were purchased were solved more economically when the masses demonstrated their initiative and creativity.

In the polymerization section of the polyvinyl chloride shop, the unwanted vinyl chloride gas used to be discharged from nine polymerization reactors by compressed air. Thinned by the air in this way, the harmful gas was difficult to treat to recover raw materials.

Before the cultural revolution efforts had been made to recover this gas. One technician, after poring through all available literature from abroad, had designed a vacuum pump for removing the gas from the reactors. But it had not been designed with reference to actual conditions at the plant and proved unusable.

In the mass campaign last year, workers and technicians in the polymerization section proposed many ideas and methods for recovering the gas. On the basis of these, in a month an experimental group worked out a plan and simple equipment for pumping water into the reactors to force the gas into a tank for storage and later re-processing. Practically everybody pitched in to help install the piping, and the whole thing was ready in 48 hours. This method cut air pollution and recovered enough raw materials to produce an additional 250 tons of polyvinyl chloride resin a year. This success spurred the workers in the polymerization section on to further efforts in treating harmful gas and water.

Chlorine Gas

Chlorine gas, of which the Liaoyuan plant produces tens of thousands of tons annually, is important to chemical production, but when it escapes it is very harmful. A particular problem was the iron trichloride section of the chlorine shop where scrap wire is turned into iron trichloride in a chlorinator. If the chlorinator is not loaded just right, large amounts of chlorine gas are released. Formerly these discharged into the air above the plant through a tail gas tower, filled the atmosphere with

thick yellow smoke and stunk up the place for hundreds of meters around.

Some people maintained that a small amount of such gas was inevitable, saying, "You can't have a chemical works without smells any more than a fish market that doesn't stink of fish." Such thinking kept the problem from being solved.

In the process of creating benefit for the people, socialist industry should not add to their hazards. This was the conclusion of a three-in-one group set up in the section after they studied the problem in the light of Chairman Mao's thinking. Harmful wastes, they decided, were not inevitable, and they resolved to eliminate them.

An old worker remembered a punch press he had seen at an industrial exhibition which was stopped by signals from a photoelectric cell. He thought a similar device might be constructed to control the chlorine content in the tail gas. He placed his ideas before the technicians, electricians and instrument operators. A month and 20 experiments later they had set up apparatus that serves the purpose. It also automatically sounds an alarm to alert the operators of the chlorinator. The whole thing cost less than 100 yuan. Health department tests of the gas discharged from the iron trichloride section's tail gas tower now reveal no chlorine content.

Another waste product of this section is a dark yellow water containing iron dichloride. It used to corrode the drainage pipes and pollute Soochow Creek into which they emptied. Now the workers save this waste water and re-use it as an agent for absorbing chlorine. Absorption of sufficient chlorine turns this waste into the by-product iron trichloride solution, of which the plant now produces 200 tons a year.

Thus two major hazards have been turned into benefits.

More Fundamental Measures

Reforming technological processes is, of course, the more funda-

mental way to eliminate harmful wastes. The chlorine shop's hydrochloric acid section used to discharge a daily 300 tons of water containing this acid. Pipes corroded by it sometimes collapsed and caused cave-ins on the streets or serious damage to the foundations of buildings and installations at the plant.

From this water, originally used to wash hydrogen chloride waste gas, a certain amount of acid could be recovered, but the quantity was not considered worth the cost of the expensive installations needed.

Last August workers and technicians in the section, after study of advanced techniques used abroad, improved the inner structure of the absorption tower so as to raise its efficiency and cut the hydrogen chloride content in the discharged gas. Then they worked out a new process in which the water with the remaining hydrochloric acid is sent back to the absorption tower for re-use in production. In addition to completely eliminating the acid content in its waste water, this section now recovers 800 tons of hydrochloric acid annually.

Much of the equipment for eliminating wastes has been made out of old pieces or scrap. Equipment for recovering carbon dioxide for use in making soda ash would have cost 60,000 yuan if built according to standard designs. Technicians and experienced workers of the caustic soda shop, with the help of the maintenance department, produced it from scrap at a cost of only 6,000 yuan. It yields 800 tons of soda ash a year, all the shop needs for purifying its brine — an annual saving of more than 100,000 yuan.

In the past year more than 30 projects for utilizing wastes have gone into operation. Most of the Liaoyuan plant's waste gases, 90 percent of its solid residues and 60 percent of the discharged water are now being decontaminated. In addition, 10,000 tons of chemical materials valued at over one million yuan are recovered annually. A good beginning, say the plant's workers, in a long-term struggle to reduce pollution for the good of the people.

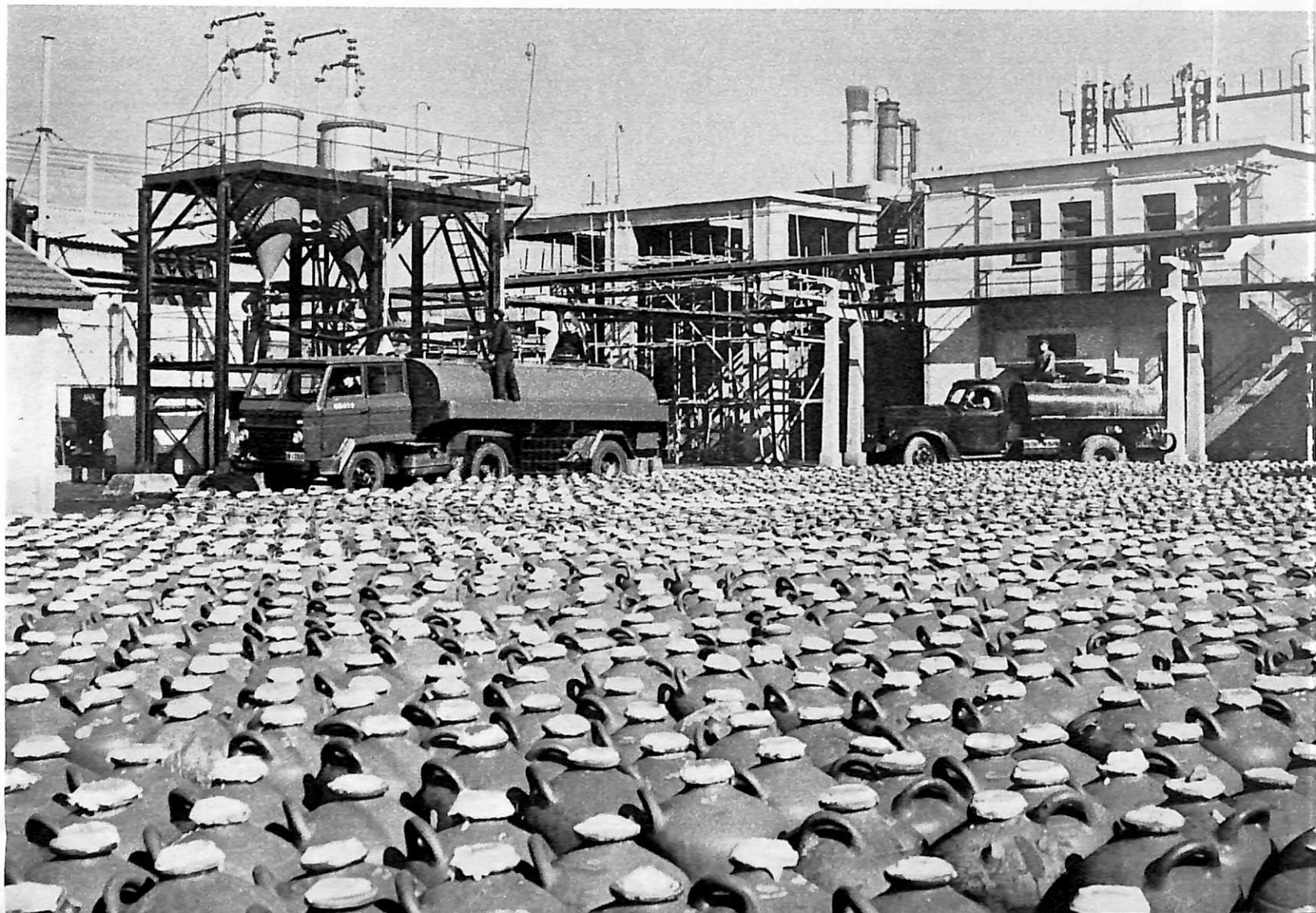


Photoelectric cell apparatus for controlling harmful gas.



Plant leaders collect workers' ideas on pollution.

Hydrochloric acid recovered from waste water.





Weaving bamboo baskets.

The Land of Bamboo

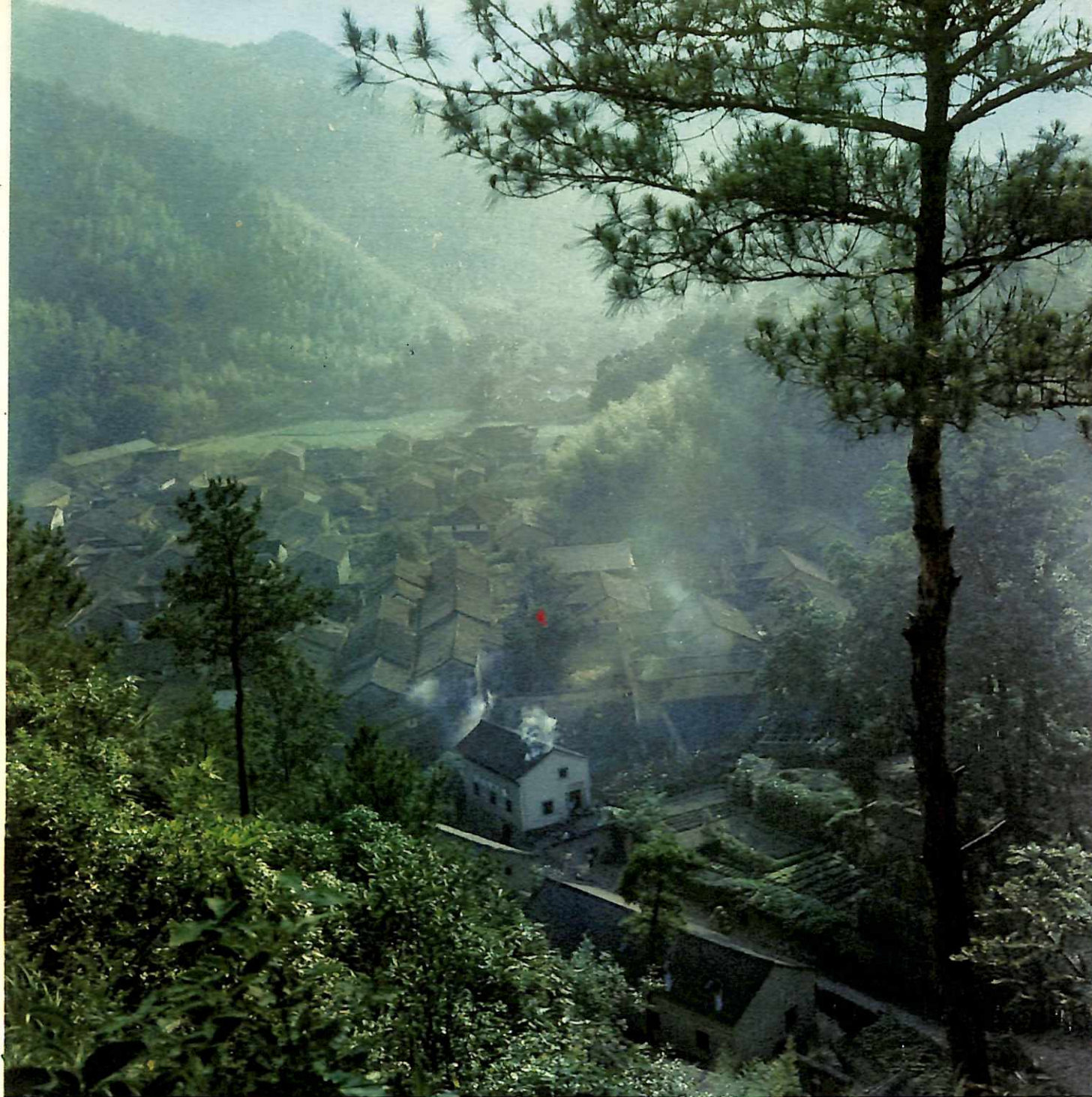
Anchi county, Chekiang province, has been called "the land of bamboo" for its abundant bamboo growth. More than 700,000 *mu* (47,000 hectares) of bamboo forests spread over the mountains of the county.

Before liberation most of the bamboo forests were owned by the landlords. The laborers in the bamboo groves led a miserable existence. Bamboo growing and the economy of the entire area was on the decline.

After liberation both land and forests were returned to the people. Collective growing and better care under the people's communes brought a new look to the land of bamboo. Today the area under it is speedily being expanded.

Bamboo growers on the way to work.





The new look of the land of bamboo.

With the aid of a scientific researcher, commune members manage the forests scientifically.



Felling.





A bird's-eye view of the Linchih Woolen Mill.

Report from Tibet:

LINCHIH TODAY

ALL day long trucks pour local agricultural and livestock products to be processed into Linchih, a new industrial base in Tibet, and dispatch manufactured goods to the herding areas.

Known as "the pearl of the plateau", Linchih is located beside the Nyang River at the foot of the Himalaya Mountains. Ancient trees grow on the river banks. Farther away are snow-capped mountains. The climate here is mild and Linchih's fertile land is good for crops. But before liberation, it was a desolate valley overgrown with brambles. The serfs were ground down by the feudal serf system, and many died as a result of heavy labor and brutal punishment. When the river rose in the high water season, manorial lords often forced them at gun and sword-point to cross the river to fell trees, even though many never reached the other shore alive.

With the liberation of Tibet in 1950 Linchih gained a new life. Soon the Szechuan-Tibet highway reached this former isolated place. The Chinese Communist Party led the peasants and herdsmen to begin local industries.

The Great Proletarian Cultural Revolution speeded up socialist construction. In the past few years more than 10,000 people have taken part in the building of local industries. Linchih now boasts a dozen factories of small and medium size for printing, power generation, processing grain, oil-seeds and timber and producing woolen goods, paper, matches, flashlight batteries and farm tools.

In the past, every year on horse and mule-back, the manorial lords transported abroad great quantities of local sheep's wool, and exchanged it for costly foreign luxury fabrics and blankets—solely for their own use. But now the Linchih Woolen Mill turns the local wool into a wide variety of fabrics, knitting wool, blankets and felt for the herdsmen and peasants of the plateau. The herdsmen, who before liberation lit their fires by the friction method, now get matches from a Linchih factory, which not only meets local needs but also ships them to neighboring provinces.

Linchih's woolen and paper mills were built by the state and are well equipped. Its paper-making equipment was made in Shanghai. The Chengtu battery factory sent some of its own equipment to the Linchih plant. Shanghai and the provinces of Szechuan, Shensi and Hupeh helped train technical personnel and provided experienced workers. P.L.A. commanders and fighters also engaged in the construction.

Most of the workers in Linchih came from Tibet's farming and herding areas. Since they entered the factories, they have earnestly studied Chairman Mao's works and are trying hard to serve the revolution. Helped by the Han workers, they have rapidly raised their technical level. Tsering Yangzong, daughter of a serf and now a weaver in the woolen mill, was born in a cowshed 21 years ago. Her mother, a herdsman, slaved for manorial lords many

years but could not buy her daughter even a dress of coarse wool. Little Tsering Yangzong got her first dress after a neighbor brought over several scraps of sheepskin.

But people like her are now the masters of the country and she works with great energy. In the mill she learned how to operate the machines in less than a month. An experienced hand, she now helps train new women to the work.

As the local industry develops, the life of the people in Linchih continually improves. Not only the county town has schools, stores, a post office and a hospital, even the factories scattered through the valleys have their own shops and clinics. The factory workers, both Tibetan and Han, live in housing built of brick with tile roofs. The state provides them with work clothing, gloves and safety equipment. Medical treatment is free. Women have maternity leave with full pay. Workers who live away from their families have time off with pay, in addition to their regular weekly day off, in order to visit them. The factories have reading rooms and frequently show films.

"Before the liberation day and night we longed for the paradise of freedom," said Lhapa Tabgyae, chairman of the Gold Star People's Commune, who had spent his first forty years in the old society, "but now our Linchih is better than even imagined paradise could be."

How We Prevent and Treat Occupational Diseases

IN the heart of the chemical industry district in the northeastern city of Kirin stands the spacious four-story Kirin Chemical Industry Hospital. With 600 beds and a staff of 500, it takes care of the health of the chemical workers and their families. An important part of its work since it was set up in 1956 has been to prevent and treat occupational diseases that workers develop through constant contact with toxic materials like mercury, benzene and chromium and their derivatives. How the hospital goes about this work is shown in the following conversation with the chairman of the hospital's revolutionary committee and several of its doctors, as recorded by a *China Reconstructs* reporter.

TUNG WEI-CHIH (revolutionary committee chairman): We've always had a department for occupational diseases but before the cultural revolution, because the revisionist line promoted by Liu Shao-chi placed emphasis on treatment rather than prevention, we did not give occupational diseases the attention they deserved.

In 1968 during the proletarian cultural revolution the staff made an intensive study of Chairman Mao's instructions on health and medical work in relation to our own work of serving the chemical industry. We saw that a socialist country like ours develops industry for the welfare of the working people. It is entirely different from capitalist industry where the aim is profit and the workers are only tools for realizing that aim. We resolved to make occupational diseases one of our main tasks.

The staff was reorganized so that doctors from every department had a chance to go to the factories in

order to discover better ways to deal with these illnesses.

SHEN HO-FEI (head of the department of internal medicine): I was one of the first group that went to the factories in 1969. Although I had been with the hospital 16 years, up until that time I had hardly ever gone out of the building, and confined my efforts to treating patients who came. I felt that occupational diseases were the business of that department and that my work did not have much to do with them.

My threefold aim in going to the factory was to be re-educated by the workers, to train worker-medical personnel and to explore the problem of preventing and treating occupational diseases. I welcomed the opportunity to be with the workers and to learn to see things the way they did. But what I was supposed to do about occupational diseases I didn't know. They just weren't my line.

Comrade Tung knew what was on my mind. He led me to explore more deeply the meaning of the quotation from Chairman Mao, "This question of 'for whom' is fundamental; it is a question of principle." He pointed out that I had not really related the remodeling of my thinking to the question "for whom". My indifference to occupational diseases, my regarding them as something out of my line showed that I lacked deep feeling for the working class — that what concerned me most was my specialization. Such a problem can only be solved by getting out of the hospital and going among the masses.

The day the first group left, the hospital gave us a rousing send-off with gongs and drums, and I received an equally warm welcome from the workers at the dyestuffs plant where I was assigned. I learned its production processes on the job, and also taught the workers how to treat common illnesses and trained some of them as shop medical personnel. Together we made extensive investigations into the causes of occupational diseases. I discovered something I hadn't known before — that chemical materials in their semi-processed state were much more harmful to health than the finished products. Using this knowledge, I consulted with the workers and proposed measures for eliminating some of the valves in the piping, thus reducing the possibilities for escape of toxic fumes. My first-hand experience with their effects later led me to



Hospital leader Tung Wei-chih (left) learns about herbal medicine for treating a skin disease from dyestuffs workers.



Dr. Shen Ho-fei (right) doing some investigation.



Dr. Fang Ke-wei (left) tests a new method on a rabbit.

find other ways to prevent and treat their harmful effects.

Six months in the factory gave me a deeper understanding of the need to deal with occupational diseases more effectively. Now I am back at the hospital but my feeling towards the workers is different. I know what questions

to ask them in order to examine them more thoroughly. And every so often I feel I must go to the factories again to keep in touch with things.

TUNG WEI-CHIH: We have learned from experience that we can do a good job only by working closely with the workers. For instance, one doctor who went to the catalytic shop of a fertilizer plant was extremely moved to see the workers going ahead with production even though their nostrils became irritated from contact with chromic anhydride dust, which affected them despite the fact that they wore masks. He wanted to find a solution immediately and pored over books and documents and made a careful study of chromic anhydride in the test tube. He racked his brains for two months, but nothing came of it. Then Dr. Fang Ke-wei went to that shop and tried a different method. . . .

FANG KE-WEI (ear, nose and throat doctor): I didn't know anything about this condition either, though I've been working in the hospital's ENT department since I finished medical school in 1965. I had to learn about it from the beginning, so I asked the workers to explain the production processes and found out why chromic anhydride dust affected the workers. I found out the various ways they had tried to control its bad effects, and then we experimented till we produced an ointment that reduces the chemical activity of chromic anhydride. When applied to the nostrils, it prevents the nasal mucous membrane from becoming irritated, and is also effective in treating irritation.

CHIN FU-YU (eye doctor): The workers have accumulated valuable experience in fighting their

own occupational diseases. By being on the job with them we can find out the methods of prevention and treatment they have developed among themselves. Then we can improve on these with the medical knowledge we possess.

Workers in a shop of the dyestuffs plant often suffer from eye inflammations caused by contact with the variamine blue salt B they produce. At the hospital I used to prescribe hot compresses, but the eyes only got redder and more swollen. In my 14 years in the eye department I hadn't been able to find a real treatment for it.

When I went to work at the shop I found that some of the experienced workers did not go anywhere for treatment when they had this eye condition but still got over it. They told me that they simply stayed in a dark place for a while and then applied milk to their eyes, and soon the inflammation was gone. I only half believed it. Then I myself developed this trouble. One of the workers treated me by this method and soon my eyes were all right again.

After further investigation I found that when it comes into contact with light and heat variamine blue salt B decomposes, and this is what produces the toxic matter that irritates the conjunctiva. My previous treatment had only aggravated the inflammation, but the darkness reduces decomposition and consequently irritation. The protein content in milk protects the conjunctiva from the toxic matter and cleanses the eye. Experiments found that egg white was even better for this than milk, and that coptis, a plant with a tonic and astringent effect, stops the inflammation. We made very good eye drops of egg-white and coptis. Now

anyone who suffers from contact with this dye can treat himself right in the shop.

TUNG WEI-CHIH: As doctors, our main job is still to give treatment, but since we have been working in the shops we have discovered that many occupational diseases arise from spread or leakage of harmful substances due to imperfectly-welded equipment or irrational work processes. We must also help make technical improvements to eradicate such sources of illness if we are to carry out the policy for medicine and health care of "prevention first". Of course technical innovations are mainly made by the workers, but we should contribute our ideas too. Dr. Sun Wei-sheng has had some experience on that.

SUN WEI-SHENG (doctor in the occupational diseases department): When I worked in the acrylonitrile shop of a calcium carbide factory, I found that to clean out a certain tank the workers had to crawl in through a hole in the top and from a depth of three meters haul out

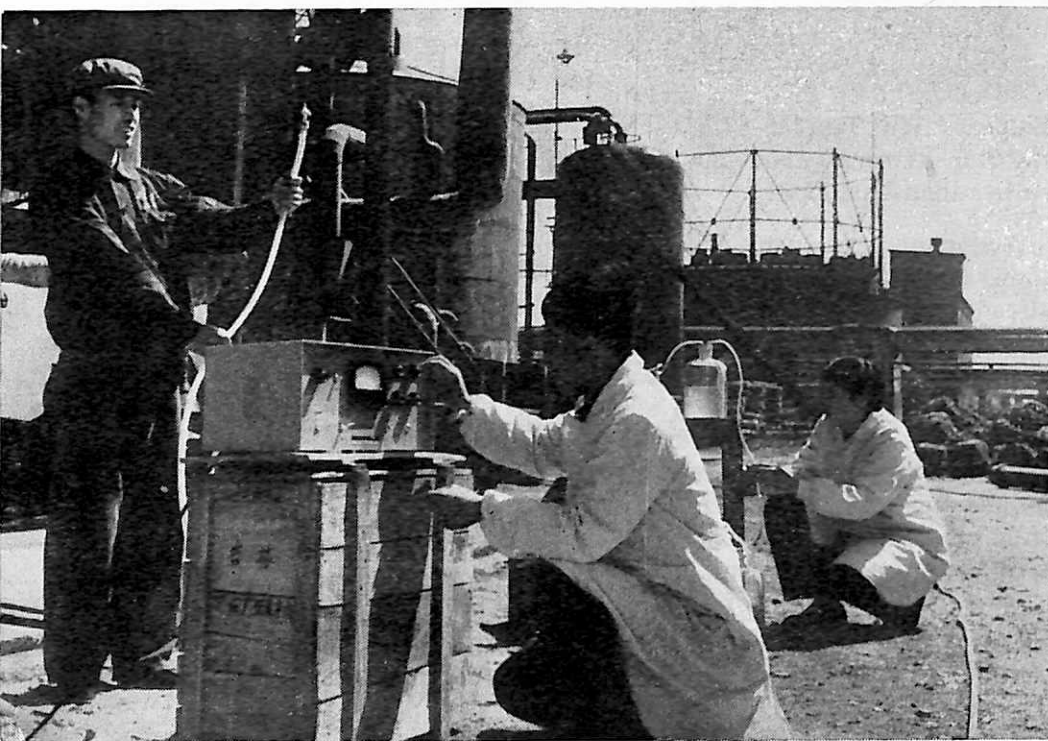
pail by pail the polymerized matter that had stuck to the tank wall. The long contact with the chemical substances in the hot tank gave the workers an almost intolerable itch. I suggested they wear rubber suits which covered the whole body except for the head, but they said these were too cumbersome and that the toxic gas could still get to the body through the opening at the neck.

After talking the problem over with the workers I suggested changing the opening of the tank to the side so that they could clean out the polymerized matter with a long-handled scraper without going into the tank. This method, adopted by the shop, has greatly reduced the hazard.

This experience taught me that if we doctors of occupational diseases are going to do our job well, for a period we must do the work that causes these diseases and develop measures in close cooperation with the workers.

TUNG WEI-CHIH: The day-to-day tasks of prevention are now han-

Testing the air near an industrial plant.



Eye-doctor Chin Fu-yu (left) learns the production process.



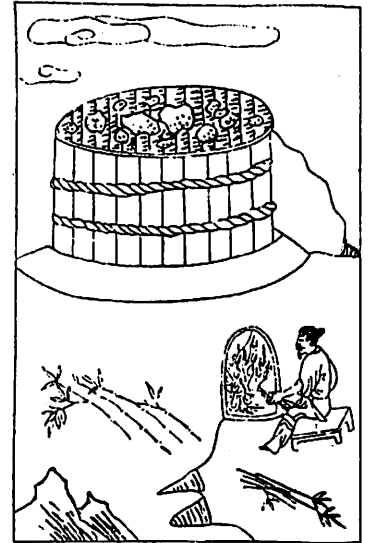
Dr. Sun Wei-sheng (left) encourages worker-medics to test their knowledge of acupuncture needle-treatment points on his own body.

dled by 300 worker-medical personnel which we have trained in cooperation with the factory clinics. A 20-man team of doctors with a lot of clinical experience goes regularly to the factories to give physical checkups, investigate incidence of disease and study measures for prevention. There is still a lot to be done. Things that have proven effective in practice must be studied and theoretical conclusions must be reached. We are planning to make a thorough study of the pollution of air and water, so that we can offer our medical opinion on measures to eliminate it.

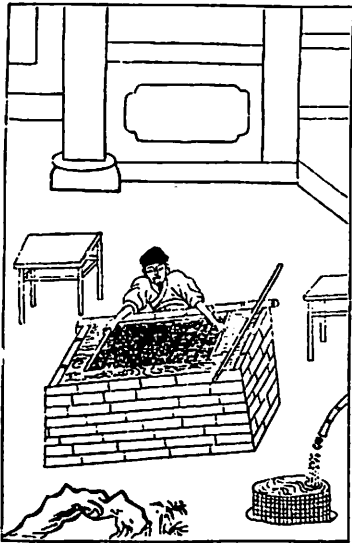
Who Invented Paper?



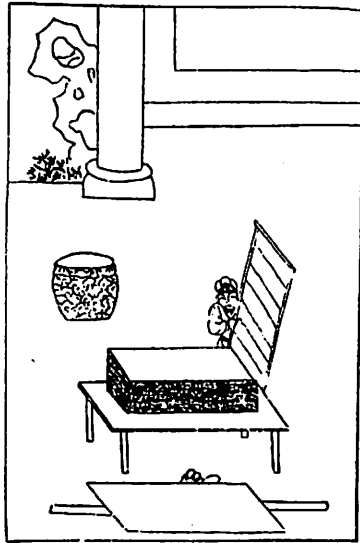
Soaking bamboo



Cooking



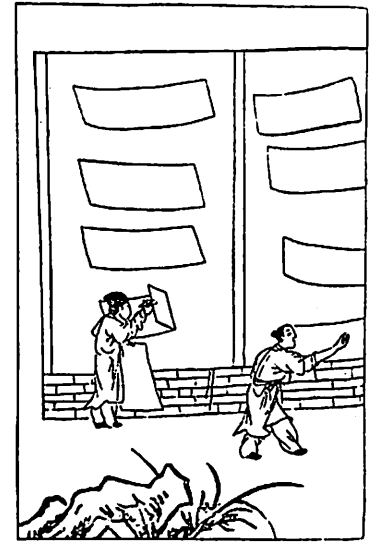
Beating the pulp



Pressing



Drying



Papermaking in Ancient China (Illustrations from an ancient book)

FOR A LONG TIME in China the making of paper from fibrous matter was attributed to Tsai Lun, a court official in the Eastern Han dynasty (A.D. 25-220), who was supposed to have invented it in A.D. 105. In later centuries he was memorialized by temples and statues of him.

During the past half century fragments of paper made from plant fibers dating from before the time of Tsai Lun have been excavated. In 1933 a piece of coarse paper made from hemp and dated 150 years earlier than his time was found at Lop Nor in Sinkiang. In 1942 some fragments of plant-fiber paper dated several years earlier than Tsai Lun's were unearthed in Chuyen in western Inner Mongolia.

In 1957 several dozen pieces of coarse paper were found in a Han dynasty tomb in Pachiao near Sian

in Shensi province. The largest was about 10 centimeters square. Examination proved them to be made from hemp fiber. Other relics uncovered in the same tomb showed it to be no later than the time of Emperor Wu Ti (140-87 B.C.) of the Han dynasty, about 200 years earlier than Tsai Lun.

Abundant evidence, therefore, shows that the art of papermaking already existed in the time of Tsai Lun, probably the creation of the working people of an earlier day. As court official in charge of supplies for the emperor, Tsai Lun had ample opportunity to come into contact with the advanced handicraft products of the time and the methods for making them. Clearly it was on the basis of the experience of the working people that he was able to propose that the emperor make paper from rags, bark, hemp and old fishnets. The success

of the method resulted in the wider use of paper.

The Chinese method of papermaking soon spread to Korea and through Korea to Japan. Westward it travelled to Samarkand in central Asia, and further to Baghdad, Damascus, Egypt and Morocco.

The production of paper from plant fibers was an epoch-making invention in the cultural history of mankind. Back in the Shang dynasty (1600-1100 B.C.) characters had been inscribed on pieces of tortoise shell or animal bone. Later, inscriptions were carved on stone tablets and bronze, or written on strips of bamboo and silk. These processes were always laborious, a fact which greatly limited the spread of knowledge. The invention of paper, and later that of printing during the Tang dynasty (seventh century) contributed immeasurably to the spread of culture.

物归原主
Wù Guī Yuán Zhǔ
Lost and Found

一天, 在一列从南宁去北京的特别
Yi tiān, zài yí liè cóng Nánning qù Běijīng de tèbié
One day, at a from Nanning go Peking special

快车上, 一位旅客 不留意把一块
kuàichē shàng, yí wèi lǚkè bù liúyì bǎ yíkuài
express train on, a passenger (was) not careful a

新手表 掉进了 便池。手表 溜到
xīn shǒubiǎo diào jìn le biàn chí. Shǒubiǎo liū dào
new wrist watch dropped (into) toilet. Wrist watch slipped

铁路 上去了。他 十分着急。列车
tiělù shàng qù le. Tā shí fēn zhāo jí. Lièchē
railroad (track) onto. He (was) very worried. Train

到达了 下一站, 他 急忙向 车站 去
dàodá le xià yí zhàn, tā jí máng xiàng chēzhàn qù
arrived next stop, he hurriedly to station go

报告 失表的 经过。车站 的人 对
bàogào shī biǎo de jīngguò. Chēzhàn de rén duì
report losing watch experience. Station's people to

他说: “同志, 你 不要 着急, 我们 一定
tā shuō: “Tóngzhì, nǐ bú yào zhāo jí, wǒmen yí dìng
him said: “Comrade, you shouldn't worry, we certainly

尽力 帮你 找到。”
jìn lì bāng nǐ zhǎo dào.”
exhaust effort help you find (it).”

列车 开走后, 这里的 职员 立刻
Lièchē kāi zǒu hòu, zhè lǐ de zhí yuán lì kè
Train departed after, here clerks immediately

打电话 给 前 三个 车站, 请 他们
dǎ diàn huà gěi qián sān ge chēzhàn, qǐng tā men
telephoned to previous three station, asking them

帮助 寻找。
bāng zhù xún zhǎo.
help search.

第二天, 一个 车站 回了 电话, 说
Dì èr tiān, yí ge chēzhàn huí le diàn huà, shuō
Next day, a station returned telephone (call), saying

铁路 小学 有 四个 小 学生 上
tiělù xiǎo xué yǒu sì ge xiǎo xué shēng shàng
railroad primary school had four young students up

山 采集 草药, 回家 路上 在 车站
shān cǎi jí cǎo yào, huí jiā lù shàng zài chēzhàn
mountain collecting medicinal herbs, homeward route at station

附近的 碎石 间 拾到了 一块 手表,
fù jìn de suǐ shí jiān shí dào le yí kuài shǒu biǎo,
near crushed stone among picked up a wrist watch,

交给了 学校。学校 又 把手表 转交
jiāo gěi le xué xiào. Xué xiào yòu bǎ shǒu biǎo zhuǎn jiāo
gave to school. School again wrist watch turned over

到了 车站。
dào le chēzhàn.
to station.

过了 两天, 那位 旅客 收到了
Guò le liǎng tiān, nà wèi lǚkè shōu dào le
After two days, that passenger received

自己的 手表。
zì jǐ de shǒu biǎo.
(his) own wrist watch.

Translation

One day, on a Nanning-Peking special express train, a passenger was not careful and dropped his watch into the toilet. The watch passed through out onto the roadbed. He was very worried. When the train pulled into the next station, he hastened to report the loss of his watch. The people at the station told him, “Comrade, don't worry. We'll do our best to help find it.”

After the train had left, the clerks immediately telephoned the three stations up the line and asked them to help look for the watch.

The next day a station called back saying that four students of the railroad primary school who had gone to the mountains to collect medicinal herbs had found a watch among the stones near the station on their way home. They handed it in to the school, which had turned it over to the station.

Two days later the passenger received his watch.

Explanatory Notes

1. The suffix 了 shows an action completed and is often used to express the past tense. Xuéshēng zhǎo dào biǎo le 学生找到表了 (the students found the watch). Wǒ xuéxí le yí fèn wénjiàn 我学习了一份文件 (I studied a document).

2. Shàng 上 and xià 下 usually mean “up” and “down”. E.g. lóushàng 楼上 (upstairs), lóuxià 楼下 (downstairs); shān shàng 山上 (on the mountain), shān xià 山下 (below the mountain). But 上 and 下 can also denote the order of time or place. E.g. shàng xīngqī 上星期 (last week), xià xīngqī 下星期 (next week); shàng yí zhàn 上一站 (previous stop (station)), xià yí zhàn 下一站 (next stop).

3. Literally dǎ 打 means “beat”, but the meaning varies with the object taken, e.g. dǎ diàn huà 打电话 “to telephone”, dǎ shuǐ 打水 “fetch water”, and dǎ qiú 打球 “play ball”.

4. The word bǎ 把 if directly translated would read “take”, but it requires a verb or other words to make the meaning complete. A sentence with bǎ 把 is arranged in this order:

subject — bǎ — object — verb — other elements.

E.g. Tā — bǎ — biǎo — diào le (He dropped the watch)

Xuéshēng — bǎ — biǎo — jiāo gěi le — lǎoshī (The students gave the watch to the teacher).

JADE CARVING

JADE has always ranked among the most valued of stones in China.

Jade stone is a mineral of complex chemical components. Different compositions result in stones of different colors. The more common ones include white jade, dark green jade, yellow jade, veined jade and emerald-green jadeite. Fine jades are valued for their waxlike luster and tough structure.

Long hard work goes into a piece of finely-carved jade, from several months for a simple object to several years for an intricate work of art. This is because jade is so hard that it can only be cut with belt-driven lap wheels using abrasive sand. Strictly speaking, therefore, a worked object of jade is cut and polished rather than carved, as testified by the old Chinese saying, "A piece of jade is nothing without cutting and polishing."

When creating a work of art the jade carver first studies the piece of raw material to decide what can best be made of it according to its particular size, shape, coloring, texture and grain, and then makes his design to fit his piece. A block of black jade becomes a sleek black donkey. A jade stone with several colors becomes a bird with colorful plumes. In both cases the natural coloring of the raw material is utilized in the design.

Experienced and highly-skilled jade carvers are good at bringing out the fine qualities and disguising the defects of the raw material. Jadeite, for instance, is prized for its green markings. In carving a piece of jadeite, the artist makes full use of the green parts as an important part of his design. Again, a flawed piece of jade does not worry or discourage the carver. By careful designing he turns the imperfections into natural features of his work of art.

Jade carving in China has a history of 3,000 years. Many prized works are preserved in the Palace Museum in Peking. Jade carving was already a specialized profession in the 16th century B.C. Relics uncovered at excavations of Shang dynasty civilization (16th to 11th centuries B.C.) included a large variety of jade ornaments and utensils of very high artistic order. The Chou dynasty (11th to 3rd centuries B.C.) set up the Jade Office specially for collecting fine jade stone and employing skilled craftsmen to make jade objects for court use.

Jade artistry reached new heights during the Han dynasty (206 B.C.-A.D. 220) with the carving of animal and other ornamental motifs. Celebrated jade carvers appeared in large numbers during the Sui and Tang dynasties (6th to 10th centuries). The opening line of a famous war poem by the Tang poet Wang Han speaks of "A luminous goblet of fragrant grape wine". This luminous goblet was fashioned from jade quarried in the Chilian Mountains. The making of designs based on the natural coloring of the stone was initiated by the imperial carvers of the Sung dynasty (960-1279). Artists of the Yuan dynasty (1271-1368) began inlaying gold and silver wire onto jade objects for ornamental effect. Carving, mainly of objects of art, developed further during the Ming and Ching dynasties from the 14th to 19th centuries.

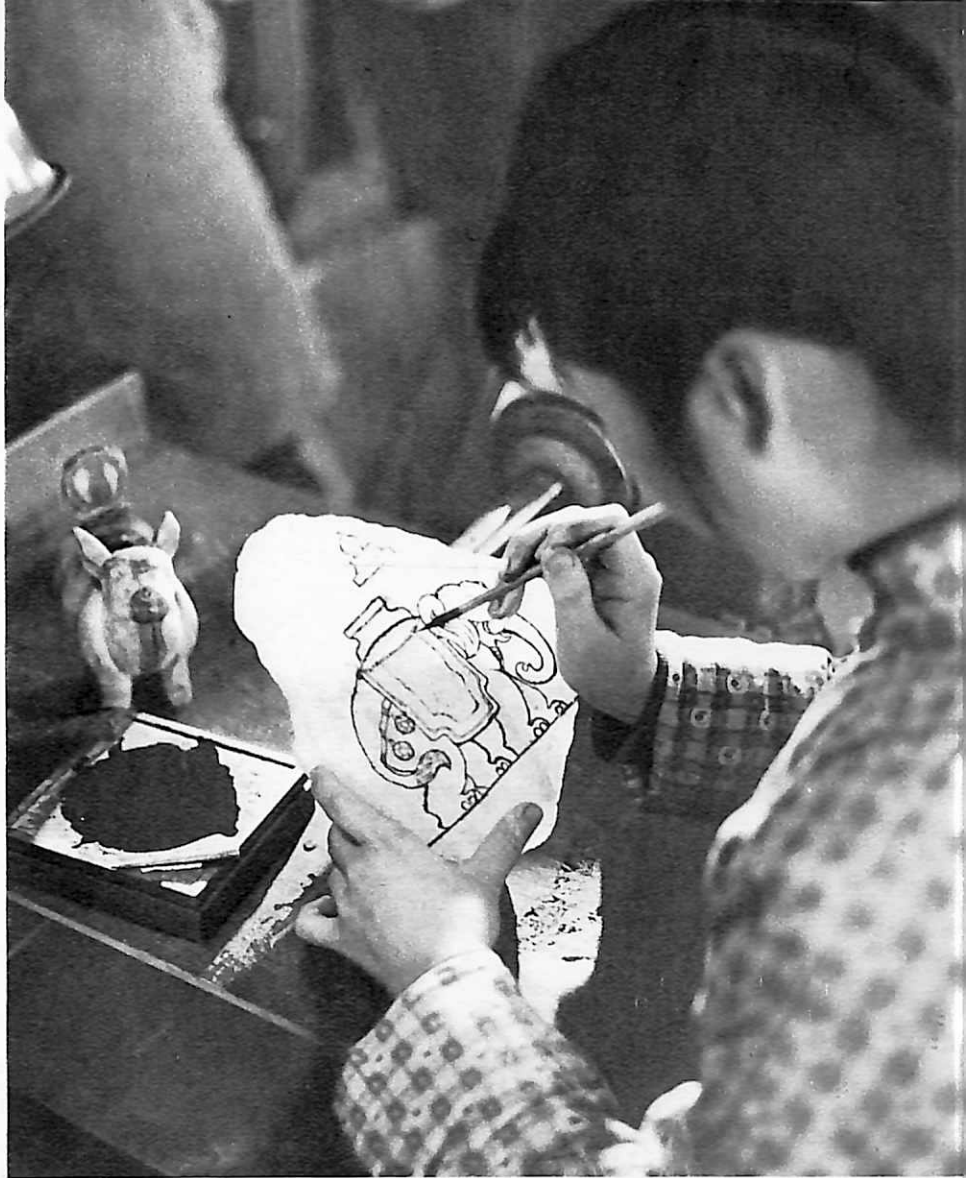
In the semi-feudal, semi-colonial China before 1949, industry of all kinds went into decline and people had a hard time making a living. Jade carvers were poor and looked down upon. Many turned to other trades to eke out a subsistence. Old craftsmen were frequently reduced to begging and sometimes starved to death in the streets. The art of jade carving was on the brink of extinction.

After liberation the People's Government set up jade studios in Peking, Shanghai, Tientsin, Kwangchow (Canton), Yangchow (Kiangsu province) and Chinchow (Liaoning province) which brought together carvers who had given up the craft and those working on their own. Each was encouraged to develop his speciality. The craft took a new lease on life. In the Peking Jade Studios alone there are now 1,500 carvers, young and old.

With the liberation, jade carvers were emancipated politically. Now they no longer need worry about employment and a decent livelihood. Tragedies of old craftsmen starving to death after their apprentices mastered the art have become a thing of the past. Once closely-guarded professional secrets are being passed on to the younger generation. The late Pan Ping-heng of the Peking Studios was a past master at gold and silver inlay, a skill he jealously guarded in the old society. After liberation he offered to make his technique known and taught it to his apprentices. Another skill requiring years to master is carving from a single block of jade a vase decorated with chains of interconnecting links. The links are carved with the spiralling method. Today not one or two, but many carvers, are able to do this.

Chairman Mao's policies for the arts — "Make the past serve the present and foreign things serve China" and "Let a hundred flowers blossom; weed through the old to bring forth the new" — are guiding carvers to create new works with their traditional techniques. Experiencing life in factories and communes, the designers have extended the scope and significance of their themes. Some of the new works include "Spring Comes Early", "Bumper Harvest", "The Boat on Nanhu Lake"* and "Fishing". In composition, arrangement, design and workmanship, each piece is highly appreciated as an individual creation.

* When the Chinese Communist Party's first national congress, held in secret in Shanghai on July 1, 1921, learned the police were searching for it, it adjourned to a boat on Nanhu Lake in Chiahing county in nearby Chekiang province.



Designing.

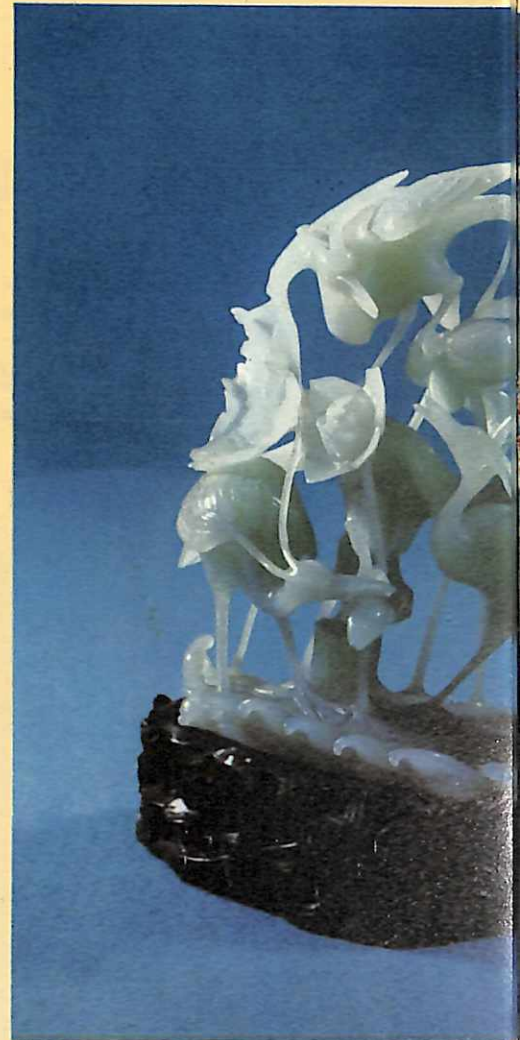
Master workman and apprentice.





Flower Basket and Chains, green jade openwork.

JADE CARVING

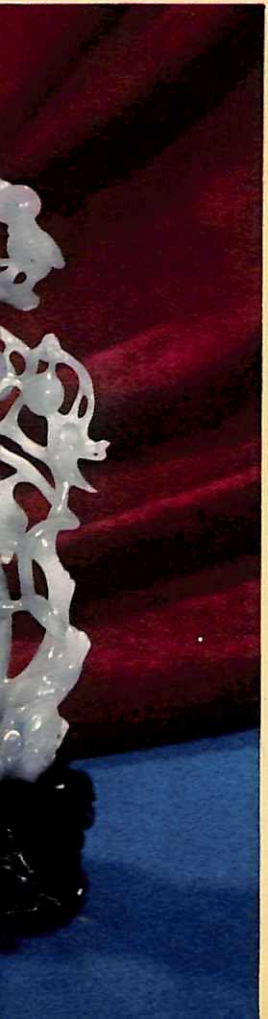


Egrets and Lotus, white jade.





ape-twined vase, jadeite.



The Boat on Nanhu Lake, *hsiu* jade.

Harvest, vase, jadeite.

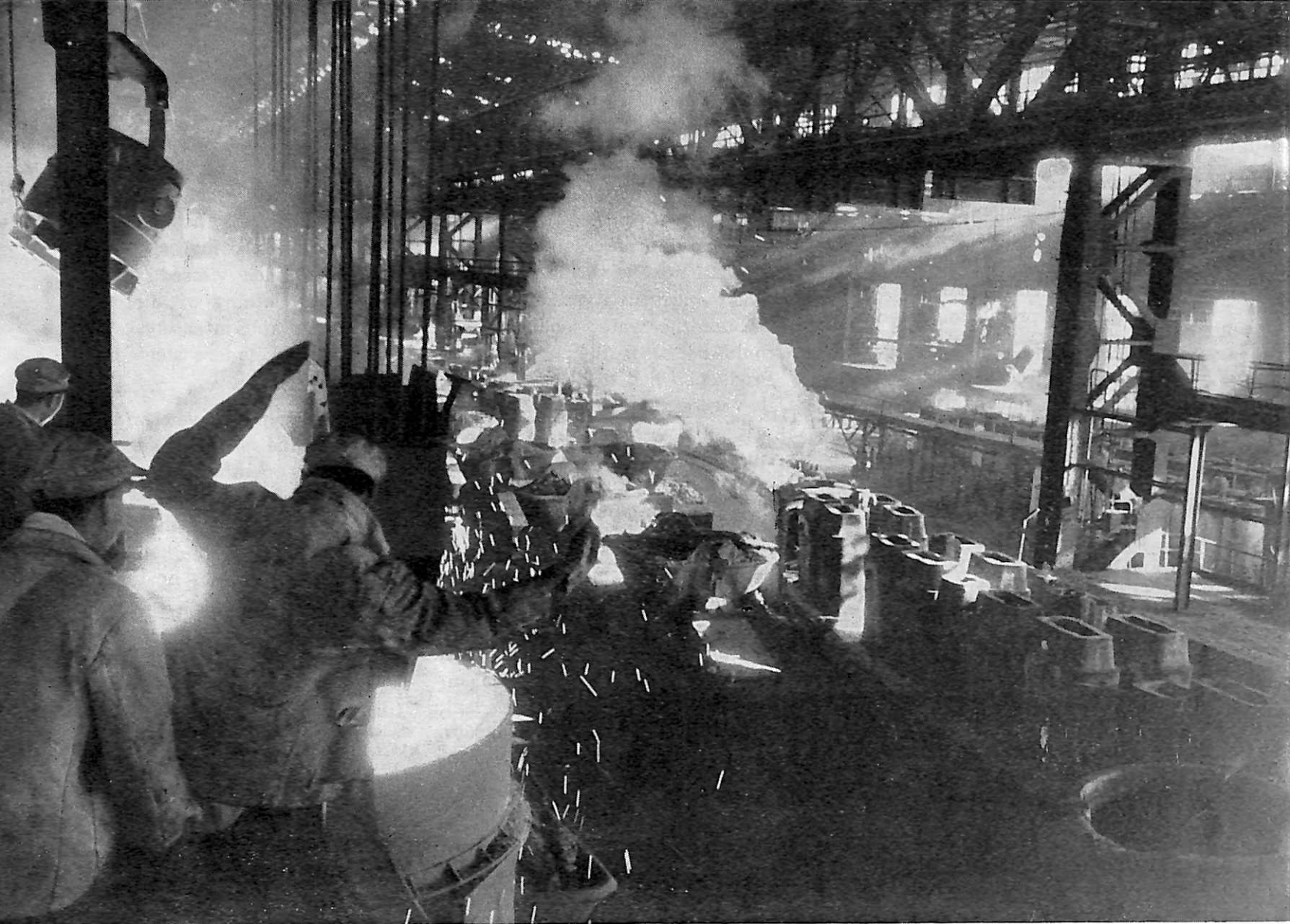


Steelworkers Tap Hidden Potential

AN TUNG

Li Shao-kuei (right) with young workers.





Steel-smelting plant.

THE Anshan Steel Works, China's oldest iron and steel complex, is still setting new records. In 1971 output of all main products showed substantial gains over 1970: steel 8.68 percent, iron 4.95 percent, rolled steel 16.59 percent — all-time highs for the complex.

To meet the zooming demands of industry and agriculture for steel, early in 1971 the state proposed a set of revised targets for Anshan Steel. Among the workers and administrative personnel there were two views on how to meet them. One view held that more men and equipment were needed. Many old workers didn't agree. They were for tapping the complex's own potential.

Mass Debate

To help the masses sort out their ideas, the steel works' leaders or-

ganized them to study Chairman Mao's writings with reference to the problem. Within a few days a hundred thousand big-character posters had been put up in the combine's various plants. The great majority of them argued that Anshan Steel had developed to what it was today because of the concern of Chairman Mao and the support of the people. Such a big enterprise should not add to the burden of the state by asking for more men and equipment, especially since these were badly needed for construction elsewhere in the country. Instead, it should rely on its own efforts. Some added that this idea that Anshan could not increase production unless it got more men and equipment was actually a reflection of the "Anshan has reached the limit of its production" thinking spread by Liu Shao-chi's henchmen in the steel industry. Through mass de-

bate the workers realized that the two views were really a reflection of two different lines for industrialization. They agreed to try the self-reliant way.

The Takushan Iron Mine had originally wanted five more drill rigs, two electric shovels and more electric locomotives. The workers, however, said that the present equipment was not inadequate, it only seemed so because the work was not organized well. This could be overcome, they felt, if they took the initiative in rationalizing the work organization. The mine's leaders accepted the criticism and welcomed suggestions. As a result the mine overfulfilled its 1971 plan without adding men or equipment.

Reforming Old Equipment

Anshan Steel has more than a thousand three-in-one groups en-

gaged in making technical innovations. These are composed mainly of workers. Along with technicians and plant leaders they comb the shops, checking over every piece of machinery. Under their guidance, old equipment is reformed to bring out its full production potential.

The Seamless Steel Tubing Mill had difficulty in producing certain large hard-alloy steel tubing which was much in demand for construction. An innovation group headed by Han Shih-chi, an old worker, made a close examination of the whole process and found that the main trouble was that the piercing machine was not powerful enough. This could be remedied by increasing the speed of the motor and putting in two new gears, but it would take a long time to get the gears from the manufacturer. The innovation group decided to make its own, first experimenting on a small model and then producing them in the required size. They increased the power of the piercing machine

25 percent, and output went up 15 percent.

The high-speed annealing furnace is an important link in the tube-making process. The metal bearings next to the furnace walls used to burn out about once a week because the water-cooling system could not cool them adequately. Production had to be halted while they were changed and constant replacement used up a lot of steel. An innovation group solved the problem by making the bearings of a material containing resin.

At the Tunganshan Iron Mine, 80 percent of the principal equipment has been reformed by such groups, a fact which enabled the mine to register a record output last year. More than a hundred technical innovations at the Steel Cable Plant, an old one built in the 1930s, helped it top its 1970 output figure by 25 percent last year. In all, Anshan workers made more than 3,000 technical innovations, 300 of them of major importance.

Exchange Technical Know-how

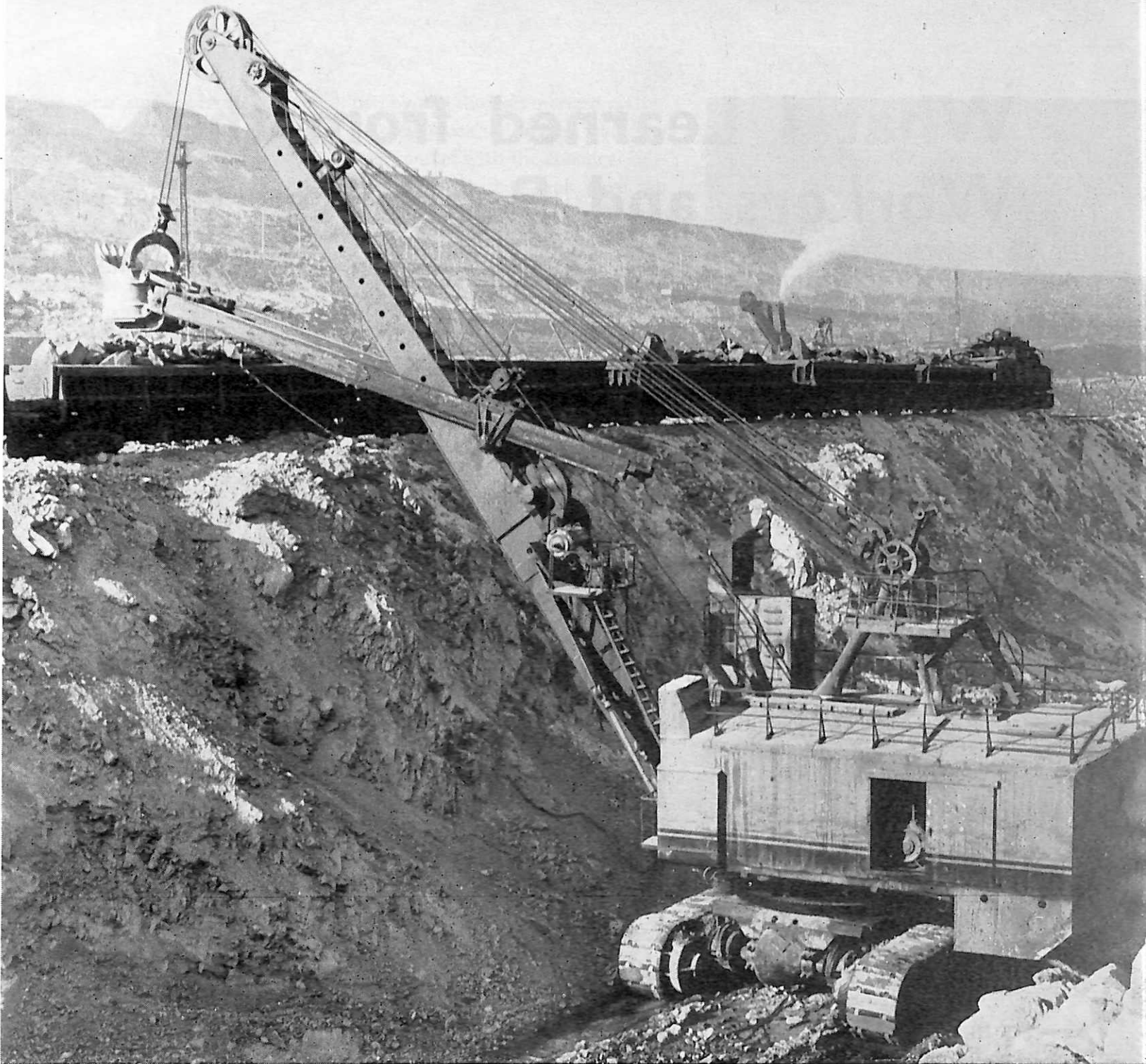
The steel mill is like a battleground. The glowing furnaces, the swinging arms of the mechanical loaders loading at high speed. The workers in their visored caps and heat-proof clothing wielding their shovels, working intensely. All in order to make more steel, better steel.

Liu Kuang-jung, a veteran worker, though he is now head of one of Anshan's open-hearth shops, still spends much of his time at the furnaces. While at the No. 5 furnace, he learned that the C shift was turning out a heat of steel 36 minutes faster than the A shift and 1 minute faster than the B shift. He found that in order to speed up smelting in the old furnace, the whole shift had been mobilized to make constant observation so as to be thoroughly acquainted with its performance and then make necessary adjustments. The C shift was then asked to demonstrate to other teams the way they worked. Finally the plant revolutionary committee organized a mass campaign in which steelworkers throughout the plant demonstrated their high-speed smelting techniques.

Li Shao-kuei, a member of the Anshan Municipal Party Committee, is a seasoned smelter who has been received by Chairman Mao six times. He works regularly in the plant and always seems to show up where there's trouble. When he heard that the No. 6 furnace was taking unusually long to turn out a heat of steel, he worked alongside the crew to find out what was the matter. A thick layer of slag accumulated around the charging-mouth and air flues was keeping the furnace from maintaining the necessary temperature. He demonstrated to the crew a way of charging that in his own experience had kept the slag from accumulating. Using it the workers eventually cut the time for a heat of high-quality steel from 9

Technical innovation group at work.





One of Anshan's iron mines overfulfils its production quota.

down to 7 hours. Last year the whole plant overfulfilled its target by 300,000 tons.

The movement to exchange advanced technical experience has now spread to the whole complex.

Seizing the Hour

Cutting down on the time needed for construction and new installations is another way of getting more steel faster. Instead of waiting for construction firms to build new blast furnaces and converters,

the Anshan workers have undertaken to build these themselves. Now they have overcome initial problems of lack of experience and proper equipment and are getting good results. To build the 75-meter-long inclined track for the charging cars to run up, first a scaffolding used to be set up and then the track was installed from the ground up piece by piece. This took at least a month and a half. To save putting up a scaffolding, Lin Hou-kuang, an old worker, proposed assembling sections of

the track on the ground and hoisting them into place. Later he improved on the idea by adding two ropes hung from the top of the section which helped the crane operator adjust his angles and ease the track exactly into position. The incline was built in a month.

"We'll stand by self-reliance," say the steelworkers. "That's the way to get what you don't have, to get big things when you have only small ones, and to speed up steel production."

What I Learned from the Workers and Peasants

TSIEN LING-HI

I AM an intellectual from the old society and have been teaching science for thirty years. You might say that my position at the Talien Polytechnic Institute — where I have been for most of these twenty-two years that the country has been under the leadership of the Communist Party and People's Government — was an ideal job for me. I have had good working conditions and have been accorded honors, both politically and professionally.

Yet, for quite a long time, though I had all these opportunities to be useful, I still kept running along rather like an automobile without a steering wheel. Consciously or unconsciously I was under the influence of the old ideas — I viewed my knowledge as my private possession to be used for my own good, and behind closed doors pursued purely theoretical research whether or not it had any relation to practical needs or problems. The fact is that I hadn't completely solved the fundamental problem: knowledge, research — for whom?

THE Great Proletarian Cultural Revolution gave me quite a jolt. I learned a lot from the revolutionary criticism of such ideas by the masses. Reviewing my past experience, I realized that the reason why my work had fallen short of the needs of the new society was because I had not taken the road for intellectuals pointed out by Chairman Mao; I had not got close to the workers and peasants. I decided I had to change, I would go

TSIEN LING-HI, a professor in the Department of Mathematics, Physics and Mechanics at Talien Polytechnic Institute, is a deputy to the Third National People's Congress. He has taken part in design work for some important construction projects, including the bridge over the Yangtze at Wuhan.



The author (center) and commune members search for water sources.



Tsien Ling-hi (center) in the workshop.

out among them, breathe some fresh air.

In 1967 I asked for a few months to work in the Miaoling production brigade near our institute. The commune members were very glad to see me. "All those years you've been working in that big building and we've never seen you," they said. "This is a good start." They encouraged me. I lived with a peasant family, worked with the brigade members. They taught me about the farm work and told me of the class struggle in the countryside. I joined in their political study sessions and discussions on how to build the new socialist countryside in answer to Chairman Mao's call for agriculture to learn from Tachai. I found that when they worked hard from early morning till after dark it was not for personal fame or profit but for the revolution. In the past when I had engaged in scientific research, I had always put first promoting my own school of thought in my special field, and my own fame and gain — not what the cause of the proletariat needed. When I compared myself with these people I found there was a great difference in our thinking. I resolved to get rid of the idea of viewing knowledge as one's private possession and to use my technology to serve the people.

The members of the Miaoling brigade wanted to use the sewage from our school to irrigate their hillside fields. I worked with them on drafting a plan for the system, walking with them all over the mountains surveying. It was hard for me because my legs and back are not good, but when I saw how eager the commune members were to change their mountains, it gave me new strength. In three months of hard work their irrigation plan was realized. I was so happy to see the sewage water flowing into the wheat fields that I scooped up a handful and smelled it, causing the commune members to smile understandingly.

GRADUALLY I came to have a common language with the peasants and they often came to talk things over with me. In the spring of 1971 one production team asked me to design them a bridge with an eight-meter span. To tell the truth, in the past I would have thought such a small project beneath me, and, furthermore, the commune members would never have sought me out about it. Now things were different. They trusted me, and I accepted their request with pleasure.

Utilizing the hours after work, I very quickly drafted a plan requir-

ing 800 kilograms of steel reinforcing rods. I thought this about as economical as possible. But after looking at it the commune members asked that I cut the reinforcing rods down to 500 kilograms. I went home and studied the draft from every angle and finally added a pier which would cut down on the steel. I thought that certainly they would approve of this, but then some people raised a new request — "Old Tsien, could you look at it again? Would it be possible to build the bridge without any steel?" Their question stumped me. Of course it is possible to build a bridge without steel, but I wondered whether it could be done with the brigade's construction conditions and equipment. I consulted with stonemasons and bricklayers and learned from them, and also did some investigation in the Luta city department of architecture and design. At last I produced a plan for an arched cement bridge that could stand the weight of a tractor and could be built without steel rods or wooden supports. Using local materials, the commune members completed it in a very short time.

Reviewing the whole process afterwards, I didn't feel comfortable about it. If the commune members had adopted the first draft it would have meant a waste and an economic loss to the state. This once again showed me that even though one wants subjectively to serve the laboring people, he cannot do it well unless he has a real understanding of their life and the way they feel. I saw that through this process of laboring with them I had really come to feel the way they did and be concerned about the things they were.

ONE DAY in April 1971 the teachers and students of our institute went to a production brigade in the Lingshui commune to plant trees. When we finished I did not go right back to the school, but, even though it was raining, walked a few kilometers over the mountains to see a reservoir the commune members were constructing.

I learned that they had quite a few unsolved problems. The plan for the project had been made without taking local conditions into consideration. The dam was higher than necessary and this would waste a lot of labor. Judging from the pace of construction thus far, the project could not be finished before the flood season. The people were busy with spring sowing, so they could not afford to transfer a lot of labor power to the dam to speed work on it. Yet, if it were not finished in time, the uncompleted dam might be destroyed by floods. The commune members were very worried.

I went to the office of the brigade and suggested that perhaps the plan could be revised to cut down the height of the dam from 11 meters to 9 meters. Then it could be finished ahead of the flood season. The secretary of the Party branch was very happy with my proposal. "Good, now you're thinking the way we are," he said. "We had the same idea, but haven't carried it out because we couldn't agree on the final plan." He called a meeting of the Party committee, and after talking it over they agreed to revise the original design. A new target date was set for the construction. With hard work, the commune members finished the reservoir project in two months, in time for the flood season.

That year there were extraordinarily heavy rains, but the dam stood firm. The peasants were overjoyed. This matter may seem like something beyond my line of duty, yet it was just at this time, as I got out of my narrow circle of individualism and plunged into the revolutionary work of serving the people, that I began to realize the breadth of life and the far-reaching opportunities for my own future.

Of course, before the cultural revolution I had also had occasion to go to the factories and villages. But then I went in a car. I was the "professor", the "expert". I never thought there was any way in which the workers and peasants could re-educate me. Instead, I looked down on everyone and was always making criticisms. I never

thought of myself as one who should learn from them. In this respect, one incident taught me a great deal.

WHEN our institute was in the midst of the educational revolution in 1969, I went to a shipyard with a group studying reform of teaching in order to find ways to carry out Chairman Mao's directive that education must be combined with productive labor. One day I went with a worker to repair a machine. During the course of the work he was called away on other business. This is not difficult, I thought, if I go on the way he's been doing it, I'll have no trouble. But things were not so simple as I had imagined. I dismantled and cleaned one part of it, but after I put it back together, the machine wouldn't move. In fact, a part that originally should have been stationary had become loose. This was clearly a problem of mechanics, but neither my strength nor my book-learning was of any use.

I couldn't rest that night. I was afraid that people would make a big to-do about the matter and the great professor who couldn't do this little job would become the laughing stock of the plant. The next morning I told the worker what had happened. He had another look at the machine, did the job again methodically and soon the machine was turning smoothly. I felt that maybe a self-criticism was in order, but instead of blaming me, the worker told me in detail what I had done wrong in the operation. He pointed out that I had used too much force when putting in the fixing pins so that the part was in too tight. And then I had neglected to give it a few taps to loosen it a bit. His direct, sincere words brought home to me the idea that theory divorced from practice was one of my serious shortcomings.

This incident also showed me that I should learn from the working class not only politically, but also in the professional sphere—that I must get rid of the ideas fettering my mind such as placing theoretical work above all else and

thinking that book knowledge could solve everything. It showed me that only if I conscientiously learned from these workers with practical experience would I ever have the kind of knowledge that could serve the people.

IN May 1970 I was sent by our institute to help unravel a knotty problem in the shipbuilding industry. When I got there I found it was something with which I was completely unfamiliar. I cudgelled my brains all one night but still couldn't figure out where to start. I thought that perhaps I wouldn't be able to do the job. The next day when I went among the workers to investigate, while they told me about the situation they gave encouragement. "Don't worry if it's something new to you. We'll do it together," they said.

I talked with workers and other personnel engaged in building, maintenance, salvage and shipping and from their practical experience collected a lot of data. Then, with the workers and members of the group responsible for solving the problem, I carefully analyzed it and discovered some pattern to it. We found that good conditions existed for our design work to break with foreign conventions on this point and develop our own way.

During this period I frequently lived, worked and studied with the workers, told them what was on my mind and really made an effort to learn their revolutionary thinking and good ways of working. They were happy to have me and often helped me by pointing out my ideological faults or weak points. This kind of contact with them in practical work enabled me to learn many things I could not get from books. It also led me to a gradual understanding of the technology of the problem we were to solve, so that I could work out an initial plan for it. In three months of hard work we unravelled the knot in production. In the process I had a good tempering in practical work and another opportunity to see from my own experience the benefits of getting close to the workers and peasants.

Youth Amateur Athletic School

THE rhythmical sound of a piano fills the spacious gymnasium of the Peking Youth Amateur Athletic School as, to the count of "One, . . . two, . . . three, . . . four, . . ." a coach puts a group of young girls through their paces in the basic gymnastic movements. Elsewhere boys are jumping over the vaulting horse, turning on the horizontal bars or wielding their swords practising the rudimentary techniques of *wu shu* (Chinese traditional exercises).

Located beside scenic Peihai Park, the school was set up in 1958. Today it has over 50 coaches and 1,000 students between the ages of seven and sixteen, recommended by the primary and middle schools they attend daily. In the athletic school's classes four times a week they get special coaching in nine sports, including basketball, volleyball, football, table tennis, track and field sports, *wu shu*, skating and ice-hockey.

Lesson Number One

Some of the youngsters, when they first come to the school, see it simply as a good place to have a bit of fun. Others are pleased with the idea that with their new skills they will outshine others. One of the former was Kuo Hsiao-chun, a second-year student at Yuyuantan Junior Middle School who is enrolled in the athletic school's speed-skating class. However, on the first day, the coach told his group the story of Ni Chih-chin, the Chinese athlete who in 1970 set a new world high jump record of 2.29 meters.

Ni, too, at first had no aim other than to win fame for himself. But this in itself was not enough to provide him with the strong will needed for constant practice, or to keep him from becoming easily discouraged when things did not go as he had hoped. Later he began to relate Chairman Mao's teaching,

"The question of 'for whom' is fundamental" to his own situation. He realized that his aim had been wrong. Resolving to make his sports activities part of his service to socialism, he practised harder until he made himself capable of topping the highest world record. The story made a deep impression on Kuo Hsiao-chun and his classmates.

Now, with his aim clear, Kuo trained rigorously in the severest winter cold, and continued his physical fitness program even through the hottest summer. Once, though he did not feel well, in the same spirit that Ni Chih-chin had defied the difficulties that confronted him, Kuo still insisted on finishing his full practice session. He blacked out. The coaches and his classmates tried to persuade him to rest, but he refused. He got up and continued the practice, not stopping until he had done as much as on any other day. Approaching things in this spirit not only

brought about rapid improvement in his skating, but also in his studies.

Tan Kuo-ho is a sixth-grader at the No. 2 Primary School. He has been fond of sports since he was very small and once won the 100-meter dash in his primary school's sports meet. After he was chosen for the athletic school, his mind was full of the idea of always being the winner. With this attitude, he didn't want to put in the work needed to master the basic movements, so he had a poor basis for making progress. Aware of the situation, teachers in his primary school and the athletic school talked with him and helped him see that the idea of pushing one's self forward should not be the reason for taking up sports in socialist society. He came to understand that athletes must temper themselves for the revolution. After a period of hard training for basic body-building, he greatly improved his physique. From being

Young athletes before class.





Children at Wu Shu

Wu shu, a traditional form of physical culture, is a popular sport in China. It includes both shadowboxing and exercises with weapons such as broadswords.

Every gesture and position shows strength.

Practice on the basic movements.





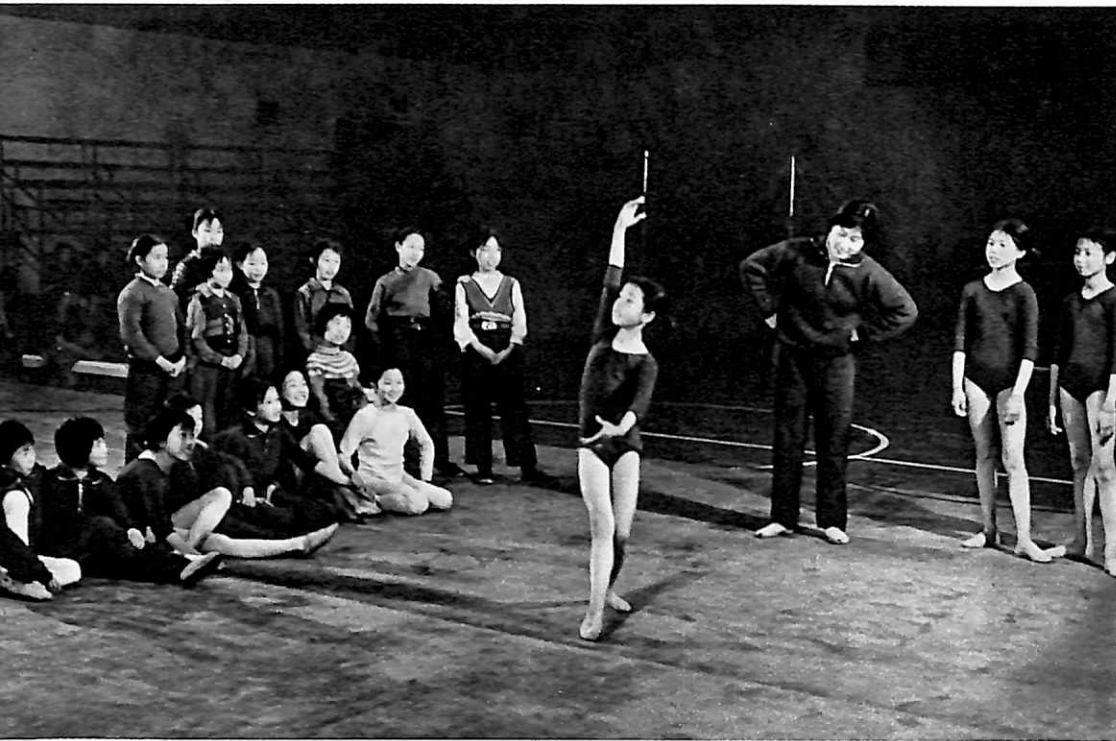
Exciting encounter.



Fencing with broadswords.

Swordplay under the guidance of a coach.





In the gymnasium: How's her position?

able to do the squat-and-straight-en-up exercise with a 45-kilogram barbell on his shoulders, he has now progressed to a 100-kilogram one.

They Advance Together

The school teaches the young players the principle "Friendship first, competition second". In the table tennis room a group is intent on practising attacking. At table No. 5 a girl using the hand-shake grip is sending over chopping balls to give another girl using the pen-holder grip practice in returning with top drives. Every so often the server goes over to the latter and gives her a few pointers. She is Hsieh Ching-hung, a student at Peking's No. 74 Middle School. Training at the sports school since her primary grades has brought about an all-round development in her skill. A good student in middle school, at the sports school she has been chosen as a model for uniting and helping her classmates, and serves as a good assistant to the coaches. She often gives up her own practice or rest time to help the others.

When she first came to the sports school, she was bored with continual practice on the forehand drive varied only with sideline or diagonal shots. She thought these

methods of play too monotonous. Later, visiting some factories with other young players, she was deeply impressed by the enthusiasm and hard-working spirit of the workers. She made up her mind to practice the basic movements more rigorously and be more conscientious in helping her classmates. In a short time she improved her skill greatly. Last year

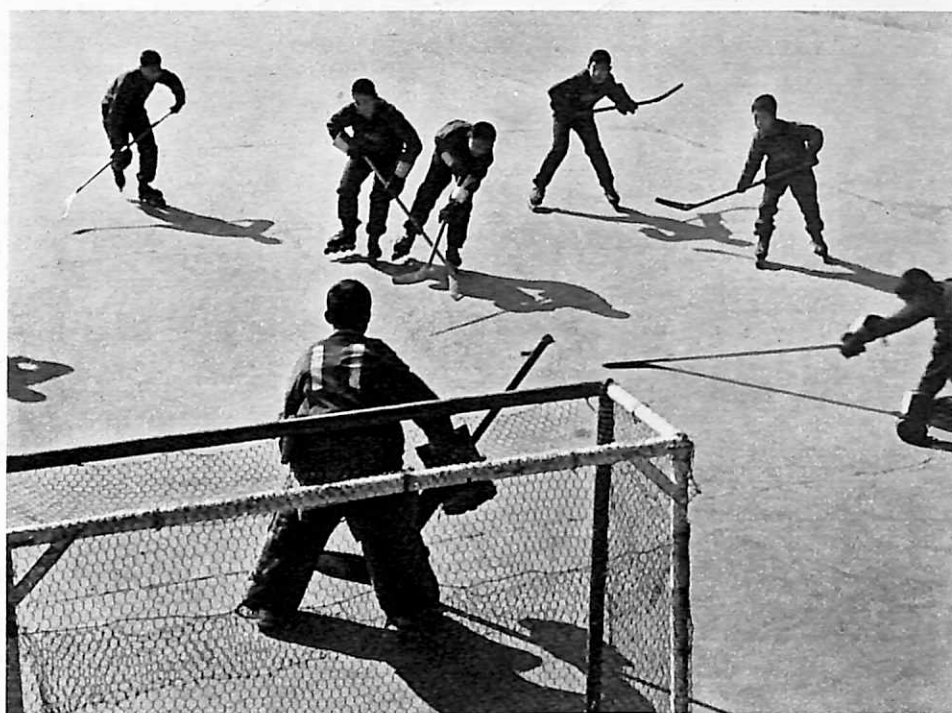
she won the girls' singles at the city junior table-tennis tournament.

Many Ways to Learn

Aware that the people they are coaching are very young, the school's teachers adapt their methods to the psychology and physical characteristics of their pupils. The young athletes sometimes have the chance to see well-known sportsmen in action, in order to learn their good points. On holidays they frequently go to factories, country villages and army units to themselves give exhibition performances.

In addition to activities on its own premises, the athletic school sponsors classes in factories and schools, providing both coaches and equipment. Over the years the school has trained thousands of physical culture activists. In 1971, 528 people studied in its 32 one-year courses, and 4,800 received training in 210 three-month courses. Now back at their more than 200 primary and middle schools and 16 factories in Peking and its suburbs, they are helping to promote physical training among their schoolmates and co-workers. Some of them have become members of national or city teams.

The ice hockey teams.



They Went to the Country

In 1969, 20,000 young people left Peking to make their homes in the mountain villages around Yen-an, the old revolutionary base in Shensi province (see report on them in *China Reconstructs* No. 6, 1969). They had gone there, on finishing junior or senior middle school, in response to a call from Chairman Mao. He said, "It is highly necessary for young people with education to go to the countryside to be re-educated by the poor and lower-middle peasants."

Three years later a 100-member representative group of the young people came to Peking to report

to the people back home on progress and problems in the new commune members' re-education. They reported that 2,300 of the group had been elected to positions of leadership in communes and their brigades or teams, or in local government. A far larger number are working as teachers in primary and middle schools, barefoot doctors,* accountants, supply stewards, tractor drivers and agronomists. *China Reconstructs* asked some of them and the commune members who came with them to tell of their experiences.

'WE WELCOME THEM'

HAO SHU-TSAI, Communist Party secretary of the Tanshiyuan brigade, Chiaokou commune, Yenchang county. During the anti-Japanese and liberation wars he was a Labor Hero of the Shensi-Kansu-Ningsia Border Area.

Three years ago when we first heard that 20 young people from Peking were coming to our village, we were as happy as if we were welcoming new daughters-in-law, getting houses ready and stocking them with rice, flour and firewood. On the day they arrived we walked ten kilometers over the mountains in a snowstorm to the commune headquarters to welcome them. We heard that these youngsters from the big city had never climbed mountains before, so we helped them up the slippery mountain paths with their bedrolls till all got to their village homes safely.

This was the first time the young people had been away from their parents and their city homes. We felt we should care for them like our own children. We taught them how to light the fire in the *kang* (brick bed) and how to cook. On holidays and festivals our families often sent over specially-prepared dishes.

We asked them to study *The Orientation of the Youth Movement*, a speech given by Chairman Mao at a mass meeting of youth in Yen-an on May 4, 1939. He told the young intellectuals of the day that if they wanted to contribute to

the revolution, they had to integrate themselves with the workers, peasants and soldiers.

I recalled how, inspired by this talk, thousands of young people from all parts of the country had broken through the blockades set up by the Japanese imperialists and the Kuomintang reactionaries and came to Yen-an. Here they studied Marxist-Leninist theory and writings of Chairman Mao, and learned to grow crops, build cave houses, raise pigs, spin and make paper and writing brushes. They also learned to fight in war and do political work among the masses. Thousands of them matured to become cadres for the revolution, serving at the battlefield in the anti-Japanese war and in the newly liberated areas.

The 20 young people pledged to carry on this revolutionary tradition and we must do our part to help them. Since they grew up in the new society, they didn't know what a hard life was like. They didn't pay much attention to thrift, sometimes were downright wasteful, throwing away leftovers from meals. I asked them to a meal of husk and wild roots. They couldn't swallow it. I told them this was our daily fare in the old days.

"Was the old society as awful as this?" they asked. "The poorest people didn't even get to eat these," I said. All the families in our village except two had come



Hao Shu-tsai

from other places, driven by famine. My own grandfather worked seven years for a landlord. He died after the landlord had him beaten on some pretext because he didn't want to pay the wages. My father fell ill while working and the landlord kicked him out. Then he injured his leg and could not work any more. My mother went out begging. I was sent to tend sheep for a landlord when I was eight years old. Until I joined the Chinese Workers' and Peasants' Red Army in 1935 I had never had a decent meal or warm clothing.

* Barefoot doctor is the name given medical personnel selected from among the peasants for a short intensive training course to enable them to treat common diseases. They labor just as the other commune members when not giving treatment. The term comes from the south, where peasants work barefoot in rice paddies.



An old peasant tells how much better life is today than in the old society.

Only when Chairman Mao came did we poor people see the light of day.

My accounts brought tears to the youngsters' eyes. After that they never wasted food again and have learned to be frugal about everything.

We wanted to cultivate in them a love for labor and the spirit of hard work. These youngsters are full of pep. A few days after their arrival they started to work with us on a water conservation project. They took off their padded jackets, rolled up their sleeves and threw themselves into the task. It made us glad to see such drive. But soon they all had blisters on their hands. I tried to make them do something lighter as a start, but they said, "We've come to learn from you. We're going to do whatever you do." Good spirit! We assigned a commune member each to show

them how to work properly. They learned fast and pretty soon were on their own.

These young people have had 9 to 12 years' schooling and they should be given a chance to use it for building socialism. We asked them to teach literacy classes and help the commune members study Chairman Mao's works. We got them to work with experienced peasants on mechanization and experiments in scientific farming. They got good results very quickly. Now farm work in our out-of-the-way mountain village is partially mechanized.

MECHANIZING FARMING

LI CHIEN-KUO, Tachuangho brigade, Wangping commune, Kanchuan county.

Through my 12 years in school, because of Liu Shao-chi's revision-

ist line for education, I concentrated on book learning and seldom thought of doing anything practical. I seldom did hard manual labor and could not tell one kind of grain from another. But in these past three years I have had a chance to make use of my book knowledge in mechanizing farming.

We young graduates all had big ideas when we first came to the countryside. With our education, we thought, we'd soon be doing big things. When we found ourselves pushing around lumps of dirt all day long, our enthusiasm cooled down fast.

The Party secretary saw what was wrong with us. One day he took us a long way over the mountains to visit a charcoal kiln. It was the place where Chang Szu-teh, the soldier Chairman Mao had memorialized in *Serve the People*,

had worked. I thought about how he, a veteran of the Red Army's famous Long March, was really "somebody". Yet for the revolution he was ready to do whatever task had to be done. He was burning charcoal there when the kiln collapsed and killed him in September 1944. As I looked at the kiln and the portrait of Chang Szü-teh placed there in memory of him I realized that what this soldier represents is something truly great — having service to the people and the revolution so in his heart that he was willing to do the most ordinary work if it was needed.

Our village is deep in the mountains. Liu Shao-chi's line was against building up the mountain areas. Production in this locality developed slowly; most of the farm work was done by hand. Every day before the cocks crowed, the women were already at the mill, driving the donkey that turned the millstone.

The commune members had long wanted to change such backward methods and we newcomers were eager to help. Several of us presented the Party branch with a plan for mechanizing some of the work. The Party branch was all for it. With some of the commune members we set up a mechanization group.

When we bought a 5-h.p. diesel engine and brought it back from the county town the peasants were all excited. The trouble was we didn't know how to install it. We nailed it to the ground with wooden stakes but as soon as we started it, up it danced away. We tried weighing it down with big stones but that didn't work either. Finally we brought a discarded stone tablet from a ruined temple, cut a well in it, placed the engine in the well and set the tablet firmly in the earth. That engine certainly livened up the place.

Then the brigade bought some corn-shellers, and rice husking and milling machines. But one diesel engine could not turn them all. We learned that two 10-h.p. diesel engines had been scrapped and were sitting in the county town. We decided to repair them. Both were in pretty poor condition. The



Li Chien-kuo

bodies were worn and battered and many parts were missing. We thought maybe we could make one good engine out of the two. We consulted books and took it apart and put it together many times. Months passed but the engine still wouldn't work. We heard some people say, "What a waste of time! It's simpler to buy a new one." Should we give up? The Party secretary encouraged us. "No success comes easily," he said. "You'll not only be restoring a scrap engine to use; in doing it you'll be learning the Yen-an spirit."

We kept on. As the engines were very old models, parts were no

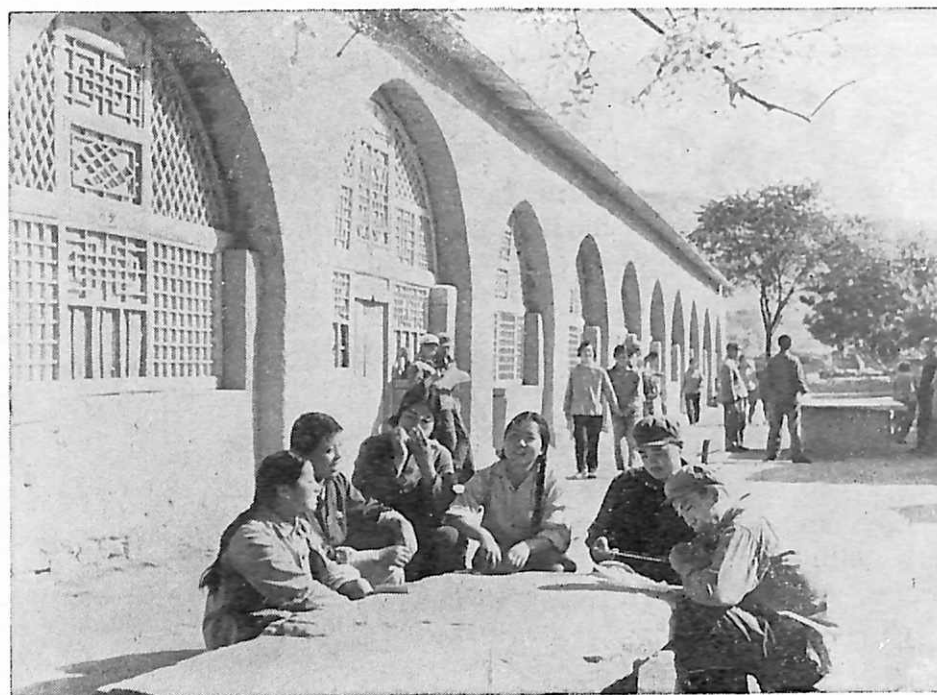
longer available. We tried making our own parts, going to factory workers for advice about the drawings. We finally got an engine that ran.

It turned the husking and milling machines, but its strong vibration was hard on them. Electric power would be better, but a 10-kw. generator cost more than two thousand yuan. We came up with the idea of converting an electric motor into a generator.

It was no easy job with our little technical knowledge. But the Party branch backed us up and we went ahead. We bought capacitors of several different sizes and, starting with the smallest one, connected them one after another to the motor. The needle on the testing instrument did not move. Commune members who were watching urged us to go on. Finally the needle moved. The current was passing through. The motor and other fittings cost no more than 600 yuan, saving 1,500 yuan for the brigade.

The generator enabled us to put in electric lighting and a loud-speaker system. We designed and built our own equipment for purifying honey, cutting medicinal pellets and tamping earth. We also set up a small foundry and made screws and other parts for our machines.

Relaxing after work.



SCIENCE FOR HIGH YIELDS

CHENG CHIH-HSING, Chingehiawan brigade, Chuangping commune, Yen-an county.

The first job the 20 of us did when we got to the village was turning up the soil on the hillside fields with picks. The slope was steep and the soil very hard. I asked a commune member how many hundred *jin* of wheat they got per *mu*. "How many hundred!" he exclaimed. "We're doing fine if we get one hundred." How far behind the thousand-*jin*-per-*mu* areas they were here! We newcomers wanted to experiment with getting high yields.

The botany we had studied in school turned out to be of little use in the face of reality. One of us had read something in a magazine about getting high yields of corn — cut the top of the main stalk when the corn shoot was three inches high and give it plenty of fertilizer to stimulate branching. Each of the many resulting branches would bear an ear of corn. This sounded like a good way to increase the yield, so my schoolmate planted a small plot near our house and experimented. Two weeks after he cut off the tops of the main stalks, not one crotch had appeared, probably because the weather was too cold. Some commune members said, "Even if your experiment works, it's not of much practical use. We plant corn on hundreds of *mu* and don't have the time to cut the stalks one by one." In a huff my schoolmate pulled up the corn and planted sunflowers instead.

When the Party secretary heard what we had been trying to do, he got us together and urged us to try further experiments. "We'll try and get you whatever you need," he said, and suggested that we work with several experienced farmers.

An old saying goes, "With field crops as with flowers, fertilizer's

the main thing." We read some books on fertilizer and after asking around, according to local conditions, composted grain stalks and weeds.

Next we built waterlocks and drainage ditches and diverted a mountain stream into the fields. We figured that the plant humus and silt dropped by the stream would gradually improve the hard soil in our field.

We also decided to breed better strains of kaoliang seed, a high-yield crop suitable for the local soil. The first winter when some of us went to visit our families in Peking, we consulted specialists at an agricultural science institute. They gave us some basic information and some good strains of seed. Back at the brigade we tried cross-breeding with a local variety, but things did not turn out as we had hoped. Only the male parental form sprouted. Disappointed, we were ready to give up.

The Party branch and many commune members encouraged us to go on with the experiment and helped us find out the reason for failure. We learned that we had not stored the seed well, that there

had been too much rain at planting time, making the subsoil too wet, and that the female seed had been planted too deep. We spent a week replanting the vacant spots. Scarcely had we finished when a hailstorm beat the fields as hard as a board. So we had to loosen the soil around each seed, one by one.

The shoots came up. But because of unseasonable weather the stamens did not grow well and we had to remedy this with artificial pollination. We young people and the commune women were given the job. Some of us felt this was very easy and breezed through the work, blithely knocking each kaoliang stalk as we walked down the rows. We left the commune members far behind and thought we were quite efficient. But when comparing notes at the end of the day, we found that the commune members had collected much more pollen than we had. They had held their plates against the wind when catching the pollen, something they had learned through experience. They also did much better when pollinating. That's how we finally learned that the working people actually knew much more about production than we did and that

A lesson in rice-transplanting.





Cheng Chih-hsing

we should be modest and learn from them.

We kept a record of the growth of the kaoliang, observing carefully in order to weed out inferior plants. The experiment was a success and the new strain is now used widely in our county.

GRADE SCHOOL TEACHER

SHEN FENG-YING, Shangshayuan production team, Hsienkou commune, Yichun county, member of the Yichun county Party committee.

Before the cultural revolution the children in our village had to go to another village to attend school. In March 1969 the mountain village where I went decided to set up a grade school and asked me to teach it.

I was nervous. Imagine me, a young student myself, teaching others. The very first day I ran into trouble. I was writing something on the blackboard when suddenly I heard cries behind me. I turned around and saw Chen Pao-sheng, nicknamed Little Mischief, pushing and hitting another boy. I flared up. "If you don't want to study, you can get out!" I shouted. I thought this would frighten him into behaving himself.



An experiment for high yields of corn.

"Who wants to study anyway!" he said, and picked up his school bag and ran out. I didn't know what to do. I started for the brigade headquarters to resign the job.

Many commune members came up and surrounded me. Chen Pao-sheng's mother said to me, "Do stay and teach my child. In the old

society not one person in our family could read or write."

I looked at her and the people around me and I thought of a day not long after we arrived. Coming back from a market town, a schoolmate and I lost our way among the tall peaks. We were frightened because we had been told there were wolves in the mountains. Then we

heard people calling our names and saw a group of villagers with torches. . . . I resolved to do all I could to build up this mountain village.

The day after the school episode I got up early and went around to the homes of the children telling them to come to school. I went to Chen Pao-sheng's home and brought him myself.

I tried to make the boy understand that he should try and study hard. I asked his mother to tell him what she had suffered as a maid-servant in the old society and how much she wanted him to have some schooling. The boy broke into tears. Later he became an attentive pupil in class.

I also looked after the children's well-being. When it rained, I went and fetched them myself. In the cold winter I kept a good fire going in the classroom stove. I cut their hair when it grew too long. I visited sick pupils. Enrolment grew from 19 to 50. All children of school age are now in school.

I try to follow the policy of making education serve proletarian politics and combining education and productive labor, so that the children will grow up to be laborers with socialist consciousness and culture.

We had one lesson entitled "The Old Doorkeeper", about an overthrown landlord who pretends to be mad in order to secretly carry out disruptive activities. After the lesson I took the children to a meeting where the villagers exposed the wife of a former landlord who stole public property and tried to disrupt production. This helped the children to be better able to tell the bad people from the good.

Some time later, a peddler came to our village selling firecrackers. Some of the children thought his prices were strangely high. When they surrounded and questioned him, he tried to give them some firecrackers. "Take them and have



Shen Feng-ying

some fun," he urged. Much as the children loved firecrackers, this made them even more suspicious. "Who wants your stinking firecrackers! Come to the commune headquarters with us!" The man started to run away. Some of the children pursued him while others ran to get the militia. The man was caught and turned out to be engaged in illegal profiteering.

For arithmetic I taught the children how to measure land. In the countryside the fields are of all shapes. I took the children and asked the peasants to demonstrate how they measured, which they did with a tape or a piece of rope or just by pacing. When I explained the lesson on measurement later, the children understood readily.

In order to cultivate a love for labor in the children, I helped them open a two-*mu* experimental plot. We did everything — plowing, sowing, applying fertilizer, weeding and harvesting.

From the children I have also learned some of the fine qualities of the working people. One day I saw some beautiful pear blossoms. I broke off several branches and put them in a bottle on my desk in the classroom. A child came up to me and said seriously, "Teacher, my father often tells me that the pear trees are grown by the com-

mune members and we must let the blossoms grow so that they would bear as many pears as possible. Why did you break the branches off the tree?"

I did not know what to say. Even the children knew it was hard work growing pear trees, while I only thought about having the blossoms to look at. The fact that the child said this to me showed he had proletarian feeling for me.

When I fell sick, the children came to see me and went with me to the clinic. Every time I went to the county town for meetings, some of the children would accompany me along the 10-kilometer mountain road both going and coming back.

The adults were very eager about studying Chairman Mao's writings, but found it difficult because they knew too few words. I opened a night class, arranging for the men and women to come on different nights so that at least one parent could be at home to look after the children.

BAREFOOT DOCTOR

SUN LI-CHE, Kuanchiachuang brigade, Kuanchuang commune, Yenchuan county.

When I graduated from the junior middle school attached to Tsinghua University in 1969 I never thought that one day I would be giving treatment to sick people. I have been able to do it because I have drawn close to the masses. In these three years I have come to realize deeply that the central problem for young intellectuals is class feeling towards the worker and peasant masses. If one develops this one will know what they want and need and from the heart find ways to serve them.

When the peasants invited us to their homes for our first Spring Festival in the village I met Aunt Kao. She had given birth to eight children, six of whom had died

from illness in the old society. "Wouldn't it be nice if each village had a doctor!" she said.

Medical care in the area had improved tremendously since liberation, especially after Chairman Mao called on medical workers to stress health and medical work in the rural areas. In addition to the hospital in the county town, a number of other hospitals serve groups of communes located near them. Each commune also has its own clinic. But the mountain villages are far apart and not every village had a doctor. Many commune members had to walk at least five kilometers to the commune clinic for treatment of some minor injury or illness. Sometimes because of the delay a minor illness would develop into a serious one.

I had learned something about medicine from my sister who is a doctor. Now, I thought, if some of us could learn to be barefoot doctors, we could help improve medical care in our village.

My schoolmates were all for it. "Fine! The peasants are so good to us — like we were their own children. This will give us a chance to be useful to them."

We put together all the medicine and drugs we had brought with us and started a small clinic. We bought a copy of *Handbook of Rural Health and Medicine* and spent our spare time studying it. When we heard that someone was sick, the whole group of us would take our handbook and medicine and go to see him. Some people laughed and said, "Whoever heard of five or six people visiting one patient, and with a book too!" The peasants responded warmly to our eagerness and always let us examine them.

We would ask the patient about his illness, then we would consult the handbook and discuss the case. Finally we would make a diagnosis and leave some medicine.

Our first patient was a peasant woman who had been ill in bed for several days. She seemed in serious condition and we asked her why she hadn't gone to the clinic. "There's so much work in the fields," she said, "I wish I could do the work of two."

Her deep sense of responsibility and spirit of self-sacrifice moved us. We examined her and found she was running a high temperature, her tongue appeared white and thick and she complained of nausea and a tightness in the abdomen. There were faint red spots on the body. The symptoms indicated typhus. We gave her some chloromycetin tablets and watched over her day and night. On the fourth day she was on the way to recovery. After this more commune members came to us for treatment.

When a touring P.L.A. medical team came to our village, it gave us a short training course on treating common diseases.

One night I was called to the bedside of an 11-month-old baby suffering from toxic indigestion. From vomiting and a running bowel he was seriously dehydrated and in a state of shock. Besides drugs to counter acid poison, he needed intravenous fluid therapy immediately, but we didn't have the equipment. I saw the look of expectation on the faces of the parents and decided to administer the fluid through injections by hand. After 48 hours the baby came out of shock and uttered a cry. Then I fed him a drug solution. Three days later he was out of danger.

As acupuncture needle treatment is a convenient method that costs practically nothing, we all practised hard to master it, experimenting on ourselves. Once a commune member suddenly had gastric spasms. He sweated and rolled about on the *kang* in pain. I inserted needles at several points on his hands and legs. The pain subsided in a short

time. A few minutes later he got up from the *kang* and said, "Amazing! And it didn't cost a cent!"

Through practice we also found ways to treat with acupuncture such illnesses as chronic bronchitis in elderly people and inflammations of the intestinal tract.

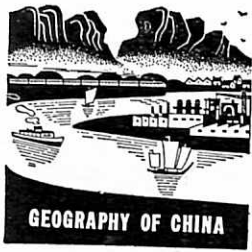
Once a woman was brought to us from another village. Examination showed that she suffered from acute intestinal obstruction. As none of us knew how to operate we sent her to the commune hospital 15 kilometers away, but she died on the way. Deeply distressed, I wondered if I could learn to do some surgery. At the training class I had watched the army doctors operate on peasants in simply-equipped rooms. Lack of teachers and facilities should not stop me from learning.

I practised sewing up incisions in my own clothes, quilts and bed-sheets. When I heard that some family was going to kill a chicken,

(Continued on p. 48)

Sun Li-che





Lakes



Chinghai Lake

THE vast Chinese landscape is dotted with lakes, not only in the warm flatlands of the east, but also in the cold high regions of the west. Those of fair size number around 370, of which 130 have an area exceeding 100 square kilometers. There are also many man-made lakes — reservoirs.

Lakes are most numerous along the middle and lower Yangtze River and on the Yunnan-Kweichow Plateau, but there are also quite a few on the Chinghai-Tibet

Plateau, in the Inner Mongolia-Sinkiang area and the northeast.

If a diagonal line were drawn across China from the southern section of the Greater Khingan Mountains through the Yinshan Mountains and the eastern section of the Chilian Mountains to the Kangkar Tesi Mountains, most of the salt lakes would fall northwest of it. These inland lakes do not have much water and have no outlets, but they are rich in chemical raw materials such as salt and

alkali. The lakes southeast of the diagonal line are mostly fresh-water ones with abundant water and outlets through rivers. They are a boon to water transport, irrigation, fertilizer collection and fish-breeding. Some are the sites of health and pleasure resorts.

Fresh-water Lakes

Best known among the fresh-water lakes along the middle and lower Yangtze are Poyang Lake, Tungting Lake, Hunghu Lake,

Taihu Lake, Chao Lake and Yangcheng Lake. Along the Yellow, Huai and Haiho rivers are Paiyangtien Lake, Weishan Lake and Hungtse Lake. On the Yunnan-Kweichow Plateau, Tienchih Lake and Erhai Lake. In the northeast most well known are Chingpo Lake, Hulun Lake and Hsingkai Lake which straddles the Sino-Soviet border. The Chinese expression "five lakes and four seas" — meaning all corners of the land — refers to lakes Poyang, Tungting, Hungtse, Taihu and Chao.

Poyang Lake is in Kiangsi province just south of the Yangtze. With an area of 4,000 square kilometers, it is China's biggest freshwater lake. In the low-water season the lake resembles a river with many branches because of its irreg-

ularly-indented shorelines. It receives the flow of the Kan, Fu, Hsin and Hsiu rivers. Its waters enter the Yangtze through only one channel. During the flood season, retarding and storing the waters of tributaries to the Yangtze, Poyang Lake helps keep down floods on the big river.

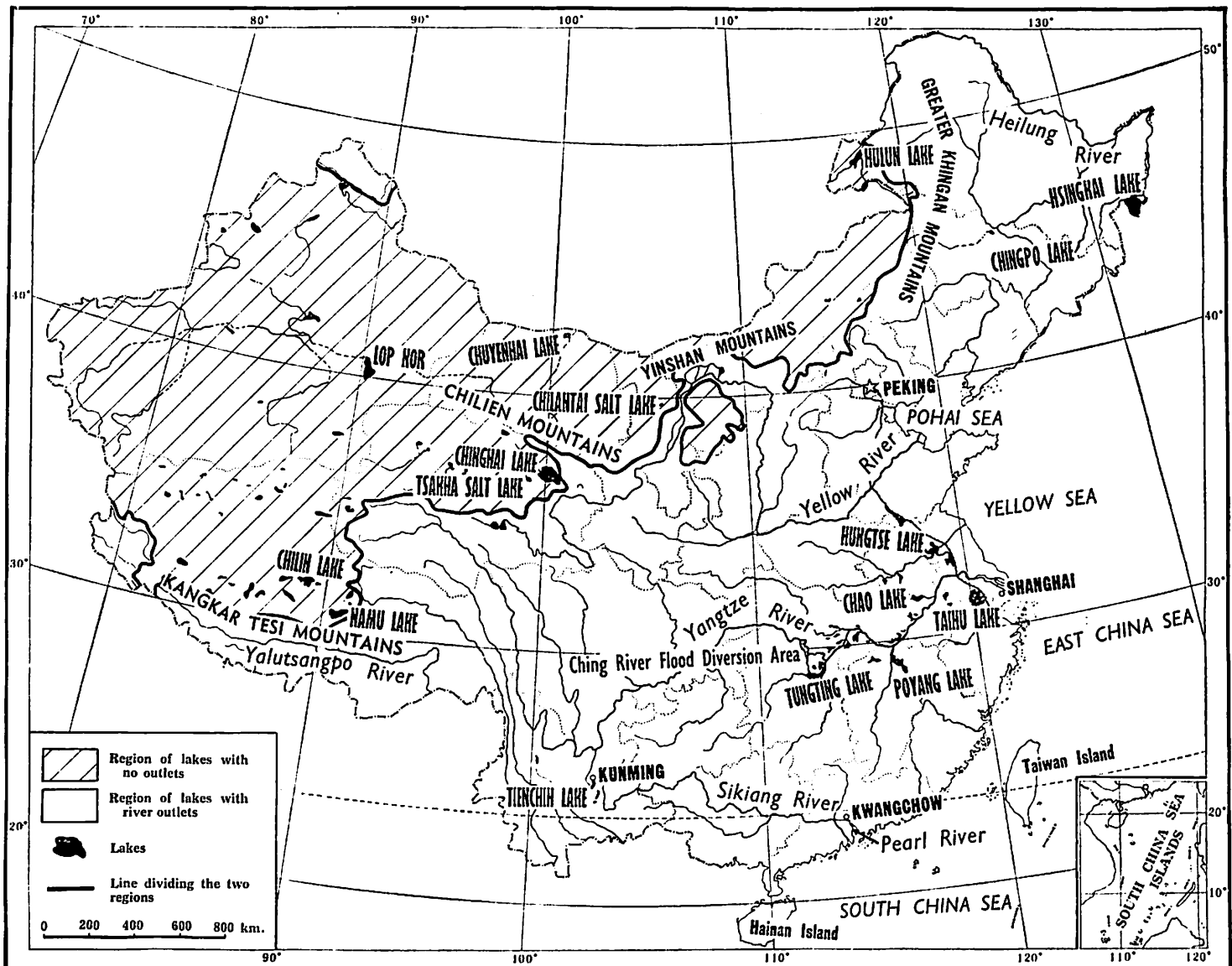
The climate in the Poyang Lake basin is warm and humid. On the fertile lake shore, rice, soybeans, jute and wheat grow luxuriantly, making it one of Kiangsi province's important farming areas. The lake is a rich source of aquatic products and is excellent for water transport.

Tungting Lake south of the Yangtze in northern Hunan province is next in size to Poyang with an area of more than 3,000 square kilometers. In the Spring and Au-

tumn and Warring States periods (770-221 B.C.) this whole area on the border between Hunan and Hupeh provinces was one big lake called the Yun Meng Tse, or Cloudy Dream Marsh. Continuous silting since that time has filled in most of the ancient lake, leaving only the present-day Tungting Lake — named after the hill on its northeast — and a number of smaller ones.

Of the three sections (the eastern, southern, western lakes), the eastern one is the largest. The waters of the Hsiang, Tzu, Yuan and Li rivers flow into the lake from the south and west, while the Yangtze enters from the north and goes out at the town of Chenglingchi on the northeast. The lake thus serves to regulate the waters of the five rivers. Unfortunately, continuous

DISTRIBUTION OF CHINA'S LAKES





Taihu Lake

silting and the wanton reclamation of scattered shoals by landlords and officials before liberation gradually cut up the lake, reduced its area and dislocated the water courses. Then, whenever the Yangtze and the four rivers rose, the water flooded over to cause untold misery for the people on the banks.

After liberation the Ching River flood diversion project* reduced pressure on Tungting Lake. Before they enter the Tungting, flooding waters of the Yangtze are diverted into a detention basin. Other anti-flood measures included reconstruction of lake dykes and water courses and the opening of storage areas.

The climate in the Tungting basin is temperate and rainfall is plentiful. The alluvial plain around the lake is good for rice and cotton. This lake too abounds in aquatic products and is good for water transport.

Hungtse Lake in the western part of Kiangsu province is China's third biggest fresh-water lake with an area of 2,500 square kilometers. It is irregularly shaped, like a swan in flight.

The average depth of Hungtse Lake is less than four meters. The biggest river flowing into it is the Huai. Most of the lake water emp-

ties into the Yangtze except for a small part that goes through the North Kiangsu Irrigation Canal into the Yellow Sea. The lake region grows rice and wheat and the lake itself teems with fish of some 40 kinds, including the common carp, black and silver carp and big-head. Other products are shrimps, clams, water chestnuts and lotus roots.

In ancient times this lake was a shallow bay which later became cut off from the sea when sediment gradually filled the outlet. As a lake it deteriorated steadily because the feudal rulers through the ages and the Kuomintang reactionaries before liberation paid little attention to water conservation. Silting raised the bed of the Hungtse above the surrounding ground so that the lake spilled over in flood and dried up in drought.

In 1950 Chairman Mao called on the people of the region to harness the Huai. As part of the project the dyke on the lake's eastern shore was strengthened. Construction of the North Kiangsu Irrigation Canal and boat and water locks greatly increased the lake's volume of water, converting it into an asset for irrigation and transport.

Taihu Lake in southern Kiangsu province has an area of 2,200 square kilometers. The lake is shaped like a half moon except for the northeastern part where the

shore juts out in several points. In the eastern section there are two peninsulas and some 90 islets, most of them covered with huge jagged rocks. The biggest islets are the East and West Tungting Hills and Machi Hill, located off the north-west shore and covered with bayberries.

The Taihu was originally part of a shallow sea. Encroachment by sand bars in the Yangtze and along the coast enclosed it to form the present-day lake with water emptying into the Yangtze through many outlets.

For a thousand years water conservation in the Taihu region received relatively more attention than elsewhere because the feudal rulers wanted to ensure their income from rents and tribute rice from the area. But from the time of the Opium War in 1840 to the liberation in 1949, conditions deteriorated. Landlords on the shores erected their own dykes to reclaim land, thus reducing the size of the lake. The inflowing water did not drain away freely, and sea tides often surged in so that the lake flooded over about every ten years.

After liberation many reservoirs were built in the hill regions to reduce flooding. Drainage channels and harbors were dredged and locks were built to hold back the tide. Within the basin the people strengthened dykes and dams and built electric irrigation and drainage stations.

A warm climate, plenty of rain, fertile soil and clearly-defined seasons make the Taihu basin an important farming area producing rice, wheat and rape-seed. A wealth of mulberry trees makes for a flourishing sericulture. The region's famous scenic spots are big attractions for tourists. Beautiful Soochow lies to the lake's east and Wusih to the north, with metropolitan Shanghai only 80 kilometers away.

Tienchih Lake lies just south of Kunming, capital of Yunnan province. Formed by a fault in the earth's crust, it has an area of 330 square kilometers and depths vary-

*See the October 1970 issue of *China Reconstructs*.

ing from five to eight meters. The surface is 1,800 meters above sea level. The lake is shaped like a crescent, with long narrow flats on both sides. Hilly terrain runs down close to the western shore, making it very steep. More than 20 rivers discharge their water into the lake whose outlet is the Putu River on the north. Sharp head drops provide rich potential for hydroelectric power.

On the lake shores rice grows luxuriantly in the year-round springlike climate. The lake is known for its brisk water transport and the carp and other fish bred there.

Chingpo Lake, or Mirror Lake, is situated on upper Mutan River in Heilungkiang province. It has an area of 90 square kilometers and many good bays. The uneven lake bed rises above the water in many places in small rocky islets. The water rushes through outlets on the north of the lake, in twin waterfalls, each about 20 meters high and 40 meters wide.* A hydropower station has been built nearby.

Salt Lakes

The principal salt lakes are Chinghai Lake (Koko Nor), Charhan Lake, Namu Lake (Nam Tso)

and Chilin Lake (Ziling Tso) all located on the Chinghai-Tibet Plateau, Lop Nor in Sinkiang and the Chuyenhai Lake in Inner Mongolia.

Chinghai Lake (Blue Sea), is situated 80 kilometers west of Sining, capital of Chinghai province. With an area of 4,400 square kilometers and a depth of 38 meters at the deepest spot, it is China's biggest salt lake. It was formed when a fault occurred about a million years ago. At that time it was the source of the Huang River, a tributary of the Yellow River. As the climate in the region turned dry and the terrain around the lake rose, its outlets became blocked.

Mountains rise to the north, east and south of the lake. More than 50 rivers flow into it, the biggest being the 200-kilometer-long Puha River. The lake shore is of sand and pebbles, except on the south which is a steep cliff washed clean by centuries of pounding waves. Along the bottom of the lake a mountain ridge runs from east to west. Of the four peaks that rise above the surface as islets, the biggest is Haihsin Hill.

The lake abounds in scaleless *huang* fish and pike. Livestock and crop farms set up on the lush lake shores promise a future of flourishing agriculture.

Lop Nor on the eastern edge of the Tarim basin in Sinkiang covers 2,000 square kilometers. Its area and shape are continually changing. Three times in the past two thousand years the lower Tarim River has shifted its course, and with it the lake shifted its site back and forth between 39°-40°N. and 40°-41°N. latitude.

As Lop Nor is created by the flooding of a river, the volume of water fluctuates and its shoreline shifts frequently in the salt marshes. Around it are numerous sand dunes and white salt crusts. Though the lake does not have prospects for water transport or service to agriculture, it yields useful saline and alkaline compounds for chemical use.

*Pictured on the back of the March 1972 issue of *China Reconstructs*.

Tungting Lake



Heavenly Lake in Sinkiang



(Continued from p. 43)

I would hurry over and cut it open to practise dissecting. Once a dog appeared to have some gastric ailment, so we opened its belly and removed an infected section of the intestine. It got well.

To give the other barefoot doctors more practice, I asked them to remove a black mole on my back. They hesitated, but I said, "Go ahead, you can do it." They gave me local anesthesia but made the incision the wrong shape so that they had a difficult time sewing it up. But I was happy that they had a chance to operate and the experience gave us all more confidence.

When I went to visit my family in Peking, my sister arranged for

me to have interne practice in the surgical department of a big hospital. I had the opportunity to do some simple operations.

In the spring of 1971 a peasant woman came to us suffering from a perforating peptic ulcer, and in need of immediate surgery. I had only watched at two such operations at the hospital, but the woman's husband was afraid that something might happen on the long journey to the commune hospital. He insisted that I operate on her right there.

Could I do it? Death has occurred even in well-equipped hospitals in such cases. We barefoot doctors discussed the matter, worked out several operating plans, trying to be prepared for every prob-

lem that might come up. The operation took two hours and everything went well. When we finished, the commune members waiting outside the house broke into cheers.

Since then we have performed more than 30 major operations without a single case of infection. We also learned to give acupuncture anesthesia and made an electric needling instrument for it.

In three years in the countryside we have learned more than we did in ten years in school. I am determined to move ahead along the course pointed out by Chairman Mao and dedicate my youth to building socialism in the countryside, and I'm sure all my comrades feel the same way.



Now, a Happier Time

As one brought up in a Chinese village it is very good indeed to see so many who might be one of those I was with so many years, now in a happier time. It is good to see so much industry that will lighten the load of the farmer and of the machine worker also.

I. P.

Philadelphia, U.S.A.

Wants Art Works

I am most interested in medical developments resulting from the cultural revolution.

Also, you must continue including works of Chinese art, since it constitutes one of the pillars of the culture of a people and the source of their history.

O.L.O

Medellin, Colombia

Peasants' Efforts

I am much impressed by the article "Sugarcane Goes Up the Hills" appearing in your esteemed journal of August 1971.

The approach to the problem, namely the debate and discussion of the subject, is fine. The determination to withstand discouragement is to be commended.

The description of the details, including the painful effort of carrying water up the hills, killing aphides by insecticides prepared by the peasants from local herbs, intercropping for shade and the habit of

learning from the peasant cultivators are very inspiring.

K.V.A.

Vellankulam, Ceylon

Revolutionary Women

I enjoy all the articles but especially those in the No. 5 issue, 1971. Take the attitude of team leader Tien Li-jung, a woman aiming high, overcoming any difficulty in the frozen wilderness in order to be a revolutionary bridge-builder. She has followed the thought of Chairman Mao who says, "A good comrade is one who is more eager to go where the difficulties are greater."

O.A.

Oshogbo, Nigeria

From the article, "North Vietnamese Fighting Women" (May 1971) one can learn that the building of a strong and united nation does not depend on men alone but on everybody. The picture on page 33 of the same issue also proves that what a man can do a woman can do.

T.O.A.

Ibadan, Nigeria

Conquering the Sand

One of the articles which impressed me the most was the one about the superhuman efforts of the people's commune in Wuwei county, Kansu province. These were peasants sweating from hard work. They accomplished incredible feats. Day and night the peasants boiled in hot desolate country never giving up, answering every challenge mother nature could offer.

C.T.

Wembley, Australia

New Generation

Imagine how overjoyed we were to read your report of the kindergarten of the Peking No. 3 Cotton Mill in the November 1971 issue. We know that such facilities are plentiful in socialist China and that all are run, as is this one, with the greatest care for the health and happiness of the children and the greatest concern for the children's mental, physical and ideological development.

M.K.B.

Hemel Hempstead, U.K.

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