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Front Cover
Harvesting Sugarcane by peasant painter Chen Dehua (See story p. 64)

Out of the Ruins
Tangshan, one of China's most important industrial cities, was leveled in the great 1976 earthquake. A five-part report on its revival, by a team of reporters who spent two weeks there.

Present Policies for Tibet
A responsible cadre of the State Nationalities Affairs Commission explains the recent changes in policy for Tibet, where past mistakes had produced economic chaos and resentment among the people.

Innovative Economist Xue Muqiao
His new best-selling book analyzes unsolved problems of China's socialist economy and offers guidelines for the future.

Frank Coe, Devoted Friend of China
Ma Haide (Dr. George Hatem) reviews the life of the late American economist Frank Coe, who worked in China for 22 years after being driven out of high-level international economic positions by the McCarthy witchhunt.

Jinshan Peasant Paintings
Peasants in Jinshan county near Shanghai have in the past decade created a remarkable, indigenous style of painting based on local decorative arts. Their leader gives us a guided tour.
After the World's Worst Earthquake

TANGSHAN RISES ANEW

The first of five on-the-spot reports in this issue prepared by "China Reconstructs" staff.

If once the world's idea of a devastating urban earthquake was Lisbon in 1755, San Francisco in 1906, or Tokyo in 1923, the symbol in our time is Tangshan, July 28, 1976. In 23 seconds, a great industrial city of 1.1 million persons was wiped off the face of the earth, and those observers abroad who did not liken Tangshan to Pompeii said it would be twenty years or more before the city could be restored.

But today Tangshan is fully functioning, and rebuilding should be virtually completed in another two years. Because Tangshan's production of coking coal and electric power was so vital to the rest of China's economy, reconstruction in those areas took precedence over housing. Since 1978, however, the emphasis has shifted, and more than 100,000 workers sent by other cities in Hebei province are now putting up apartments at the rate of 140 per day, while the city's permanent residents operate the mines, steel mills, power plants, and building materials industries on which north China depends.

Tangshan's rise as an industrial center dates from 1878, when the first coalshaft was sunk in a previously rural area. It grew slowly during the semi-colonial, semi-feudal period, and very rapidly after liberation in 1949. The great quake destroyed the work of a century at one fell swoop. Of the pitheads, bridges, factories, administrative buildings, hospitals, schools, houses and apartment buildings, only a few remained standing, and most of those could not be used or lived in.

The quake, registering 7.2 on the Richter scale, struck at 3 a.m. when most people were asleep. For the miners, it was the poignant opposite of the usual shape of a pit disaster, with women waiting at the hoist for news of their men.
Within one and half years, the great Kailuan mines, China's major producers of coking coal and therefore vital to her entire metallurgical industry, were supplying more fuel than before. Tangshan's power-generating capacity, a major element in the entire north China grid which supplies the capital, Beijing (population eight million), the port and industrial complex of Tianjin (population six million) and many other important centers all the way to Inner Mongolia, had also increased — as had the output of steel and cement. Even Tangshan's potteries, producing everything from industrial and builders' ceramics to household crockery and fine porcelain, had revived and were thriving.

Help from Outside

The rescue, clearing and major rebuilding were done with help from outside the area, first by the PLA and medical workers and then by construction forces mobilized countrywide under a general plan mounted in the first three months and nationally financed. But the restored production is being carried on by Tangshan's own sturdy and confident people. "Socialism saved Tangshan," is the way they commonly sum up both aspects. It is a sober conclusion from what has been accomplished since 1976. And from what, through bitter memory, they know would have been inconceivable in China's old society. Some 1.3 billion yuan has been spent so far on Tangshan's reconstruction, most of it coming from the city's own production, which now amounts to about 500 million yuan annually. (In China, large-scale state enterprises turn in their profits to the national treasury, but those in Tangshan have been turned back there to finance the rebuilding.)

Today, 1.2 million people live in Tangshan. Few are newcomers from other regions. Almost all are survivors in the city, or recruits from its traditional sources of labor in surrounding villages (also in the quake area), or people born and bred in Tangshan who insisted on returning from many other parts of the country. And virtually no one abandoned the area.

The people have rebuilt their lives along with their industries. This is exemplified by the large number of new families formed through marriages between men and women who had lost their original partners and, in many cases, some or all of their children.

New streets and modern apartment houses are mushrooming amid a forest of power cranes whose swinging arms, lifting prefabricated sections into place, are now the most striking feature of the skyline. The 100,000 construction workers (a third of them women) from other cities in Hebei province, in which Tangshan is located, are using more than 2,000 major pieces of equipment. When their job is done they will go back
home. Tangshan's own working people, concentrating on production, are moving into these new dwellings as they are built. Thus far, 40,000 families have been rehoused, and by 1982 everyone should be in a new home. The current rate of progress, averaging 140 new housing units each day, shows the schedule is realistic.

A City Reshaped

Tangshan is not simply being rebuilt. It is emerging as one of China's most rationally laid-out cities—the opposite of its predecessor which, in the old colonial pattern of industrial growth, was simply an agglomeration of crowded, ramshackle slums around the mine and factories, with a few outer islets of luxury—tree-shaded homes, clubs, and other facilities—for senior company men and administrative and technical staff (most of whom, before the liberation, were foreign). Also not to be repeated is the maze of rail lines running to the industries and dangerously and noisily intersecting the streets right in the heart of the city, and the irrational placement of plants and lack of smoke control that made Tangshan one of the worst-polluted places in China, with a choking pall of black and dirty-yellow fumes hanging in the sky, and the river discolored and devoid of fish.

As called for by Hua Guofeng, who came to Tangshan again in 1978, the new city is being erected with "new material, new techniques, new structure, and new designs." More than a hundred experts from seven major designing institutions of the country had earlier worked out not only the general plan but detailed ones for streets (with bicycle paths along

Former site of the casting workshop of the Tangshan Rolling Stock Factory.

Zhang Shuicheng
Girl operator of one of the hundreds of cranes building modern housing in quake-stricken Tangshan.
Chinaware, as well as industrial ceramics are an important product here.

Wang Gengshi, engineer of a construction force sent by Hebei province, designs new residential housing.

Liu Laichen, earthquake orphan, has joined the porcelain factory where his mother once worked.
Underground, Tangshan miners produce more coal with new equipment.
City stadium still awaits reconstruction; student athletes train outside.

Zheng Rongxiang, vice head of Tangshan's Douhe Power Plant and a hero in the earthquake and the reconstruction. Families are rebuilt too. Zheng and his wife, both of whom lost their original spouses and children in the quake, with their small daughter.
all the main ones and some reserved for bikes only—a pilot experiment in China), water, electricity, piped gas and “lungs” of greenery. For the city as a whole, there will be two hectares of park for every 40,000 inhabitants and, altogether, 6.8 square meters of green for every man, woman and child—well above the present national goal.

Tangshan’s new buildings must meet strict standards of quake-resistance. Ordinary structures are required to have frames that can withstand shocks measuring eight degrees on the Richter scale, and public buildings up to nine degrees. Apartment houses are generally of five stories with kitchen, toilet, gas outlets, built-in cupboards, balconies and other amenities in each family unit. The exteriors are pleasing. Pre-earthquake structures of several stories in Tangshan were usually of brick with concrete slabs dividing the floors. These collapsed like folding accordions as the walls fell outward. Hence, the new ones will have reinforced concrete frames with light, non-structural walls. Some designs absorb lessons from other seismically active countries, such as Yugoslavia and Japan.

Geological fault lines are to be kept free of all buildings, with only open spaces above them. One former built-up area south of the railway will not be rebuilt at all, as under it lie rich seams of coal to be mined; its new surface will be parkland and vegetable gardens. The reborn city is far less concentrated than the old. Industrial, residential, and administrative-cultural centers are separated. Neighborhoods are arranged in satellite patterns with their own shops, schools, nurseries, creches and medical and recreational facilities.

New industries are coming into Tangshan, including textile, electronics and synthetic rubber—some with the most modern equipment, domestic or imported. But all chemical and other plants producing pollution are being relocated downwind, with various control devices mandatory.

—Ai Pei

**Tangshan**

**A Power Plant Restored, A Family Reborn**

**T**he great earthquake engendered many staggering statistics, and one of the most appalling is that 7,000 husbands lost their wives and 8,000 wives lost their husbands. Now, with the city re-emerging from its ruins, the wrecked lives are also being repaired. Zheng Rongxiang, 43, and Chen Xiujuan, 42, both workers in the Douhe Power Plant, are part of the humanity the statistics stand for.

The 750,000-kilowatt Douhe plant, 16 miles north of Tangshan proper, is one of China’s biggest coal-fired units. It’s completely computerized. The two 180-meter smokestacks and the 40-meter-high workshop are flanked by lush green gardens planted after the quake with pines and Japanese cherry trees that are watered by automatic sprinklers. No reminder is left of the dreadful dawn of July 28, 1976.

**Puts Revolution First**

Zheng Rongxiang, a shift supervisor, was in the control room that morning with nine other workers. Suddenly the earth started to rumble and heave, rocking back and forth from south to north. The lights went out. Realizing this was an earthquake of exceptional force, Zheng staggered toward the switch controlling the battery-powered emergency lights, dodging chunks of cement that fell from the ceiling. He couldn’t get through to the plant’s leaders or to Beijing central control by telephone, but a decision had to be made and he ordered the switches on all the generators thrown. Then he ordered the building evacuated.

Zheng, however, didn’t leave. Using a flashlight, he searched the offices for wounded comrades. In one room he found a man and a woman trapped under a cement slab. Unable to lift it himself, he ran out for help. His colleagues managed to free the woman but the young man died before he could be extricated. Zheng gathered the shift leaders and determined that 17 of the 50 night-shift workers could not be accounted for. The tremors were continuing at one- to two-minute intervals. With each shock, parts of the weakened workshop and living quarters collapsed. Zheng checked every work position but could find no one. (Later, the 17 workers were discovered crushed on a staircase that had been squeezed into fantastic pleats.)

It flashed through Zheng’s mind that the hydrogen in the plant’s cooling system could explode if ignited, blowing up what remained of the plant and its equipment. He rushed into the rocking building for a third time and opened the release valve.

**More Victims Found**

Soon the surviving plant leaders arrived. Zheng and the night-shift workers were assigned to rescue people in the residential area. The four apartment buildings for plant personnel had collapsed into a heap of debris about ten feet high. They had been four-story buildings. Cries and groans
could be heard from under the rubble. It was 3 p.m. before any of the survivors could be gotten out.

By nightfall, a hard rain and another strong tremor settled the debris into an even more compact mass, and the sounds of agony ceased. Next morning, Zheng returned to the site, poking about in the ruins on the off-chance that someone might have survived. The sound of a radio playing startled him. He called for a crane to lift away the cement blocks and by afternoon one more man had been rescued.

Many of the rescue workers left for home on the first bus back to the city. But Zheng stayed on site for two days and nights, even though his family was in Tangshan. He says that what was in his mind was that he was a Communist Party member and a leader in the power plant, and his first responsibility was to the country and the Party; many of his co-workers were still buried in the rubble, and he couldn’t abandon them.

When Zheng did at last go home, he was stunned to find that his mother and father, his wife and three children, his younger brother and two nieces were all dead.

A New Beginning

Returning to the plant, Zheng plunged into the most dangerous tasks of recovery and repair: He was a guide for the army relief troops, crawling in and out of collapsed buildings; he helped remove and identify corpses that had decomposed quickly in the summer heat. Most of the plant leaders were either dead or badly hurt, and Zheng volunteered to direct the construction of temporary dwellings. He himself slept under a blanket propped up on poles.

But Zheng’s grief could not be dispelled by hard work. At night, alone, he thought often of his wife and children. His wife had been a junior leader in a ceramics factory. She was intelligent, capable, straightforward; his was a more relaxed personality, but they had gotten along well together. And now she was gone. One night he awoke weeping from a dream in which she had called to him, "Rongxiang, come home quickly!"

His wife’s family helped a great deal. Her father visited once a month from his home several kilometers out in the county. Her three sisters urged Zheng to find a new wife, someone like himself who had lost her entire family. Eventually, Zheng agreed that this was good advice and allowed his friends to do some matchmaking. But he laid down some conditions: The woman, he said, should not be the widow of a high-ranking government official; she should not be too young, or too old, or too frivolous. “What I need is a plain, honest woman who will not stand in the way of the work,” he told them.

Chen Xiujuan fit the bill exactly. A lathe operator in a mining machinery factory, she had been on the night shift when the quake hit. Her lathe propped up the fallen ceiling and saved her life. But her mother, husband, and 11-year-old son had perished in their home. Chen Xiujuan and Zheng Rongxiang were married in January 1977, four months after they were introduced.

While nearly all the widows and widowers of Tangshan remarried, many did not choose as wisely as Zheng Rongxiang and Chen Xiujuan. About 30 percent of the remarriages have ended in divorce — sometimes because the couples had too little in common, sometimes because their children couldn’t get along.

Plunges into Work

The plant began generating power again a year after the quake. Zheng was appointed chief of operations, replacing a man who had been killed. He is a tireless troubleshooter, almost daredevil in his disregard for his own comfort and safety. Once he crawled into a coal crusher to remove iron scrap that had fouled the machine; the heat inside buckled his plastic safety helmet and hardened the rubber soles of his shoes. On another occasion, a heavy rain flooded the pump house; Zheng jumped into the greasy, waist-high water, drained it, and got the pumps working again.

The same rainstorm caused problems at home, too. When Zheng got there from the pumphouse emergency, he found Chen Xiujuan in despair. Their shed had leaked badly and all the bedding recently made for their wedding had been thoroughly soaked. Zheng dragged the dripping quilts outside and hung them on wires, but the wet material was too heavy and the lines snapped, thus compounding the problem with mud. The couple stayed home the next day washing and re-sewing the quilts.

In April 1978, at the same time two new generators were installed at Douhe, six earthquake-proof apartment buildings were completed and Zheng and his wife moved into one of them. She soon became pregnant, and since Chinese women stay confined for about a month after giving birth, Zheng found himself responsible for running a household that now included a baby girl, where once he had had his parents, his first wife, and his older children to take care of things at home.

Early in 1980, Zheng was cited as a national model worker and was elected to the Fifth National Political Consultative Conference. He must now travel to Beijing frequently for meetings, but each time he brings back something special for his daughter, now two years old. The little girl gets all the affection her mother and father once showered on four children. Before the quake, Zheng Rongxiang and Chen Xiujuan supported large families; now between them they have 170 yuan a month for their family of three, and can afford things like an imported television set so their daughter can start learning at an early age. They have given away or sold their old furniture and other household items, which reminded them so painfully of...
their previous lives and have
equipped their home anew.

Last year, Chen Xiujuan was
transferred to Douhe Power Plant
as a warehouse keeper. As a
newcomer she's been learning
from veterans on the job about
the many kinds of spare machine
parts and equipment in stock and
she visits workshops to familiarize
herself with their use. One of the
marks the earthquake left on her
is impaired memory, but she tries
to compensate by spending more
time on the job.

Douhe will soon have four more
200,000-kilowatt generators, bring-
ing its total capacity to 1.55
megawatts — another statistic,
along with the 19 new five-story
apartment buildings that have re-
cently been added to the plant's
housing supply. They indicate
that the plant and Tangshan city
are recovering well from the
disaster.

And Zheng Rongxiang and Chen
Xiujuan's rebuilt family is doing
just fine.

— Liu Hongfa

Cadres Take the Lead

When the building company
accepted the Tangshan assignment
manager Zhu Linsheng put off
scheduled surgery and immediate-
ly set out with a 20-man vanguard
of cadres, technicians, workers and
a cook. On November 4, 1978,
they arrived at the site carrying
their own provisions — noodles
and salted vegetables — and
began pitching tents and preparing
for work. There was neither
electricity nor water on the empty
suburban site, and no roads. They
had to carry water in buckets slung
on shoulder-poles from a ditch
some three hundred meters away.
Building materials had to be
trundled by handcarts across muddy
fields. That was how they put
up the first barracks and work-

Well-known architects and designers from all over China study a scale model of
the projected new Tangshan.

Tangshan

Builders of the New City

From up above one sees a
belt,
Of bricks and stones on
tar-soaked felt.

So goes a popular rhyme that
describes the simple wooden
shacks, roofed with strips of
tarred felt weighted down by
bricks and stones, that were
rapidly built to house the survi-
riors of the Tangshan earthquake
as they got the wheels turning
again in the devastated city. These
structures still dominate the scene
as one comes from the railway
station, but are now giving way to
new apartment houses. Tangshan,
in fact, is being rebuilt, or more
precisely, totally renewed accord-
ing to a master plan.

The planning on paper began
very early. Immediately after the
quake, the national government
mobilized more than a hundred
architects from seven construction
design institutes in different parts
of China. Then, in 1978, after two
years in which the main effort was
on the rebuilding of the city's
mines and other industries, 35 con-
struction units — nicknamed the
"hundred-thousand-man army" —
were brought in from ten cities
and regions within Hebei province,
where Tangshan is located. Their
task: to build new homes for the
people of Tangshan.

I spent some time with one of
the construction units which had
come with all its members and
equipment from the city of
Handan in southern Hebei. It
was assigned to put up six of the
135 new residential areas in Tang-
shan. This meant building 150
apartment buildings with a total
floor space of 400,000 sq. meters,
to accommodate 8,000 families.
Last year, as a result of their
work, 1,700 families moved into
new homes. Their plan this year
is to build up to twice as many
units.
shops — 54 in all — for the construction workers arriving after them. They also set up an open-air factory capable of producing 40,000 cubic meters of pre-fab sections a year. With no electricity at first, they mixed concrete for the foundations by hand. Before the cranes arrived, they improvised manual hoists. Soon several auxiliary workshops were operating.

Manager Zhu, now in his fifties, is a former mason who knows the work from the ground up. He is always on the construction site and apart from production management meetings once every ten days he is rarely seen in his office. When things go smoothly one can see him joking and laughing with the workers, but if snags turn up in the work his seriousness and determination show through. This happened last autumn when building work was held up by slow progress in plastering the interior walls. A couple of days later he returned with a trowel more than a foot wide which raised efficiency three fold and improved the quality of the work. The bottle-neck solved, he smiled again. So did everyone else.

**Thoroughgoing Work Style**

By October 1979, eight apartment buildings stood along Tangshan's Airport Road.

*After moving into a new home.*

Manager Zhu Linsheng.

Team leader Ji Liangchun.

*Photos by Zhang Shuicheng*

Their attractive coloring — eggshell white walls, cream window frames and balcony railings, light blue balcony panels, and dark green metal door frames — made them stand out. Quality-control people from 18 different organizations rated all the buildings excellent at the first examination. But Zhu was apologetic. Why? In a preliminary check-up two days earlier, people from the heating company had found that a half-kilometer stretch of underground hot-water conduit was about 7 cm. lower than specified. This did not affect use, but there was a possibility that the bottom of the conduit would be rusted if water collected in the trench. Zhu decided that the job must be done over again the same night.

After dinner, a blaze of lights lit up the worksite as Zhu and seventy other office and general service workers shoveled out the earth over the trench. Next they broke the layer of water-resistant mortar and lifted off more than 600 concrete slabs. By the time the conduit had been raised to the required height, all were streaming with sweat and the work had gone on for some 20 hours without a break. But they finished on schedule.

**For the Tangshan People**

The Handan builders are strict on quality. Ji Liangchun, a man of long experience, has 23 painters under him, most of them apprentices. But there was a lot of work and not much time, so meeting both the deadline and the quality standards was a problem. Ji drilled his crew every day on the technical requirements and likely problems. Checks were made after each shift and work not up to standard was redone immediately. The crew paid attention not only to the smoothness of the paint applied over large surfaces but also to the quality of the work in nooks and crannies. Wherever their broad brushes would not go they used artists' brushes, and sometimes even their fingers. Once Ji found a patch of yellow on a newly whitewashed wall. Laying hold of Zhang Jiqin, the chief of the team responsible, he scraped the plaster off the yellow spot in front of everybody to reveal the end of a reinforcing steel bar. "How many times have I told you," he said severely, "that when you come up against something like this when you're plastering the wall, you should first paint it over with some white paint. Otherwise it will get rusty, and is bound to show up yellow." He covered the iron bar with white paint, while the team chief and workers, now convinced, nodded assent. "We're building for the people of Tangshan," he said. "And we give them nothing less than the best!"

— Zeng Shuzhi

CHINA RECONSTRUCTS
1,700 Paraplegics

As a result of the quake Tangshan has more than 1,700 paraplegics with severed or badly torn spinal cords which have paralyzed them to various degrees. They came back to Tangshan in June this year from hospitals in other cities to which they had been evacuated immediately after the disaster. Among them 859 are mine, factory, or office workers, 399 are workers' dependents, 42 are other townsmen, and 427 are members of nearby rural communes. The Tangshan Municipal People's Government is looking after all of them under a system of treatment and care at several levels. All their medical fees are borne by the state. Provisions vary with the circumstances.

Industrial and office workers (or their dependents) are under the care of their work units—of which the Kailuan mines are the largest. While many are in hospitals or clinics, some have returned to their homes. In such cases, besides the pensions received by the disabled workers under the labor protection code, family members may be given time off with no reduction in pay to look after them as necessary.

Commune members and townspeople among the victims mainly go home (though some communes and neighborhoods have set up wards); for them, home hospital beds are provided, with medical visits arranged.

Finally, people with no place of employment, or a unit too small to provide facilities, or no surviving families, are accommodated indefinitely in medical institutions, or have attendants assigned to them at public expense.

We visited the 40-bed paraplegic ward of a hospital attached to one of the Kailuan mines, at Tangjiazhuang some 25 kilometers from the city center. It is a new, integrated medical institution built after the quake. The ward is housed in single-story buildings for ease of access. Walking through the wide corridor of one ward we saw two large metal frames on which paraplegics exercise and a row of hand-propelled wheelchairs. Four patients sat in such chairs under an awning that opened to a courtyard, playing cards. Others were practicing walking on crutches. One was leaning against a wall and soaking up the sunshine. This ward has 26 inpatients, 6 of them women. Looking after them are three doctors, 16 nurses and an orderly.

Dr. Zheng, a graduate of the Tangshan Mines Medical Institute who specializes in paraplegics, told us that, being paralyzed and incontinent, they are prone to bed sores, urinary infections and muscular degeneration. There are training and care routines to lessen all these difficulties. Based on clinical experience, the hospital staff has devised a regimen that includes pressing on the bladder at specified times, tapping on the sacrum, deep diaphragm breathing to bring on urination, and mild laxatives and abdominal massage to get the bowels to evacuate at regular hours. Within two months of such training, nine-tenths of the patients had achieved the desired control.

For bed sores, pads and cushions of different shapes have been designed for patients lying in different positions, along with preventive medication using both Chinese and western preparations.

To prevent muscle atrophy and stiffening of the joints Dr. Zheng has worked out six sets of exercises to be done in bed. These also help the patients train themselves to sit, stand and move about. Now, 85 percent of the patients are able to get out of bed and walk on crutches, their legs stiffened with braces, some as much as 400 meters at a stretch.

In the women's ward, the girls in two beds were sitting up and doing arm exercises. Wang Cuihua is a 24-year-old middle school graduate, the daughter of a miner. She said she was dug out of the rubble of her home after the...
which was approved by the mine leadership, and put into effect with good results. Now Sun is writing a book *How to Discern and Verify the Quality of Timber Used for Mine Pitprops in North China*.

Another patient there, Song Hongliang, is a young miner. Having lost both his wife and his mother in the quake, he was deeply depressed when brought back to Tangshan and just lay brooding all day in bed. Seeing no interest or hope in life he stopped eating several times, wanting to die. The doctors and nurses persuaded him to eat. "The hospital is your home and we are your family," they said. Patiently they helped him learn to turn over in bed, then to sit up and finally to stand. Within three months he could get around on crutches. Last summer, in the ward's paraplegic sports contest, Song was one of the best in doing push-ups, lifting dumbbells, and walking on crutches. After this he became a different person, cheerful and talkative. His old hobby was repairing radios, and he acquired new skills. Now when hospital appliances—blood pressure gauges, phlegm aspirators and so on—are out of order, he fixes them.

We left the ward lighter at heart than when we had come. Although paralyzed below their spinal injuries, these people have strong arms and shoulders, and strong and resilient minds. The gates of life are once more open to them and they know the common future is also theirs.

The physical rehabilitation of these patients, within their possibilities, has been done well. Still to come is their training or retraining for appropriate work in society.

Is it possible to restore nerve function below a severance of the spinal cord? The hospital is doing research with laboratory animals on repair and reconnection of the spinal cord—a quest that is going on all over the world—and the staff hope to make some contribution.

— S.Z.
Early in 1978, when many people who had lost husbands or wives in it were marrying and setting up new households, a friend introduced Sun Xiuqing to Liu Zhenguo, an office worker two years her senior employed at another office under the Ceramics Company. Sun Xiuqing soon noticed that he not only sympathized with her, but tried to turn her attention to the future and take her mind off things irrevocably past and gone. What pleased her especially was his affection for her child.

Liu, too, had been married before the quake, but for lack of common understanding and interests the match had soon ended in divorce. For this reason he, too, was careful about choosing a new partner. He realized that Sun Xiuqing's personal tragedy might leave an indelible psychological scar, but also noticed her earnest and responsible attitude toward her work and life in general. After seeing each other for half a year, their love for each other was firmly established and they decided to marry.

In the two and a half years since, their life has been a happy one, unmarred by quarrels, or any unpleasantness over trivial matters. Sun Xiuqing gave her child the surname of the new father. Liu Zhenguo deeply appreciates this mark of trust by his wife, and loves the child, as well as the mother, all the more.

The teachers at the nursery have told Xiuqing that when she is away on business, her husband is so considerate to the child that one would never dream he was a step-father. They tell her she is lucky to have found such a good man.

Today the pair still live in a 25-sq. meter temporary shack the company built for Sun Xiuqing after the earthquake, to which they themselves have added on a little kitchen. Soon all such shelters will disappear and they will move into one of the well-designed and equipped flats of Tangshan's new housing.

Sun Xiuqing is another of the fifteen thousand who lost their mates during the earthquake. Twelve days after the death of her husband, she gave birth to their only child. As a mark of gratitude to the medical units of the PLA who helped her, she named the little girl Xiejun, or "Thank the Army". Four months later she entrusted the care of the infant to her elder sister and went back to her job at the Tangshan Ceramics Company, refusing her colleagues' advice that she stay away a bit longer. She worked hard all day, feeling more at ease than if she had been alone at home with her baby. But the evenings with her sister's family—one of the few that had suffered no casualties during the quake—awakened old longings in her. Gradually, however, she was able to cope with her grief.

Sun Xiuqing and her daughter.

Sun Xiuqing and her husband entertain visitors. Photos by Zhang Shuicheng
Present Policies for Tibet

Last April and May the Chinese Communist Party Central Committee published "The Summary of a Discussion on Work in Tibet" which set forth the policy and tasks involved in building up Tibet under new historical conditions. The Party and state leaders Hu Yaobang and Wan Li made an inspection tour there. Since then there have been many news reports that new policies have been implemented in that region. All this has aroused great interest among people both at home and abroad. For authoritative information our reporter called on a responsible cadre of the State Nationalities Affairs Commission last August.

Q: What is the present situation in Tibet?
A: To begin with, let's have a brief recap of history. With one-eighth of China's total area, Tibet is a national autonomous region of particular importance. It was liberated peacefully in 1951, and democratic reforms in 1959 abolished the extremely backward feudal serfdom, enabling the one million serfs to start a new life under a basically changed social system. On this basis policies for steady development were carried out. For a period of five years, no co-operatives were to be set up, so the emancipated serfs could have time to recuperate and develop an appreciation of the benefits of democratic reform. As a result production advanced, the living standard of the Tibetan peasants and herdsmen improved markedly, and the unity between the Tibetan and Han nationalities was strengthened greatly.

Take Zhag'ya county in the Qamdo area as an example. Between 1959 and 1966 average per-capita annual consumption was 200 kilograms of grain, 7.5 kg of butter and 15-25 kg of meat. People got a fur or woolen coat every three years. But during the ten-year turmoil Lin Biao and the gang of four pushed an ultra-Left line and carried out a series of reactionary policies toward nationalities, which brought misery to the people in Tibet as they did to people in other parts of the country.

Q: Why did Tibet fail to recover in the past few years?
A: In the four years since the downfall of the gang of four there have been some achievements, but on the whole the region is still poverty-stricken. Agriculture, animal husbandry and industry develop at a slow pace, culture and education remain backward and the people's standard of living is not much improved. This is due partly to Tibet's traditionally weak economic base and the disruption caused by the ten-year turmoil. The main reason, however, lies in the erroneous ideological line pursued by some leaders of the Tibet Autonomous Region. Under the influence of the ultra-Left line of Lin Biao and

A traditional Tibetan opera — greater efforts will be made to preserve Tibet's own rich cultural heritage.
During his visit to Tibet, Hu Yaobang (right), General Secretary of the Central Committee of the Chinese Communist Party, talks with Tibetan personages. Ngapo Ngawang-Jigme, Vice-Chairman of the Standing Committee of the National People's Congress, is second right and Yin Fatang, Acting First Secretary of the Tibet Autonomous Region Communist Party Committee, second left.

We must finally turn Tibet, systematically and in a planned way, into a flourishing and prosperous region.

The policies and tasks have been worked out on the basis of the hard conditions that exist in Tibet. As the leaders of the Party Central Committee have pointed out, all the tasks in Tibet aim at unity between the Tibetan and Han nationalities and improving economic development, raising the people's living standard, carrying out flexible, specific and unrestricted policies in economic problems, and giving the peasants and herdsmen time for recuperation, thus putting an end to the poverty in Tibet within two or three years, achieving record prosperity in five or six years and making truly significant improvements within ten years. In a word, we must work hard to build up a unified, prosperous and cultured Tibet.

Q: Could you put these policies and tasks in a more concrete way?

A: There are three major aspects.

First, full play must be given to the right of ethnic regional autonomy under the unified leadership of the Party Central Committee. Autonomy means letting the regional authorities take the initiative. Without regional autonomy, without full minority control in the autonomous regions, there will be no great unity of the various nationalities and no possibility of suiting policy to local conditions and bringing into full play the vitality of the Tibetan people.

Secondly, efforts should be made to develop the economy so as to effect a rise in the living standard and the level of science and culture of the various nationalities in Tibet. We adhere to the basic stand of common development and prosperity of the various nationalities. To this end we have to first of all help the Tibetan people to end their present difficult situation so that the real equality of various nationalities in economy and culture can be realized step by step.
Thirdly, in drawing up plans, tasks and policies it is necessary to give due consideration to the region's special needs, economic structures, ideological consciousness and living conditions.

Q: What exactly do you mean when you say "full play must be given to the right of ethnic regional autonomy under the unified leadership of the Party Central Committee," and "full minority control in the autonomous regions"?

A: The main thing about it is that minority people should have the power to manage the internal affairs of their regions. It consists of the following aspects:

First, the organ of self-government should be composed mainly of cadres of the nationality which exercises the regional autonomy. For example in Tibet the Tibetan cadres should be the main force of its regional government.

As early as the 1950s, Comrades Mao Zedong and Zhou Enlai said that the Tibetan cadres should account for 60 percent of all cadres in Tibet. Because the training and development of cadres takes time and because of the interference of the "ultra-Left" line, the goal was not reached. Now great changes have taken place and after 29 years a large number of capable Tibetan cadres with close ties to the masses have emerged. For example there are: more than 40,000 Party members of minority nationalities in Tibet, and about a thousand of them have taken up the leading posts at the county level or above.

In accordance with the decision of the Central Government, the People's Government of the Tibetan Autonomous Region has decided that part-time cadres should all be of Tibetan nationality. Tibetans should make up more than two-thirds of the full-time cadres, and the Tibetan cadres should take up all the posts at the district level, and 80 percent of the cadre posts at the county level. This will play a decisive part in fully mobilizing the enthusiasm of the Tibetan cadres and masses and rapidly changing the face of poverty and backwardness in Tibet.

Secondly, the autonomous region of any nationality should adopt its own language as its first language. For example, the Tibetan Autonomous Region's first language is Tibetan. Local schools and the Party and administrative organs, in exchanging documents and letters, should use the Tibetan and Han languages simultaneously, taking the Tibetan language as the major one.

Thirdly, specific and flexible policies suitable to the conditions of the Tibetan Autonomous Region should be carried out. The autonomous region has the right to reject or modify orders and regulations of the central authority that do not suit its local conditions. But in some cases the regional government has to ask for instructions in advance and to make a report explaining its actions.

Q: Can you give us some examples of this?

A: We have already mentioned the mistakes made in Tibet as a result of applying policies mechanically. To further explain this point we want to give more examples. The Tibetan people were under the rule of feudal serfdom before the Democratic Reform, so it was impossible that there could exist a class of rich peasants. Between 1959 and 1960, during the Democratic Reform, no peasants were classified as rich peasants. But in the ten years of...
turbmoil, methods in other parts of China were copied mechanically, and some peasants were classified as rich peasants, thus hurting some people. After the turmoil, the leaders of the autonomous region were not thoroughgoing in redressing the injustices thus inflicted. Recently the Party Committee of the Tibetan Autonomous Region has rectified these mistakes.

Under the guidance of the general principles of the Constitution and law, the Tibetan Autonomous Region has the right to draw up rules and regulations as well as judicial decrees to meet its specific needs. The places exercising autonomy have greater financial responsibility than ordinary places at the same level. They have the right to work out their various plans and develop their economic programs under the unified leadership of the central authority. In the distribution of income and management of the mines, grasslands and forests these places enjoy more authority than others. The autonomous regions also enjoy the right to develop scientific, cultural and educational undertakings for their own nationalities. In normal conditions, Tibet also has the right to trade across the border area.

Q: What will happen to the cadres of Han nationality if the Tibetan cadres are now to be the mainstay there?

A: After the peaceful liberation of Tibet, quite a number of Han personnel were sent there by the Party and government. Working together with the Tibetan cadres and people, most of them have done their share for the socialist construction in the region. But a small number of Han cadres violated the policies concerning national minorities, and harmed the unity of nationalities. They took advantage of their power to secure positions for their own people and to enjoy special privileges for themselves. This is wrong, and should be changed. As the Tibetan cadres have become mature today, the Han cadres working there have completed their historical task. With the readjustment of the cadre structure in Tibet, a majority of the Han personnel, including cadres, workers and their families, will be transferred back to the interior in batches and assigned to new jobs. This process starts this year and will be basically finished in 1982.

Q: What are the specifics of the special and flexible policies of rehabilitation?

A: The People's Government of the Tibetan Autonomous Region on June 20 proclaimed eight provisions to ensure the recovery of Tibet. The main points are:

Relaxing the policies on economics. The right of production brigades, work groups and commune members to make their own decisions is to be fully respected.

Production brigades have the right to establish any system of production responsibility that meets local conditions. It can contract with a work group for a job or for fixed output. This method can also be applied to contracting with individual households far from a community. Policies for guaranteeing commune members' private plots, animals and trees must be implemented. Handicrafts of minority nationalities and sideline work by communes, production brigades or commune members should be supported and encouraged. Communes and brigades can contract with other units for processing or transportation. They can also build houses, and run inns, hotels and repair shops. In addition, free markets are opened and the traditional exchange between the peasants and herdsmen is to be restored and developed. Pedlars are allowed to do their business from village to village. Trading along the frontier is actively promoted.

This year and next, agriculture, animal husbandry, and industry and commerce are tax-free. Compulsory sale of goods to the state is abolished, although production brigades and communes are encouraged to sell their surplus to the state on a voluntary basis. The purchase price of qingke barley is also raised. Tractors and trucks used for farming and animal husbandry are no longer assessed for road maintenance. Communes, brigades and commune members are no longer taxed when they sell their goods or use them for exchange. In the past, outputs were estimated too high, and state purchases were scaled accordingly, placing excessive burdens on the people.

To ease the local people of their burden, all kinds of compulsory services are abolished. Funds and materials owned by production teams, work groups or commune members are protected by law. No unit or individual is allowed to encroach on them. Rational payment must go to the communes, brigades or commune members when their draught animals are used by other units or individuals.

Q: How are these policies being carried out at present?

A: All these policies are being put into practice step by step. In animal husbandry, for instance, a new system of raising goats, suggested by the people, has been adopted in Jiangda county. Namely, the collective entrusts three goats to each member. After three years the members are asked to return four goats to the collective. After turning over to the collective a fixed amount of wool and droppings from each goat, the member can keep the rest of the products from the animal, including the extra lambs. In the farming areas, part of the brigades' grain reserves has been allocated to help those households short of food. Side-occupations and handicrafts such as weaving, tanning and collecting medicinal herbs have begun to revive. All regulations impeding trade across the border have been canceled. As of June 20, people from neighboring countries living near the border can come to our border markets to trade with the local people, and the Tibetans there can also cross the frontier to exchange goods with them. The implementation of these policies greatly delights the Tibetans.
Q: What new measures have been adopted concerning science, culture and education?

A: The Tibetans have a long history and a splendid culture. There is a rich lode of Tibetan-language materials on agriculture, livestock, history, astronomy, medicine, linguistics, literature, art and Buddhism. There is also an almanac. But before liberation, cultural development in Tibet was retarded because of the imperialist invasion, the system of national oppression and the rule of the feudal nobles and monks. During the ten years of turmoil many materials, unfortunately, were ransacked and badly damaged. Now the People’s Government of the Tibet Autonomous Region has been taking some measures to develop the region’s science, culture and education.

On education: Tibetan children are given priority to go to schools; the stress is on primary and secondary education. Most schools are run by the state and most of the students are boarding students on stipends. As of July the state also began to subsidize teachers’ salaries and other costs of primary schools run by the local people. More than 60 percent of the students enrolled this year by the four universities and colleges in the region are of Tibetan nationality. The age limit for enrollment has been extended to 30.

On science and culture: An academy of social sciences has been established. And another university specializing in Tibetan culture will be established. Cultural artifacts will be gathered and protected. On this basis a Tibetan culture with more socialist content will be developed.

Q: Most of the Tibetan people believe in Tibetan Buddhism. What is the policy on religious belief?

A: This goes back a long time, and Lamaism still has great influence among the masses. Our Party and government have always had a policy respecting the right of people to believe in any religion. But before the fall of the gang of four, this policy was seriously distorted. In Tibet, many monasteries were in ruins, including the Gadahn Monastery, famous for the Tibetan style dagoba where the ashes of Tsongkhapa, founder of the Yellow Hat Sect of Lamaism were kept.

Now we must carry out the policy correctly and absolutely: Every citizen enjoys the freedom to believe in any religion at any time, and also the freedom not to believe; people also enjoy the right to believe in any sect of a religion.

In recent years, we have renovated and re-opened some monasteries, such as Zuglakang, Drepung and Sera. This activity has been appreciated by the believers.

Q: Reports from abroad say that the Dalai Lama is going to return to China. What is the policy regarding such former top leaders? And what of other Tibetans abroad?

A: An important aspect of the policy toward minority nationalities is to set up a national united front with religious upper circles. In the past, under the influence of the ultra-Left line, many patriotic leaders of minority-nationality religions were persecuted. Now we are actively solving the problem. We have to implement the Party’s policies conscientiously, bring every positive factor into play and unite with all the forces that can be united.

Our principle is, “All patriots belong to one big family, whether they rally to the common cause early or late.” If the Dalai Lama and other Tibetans abroad wish to come back to China, they will be welcomed. We’ll warmly receive those who come as tourists or to visit their relatives in China. They have the freedom to come and go. Their relatives here will suffer no discrimination. Actually, as you know, we have already received some delegations sent by Dalai Lama and also many individuals who came back to visit their relatives.

Coming Soon in English

CHINA’S SOCIALIST ECONOMY

By XUE MUQIAO

A veteran Chinese economist examines China’s experience in socialist revolution and construction over the past three decades and addresses himself to some unsolved or not wholly solved economic problems, both theoretical and practical.

Major questions the book deals with:

* Commodities and money under socialism
* “To each according to his work”
* Reform of the wage system
* The law of value under socialism and price policy
* The relation between investment and standard of living
* Planned economy: How much planning?
* Reforming the system of national economic management
* Better use of the labor force

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Xue Muqiao: Innovative Economist

QIU JIAN

A BEST-SELLER in China—a quarter a million copies were sold in six months—is not a thriller nor an "inside story", but an academic work entitled China's Socialist Economy by the noted economist Xue Muqiao first published earlier this year. While still being snapped up in China, it is to be issued in English, Japanese and Spanish to meet demands for it from abroad.

The author analyzes the experience and lessons of three decades of socialist economic construction in China and in his 200,000-character work goes into a number of unsolved or not wholly solved economic problems. His conclusions indicate some guidelines for national economic planning.

Keeping in mind China's poor economic foundation and large population and low level of production, he advocates the following measures: the rate of accumulation be kept to 25 percent of the total national product instead of the present 30; the order of priority in the economy should be agriculture, light industry and then heavy industry (in practice this has not always been so); reform of the system of national economic management; solving the problem of underemployment in the rural areas through a diversified economy and more small industrial enterprises run by the communes and their production brigades, and relieving it in the city through allowing urban collectively-owned hand-

icraft production, commerce, restaurants and services free scope; and allowing private businesses that do not hire labor to exist and perform their services. All these, criticized as a revision of Marxist-Leninist political economics during the cultural revolution, are being given a second look today and being tested with the idea that there is a place for such things in socialist economics.

His "University"

Xue Muqiao spent the first part of his life in the old China, plagued by internal troubles and aggression from without. In a year the days of national humiliation outnumbered the festivals. It was this which moved him to study economics as a way of saving the country. He is far from being an ivory-tower scholar. His theories have always grown out of the study of actual conditions according to the principles of Marxism-Leninism, and have been directed at the formulation of actual policies since liberation.


Xue was born into an impoverished landlord family in Wuxi county, Jiangsu province in 1904. Lack of funds forced him to leave junior normal school after three years and go to work as an apprentice in a small railway station near Hangzhou, the provincial capital of Zhejiang.

Swept up in the turbulent Great Revolution (1924-1927), Xue joined the Communist Party and became a leader of the railway workers' movement in Hangzhou. In April 1927 Chiang Kai-shek went back on the revolution and launched a nationwide massacre of communists and other revolutionaries. Xue was arrested in June and put in the Kuomintang army prison in Hangzhou. It was there that he met Zhang Qiuren, Party secretary for Zhejiang province, whose example, Xue says, was to remain an inspiration to him throughout his life. Zhang, who was one of his cellmates, had been a political instructor at the famous Whampoa Military Academy in Guangzhou. Although he was under sentence of death, he spent five or six hours a day studying and at night would talk to his cellmates about the history of the Chinese and the world revolution.

One day Xue asked Zhang, "Why do you keep on studying so hard if you know you're going to be executed?"

"We communists must work for the revolution every day of our lives. Here in prison we can't work

QIU JIAN is a staff reporter for China Reconstructs.

OCTOBER 1980
but at least we can study and not just sit around waiting to die,” Zhang replied. A few days later he was executed, but his words were not lost on Xue Muqiao. From then on Xue would begin studying as soon as the day was light enough. In the evenings, he would read standing up, to catch the rays from the dim light.

Most of the 300 prisoners were intellectuals. The guards, holdovers from the warlord period, didn’t watch them very closely so they managed to get quite a few progressive books from outside. Before he was arrested, Xue Muqiao had read only Sun Yat-sen’s Three People’s Principles and Bukharin’s the ABC of Communism. The first two books he read in prison, Political Economy by Bogdanov and Developing History of Ideas on Capitalist Economy by Hajime Kawakami, triggered his interest in economics. He managed to read several works on politics and history and to learn English, Japanese and Esperanto. It was this study in prison that provided him with the foundation for further explorations in political economy.

In 1931 he was released and got a job in a research institute investigating China’s rural economy. In Wuxi he wrote his first thesis, “The Epitome of the Declining Rural Area South of the Changjiang”. It was published in the first issue of New Creation magazine and reprinted in a Japanese magazine. From then on he unceasingly investigated and wrote about the countryside to expose how imperialism and exploitation speeded up the bankruptcy of China’s rural economy.

As a teacher in Guangxi Teachers’ College in 1933-34 he often took his students to study in the countryside during their vacation. With economists Chen Hansheng, Qian Junrui and Jiang Junchen he initiated the Society for the Study of China’s Rural Economy and in 1934 they published a monthly magazine China’s Rural Areas. Through its articles, many young people then living under Kuomintang rule came to know something about Marxism-Leninism and the Communist Party’s policy of creating a national united front for resistance to Japan.

**Economic Work**

During the Japanese invasion (1937-1945) Xue Muqiao worked first in the liberated areas led by the Communist Party in central China and later concurrently held the post of secretary-general of the Shandong provincial government in a liberated area and director of its bureau of industry and commerce. In 1943, he made use of his knowledge of economic laws to defeat the Kuomintang blockade. Noting this seaside province’s rich salt resources, he initiated a system by which the liberated area sold salt to the Kuomintang areas and used the money to buy goods from them. In this way the Kuomintang economic blockade was rendered ineffective and the difference in the rate of currency exchange between the areas was cut down. This struggle was important in helping Xue Muqiao learn to utilize economic laws.

In 1938 he was sent to direct a training unit of the New Fourth Army in southern Anhui province. There he taught political economy for four years and wrote the popular textbook Political Economy. It was published in Hongkong in 1942. He wrote a revised draft of the book between battles and during breaks on the march while fighting Japanese attacks on the north Jiangsu base after he was transferred there to be in charge of training at the Anti-Japanese Military and Political College. This version became the first textbook on political economy published after liberation in 1949.

After the people’s republic was set up, Xue Muqiao assisted state leaders like Chen Yun, Li Fuchun and Bo Yibo on national economic matters in his capacity as Secretary-General of the State Committee of Economy and Finance, and Director of the State Industrial and Commercial Bureau. Later he became Vice-Minister of the State Planning Commission, Director of the State Statistics Bureau and Director of the National Commission for Commodity Prices. But, busy as he was, he never stopped theoretical study. In the 17 years between liberation and the cultural revolution he published about 30 papers and gave a dozen lectures on economics.

**Under Fire**

After the cultural revolution began in 1966 Xue Muqiao’s views were called into question by some, and he was attacked as “economic adviser to China’s Khrushchov” (meaning Liu Shaoqi) and the “No. 1 counter-revolutionary academic authority in the economic field.” He was put under house arrest at his office. In 1956 he had beenentrusted by the Party Central Committee to write a book on socialist political economy but he had been too busy then. He used this time under detention, which lasted three years, to write a first draft.

Toward the end of 1969 he was transferred to his office’s cadre school in Hubei to do manual labor. He was assigned to patrol the peanut fields at night in the late autumn and the threshing ground where grain was stored through the snowstorms of the winter. It gave him time to think and at the end of shift he would rush back to write down his ideas or formulations for fear he should forget. In this way he made a second draft of the book. Though ill in bed in 1972, he revised the book four more times. The result is his China’s Socialist Economy, which has gone through altogether seven revisions.

Like the true scientist he is, he poured all his energy into his undertaking. Once while standing by the stove cooking pig mash he was so absorbed in his reading that he didn’t realize his trousers had caught fire until he felt the burn. He picked up a fan to beat out the flames, but that only made them worse. Fortunately friends came to help him put the fire out. Some of his friends in the cadre school advised him against writing,
saying it was only asking for trouble. Xue Muqiao cited the story of the Ming dynasty philosopher Li Zhi who died in prison because he had written books banned by the imperial court. "I'm about the same age as he was then — he died when he was in his 70s," Xue Muqiao replied. "Certainly I, a communist, should be able to equal the record of this feudal scholar."

"But even if you do finish your book, nobody will publish it," one friend said.

"I hope you will keep it safe for me. I believe that it will be published some day, even if it's after my death."

**Two Controversial Ideas**

Today, Xue Muqiao is against the form of economic management known as "everybody eating out of the same pot," that is, a state-owned enterprise turns in all its income to the government and applies to it for all its expenditures. He says this is not, as some claim, a manifestation of the "superiority of socialism" but a remnant of the supply system from revolutionary war days hampering the initiative of the enterprise to modernize — as it could do if it kept some funds for its own use. Under the old system, he says, a new enterprise often tries to get as much investment as possible from the state and does not care if the funds pile up or lie idle, while old enterprises have difficulty getting the approval needed for major additional equipment for technical innovation or expanding production.

Another of his ideas is that no one is entitled to an "iron rice bowl!" that is, once one is employed, he can be neither fired nor demoted no matter how badly he does his work. Xue Muqiao points out that China's socialist constitution states that every citizen with the ability to work has the right and obligation to do so, so in principle labor power is handled by the state in a unified way. However, people do not have the same ability. Enterprises should have the freedom to decide what kind of people they want working for them, and the right to demote, or, with consent of the trade union, dismiss them. In the latter case the labor department would find them a new job or they have the right to find one for themselves. He stresses that proper arrangements should be made: "They must not be set adrift, destitute and homeless as in capitalist society."

These ideas, offered in an interview in the *Beijing Daily* last spring, brought a response of more than 400 letters in a few days, both pro and con. Some were from collectively-owned factories which said their production had gone up after carrying out his proposals.

An ancient Chinese poem goes, "Even though old, a thoroughbred horse has the will to travel a thousand li." Xue Muqiao is 76, but he presses ahead with his work and studies. At present he holds the position of Director of the Economic Research Institute of the State Planning Commission. Last year he made a one-month study tour in the United States. "With respect to highly socialized mass production," he says "the developed capitalist countries have much useful experience for our reference." Then he went to Shanghai and to Anhui, Zhejiang and Jiangsu provinces to help institute reforms on a trial basis and study problems of the market and merging of economic units for greater efficiency and wrote several articles on his findings. On his return to Beijing he investigated matters of foreign trade, materials supply, commerce and prices.

My most recent visit to this veteran economist and his wife Luo Qiong was on a Sunday morning in early summer. He was immersed in an article he was writing.

"Him! He's never finished with his research and his articles," Luo Qiong observed as she brought me a cup of tea.

"It's inescapable," Xue said with a smile. "Some of my friends advise me to work only part time because of my age. But I have so many articles and lectures to write, and the leaders keep raising new problems. I wouldn't be finished even if I did two days' work in one. How could I think of resting on Sunday?"
The Dragon Boat Festival, one of China’s biggest traditional festivals, falls on the 5th day of the 5th lunar month in memory of Qu Yuan (340-278 B.C.), a great patriotic poet of the Chu State (in Hubei and Hunan provinces) during the Warring States period (475-221 B.C.). On this day the Chinese people hold the dragon-boat race and eat zongzi (made of glutinous rice usually wrapped in bamboo leaves)—a custom that derives from the story of the people’s efforts to retrieve Qu Yuan’s body from the Miluo River. The poet drowned himself after learning that the Chu capital had fallen to the enemy. People threw many zongzi into the river to feed the fish and turtles so they wouldn’t eat Qu Yuan’s body.

During the cultural revolution (1966-1976), these festivities were banned as “backward custom,” and it was not until this year that they were resumed on the Miluo. The government of Miluo county allotted 15,000 yuan to ten work units for building dragon boats. When we arrived on the eve of the festival every family was busy making zongzi, sewing new clothes, and preparing special dishes and wine. People were most excited, however, by the building of the dragon boats. In the Guiyi production brigade where we stayed, a 23-meter-long boat that carries 45 oarsmen had taken two months to build. At the traditional launching ceremony, an oarsman jumped into the river amidst the sound of firecrackers, rolled over, and put the dragon head, draped in red silk, on the boat, symbolizing the dragon jumping out of the water.

Before the festival all the monuments to Qu Yuan in Miluo county had been renovated to greet visitors. The biggest is a temple containing 17 stone tablets on which scenes from Qu Yuan’s life and excerpts from his writings have been engraved.

Early in the morning on festival day (on June 17 this year), people began to stream into town from all directions to watch folk performances. The main attraction was the gaoTai performances staged by 6- and 7-year-olds atop square platforms carried about town on the shoulders of 6 to 8 men. The children pose as historical characters balancing on beams made to look like broadswords, umbrellas, or musical instruments.

The race was held on the river in the afternoon. Thousands of people in their holiday best flocked to the riverside where ten dragon boats painted in red, yellow, white, green, or blue were waiting to start. More than 500 oarsmen—transport workers or commune members in everyday life—wore tank-top shirts matching the colors of their boats.

With a crash of gongs and drums, the 2000-meter race began. On these boats the coxswain’s functions are divided between a tillerman who keeps it on course and a man who signals the stroke by waving a red flag. Spectators cheered on their favorites, but the race was clearly a contest between the yellow boat of the Jinsha production brigade and the red boat of the Guiyi brigade. Guiyi won a closely-fought victory with a time of 9 minutes, 15.2 seconds, to great applause from the crowd.

Oarsmen parade to their boats carrying the dragon heads.
A family prepares “zongzi”, the traditional delicacy of the Dragon Boat Festival.

Photos by Zhang Yang
Shanghai

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New Plays About Taiwan

XIU TANG

The “flesh and blood” ties between the people on Taiwan and the mainland are amply demonstrated in a number of new theatrical works and songs. They are part of the effort in literature and art circles to prepare for the reunification of Taiwan with the rest of China. Most were done since January 1979 when the Standing Committee of the National People’s Congress issued its “Message to Compatriots on Taiwan” manifesting the basic policy and attitude on this question.

Best-loved among the new works is the soprano solo “With Feeling Deep as the Ocean.” It runs:
Taiwan, beautiful treasure island
Day and night I gaze at you.
Ah! With feeling deep as the ocean
I think of our compatriots on Taiwan.
The song goes on to observe that when reunification becomes a reality “together we shall sing this reunion song.”

Legend in Dance

A full-length dance drama, “Banpingshan” (Mountain Cut in Halves) is based on a Taiwan legend about the island’s union with the mainland in ancient times and its separation. The girl Shiping lives at the foot of a mountain by the sea. On the day of her marriage to fisherman Shui-gen the evil god of the sea sends many shrimp soldiers and crab generals—who cavort about in opera-like acrobatics—to seize her and take her to his Dragon Palace. The sea god casts a spell to cut the mountain in two, separated by the sea, with Shiping’s family and lover on the other side. Shiping, who is later rescued from the Dragon Palace stands by the seaside looking across the strait, year after year. She finally becomes a woman of stone.

There is actually a Banpingshan on Taiwan 20 kilometers north of Gaoxiong (Kaohsiung). It looks like a round steamed roll which has been cut in half.

The scenario for the dance drama was written by Liu Run, a young dance enthusiast who works at the Shanghai Bulb Plant. The choreography draws on the Chinese classical dance, but has movements from dances of Taiwan’s Gaoshan nationality and the local opera of Fujian, the mainland province just across from Taiwan.

The 200 performances played by the Dance Troupe of the Shanghai Opera Theater in Shanghai, Beijing and Tianjin were enthusiastically received. Striking stage sets and lighting heighten the imaginative effect of the whole.

“Caiyungui”

The television drama “Caiyungui” about a former Kuomintang army doctor who returns from Taiwan has been shown to millions over the Central Television Station. It was co-produced by the central and Fujian province stations from the novel of the same name. The book written by two young men Li Dong and Wang Yungao was commended as one of the 25 outstanding novels of 1979.

The novel takes its name from that of a valuable Sichuan province medicinal herb. In their youth in Sichuan, Dr. Huang Weizhi and his wife were amateur musicians, he on the qin (like a lute) and she on the flute. He had composed the music and she the words to a song by this name.

When the story begins Huang has been on Taiwan for more than 20 years. Though he had always considered himself above politics and worldly considerations, out of a sense of justice and feelings of patriotism, he is drawn to a group of Kuomintang army officers and government officials who share hopes for reunification of Taiwan with the mainland.

One of them is Zhong Lihan, Huang’s old classmate, brother of Huang’s wife. She has remained in Sichuan and he has not seen her all this time. For his activity,
Zhong loses his army post. He goes into business which frequently takes him to Hongkong. He helps Huang get in touch with his wife. Zhong is later murdered in Taiwan.

Huang tries to use an army investigation trip as a pretext to go to Hongkong to meet his wife, but the Taiwan authorities find out. He flees to another city where he works incognito as a doctor for several years. His adopted son, Zhu Yi, trying to swim to the mainland, is caught and thrown into prison. To save him Huang comes out into the open and goes to the office of Garrison Commander Zeng Geng. He is surprised to find that Zeng was a close friend in school days. Zeng, although he has always regarded himself as a model armymen, has gradually learned something from reality and at the risk of his own life decides to protect Huang, Zhu Yi and the latter's fiancee, daughter of the late Zhong Lihan.

As the play ends, with new hope, the three go down to the sea. The melody of “Caiyunngui” floats through the air. Someone is listing to a radio broadcast from the mainland, where the song has become popular.

The novel has also been adapted as an opera entitled “Qinxiaoyue” (The Lute and the Flute under the Moon) by a theater group under the naval branch of the People’s Liberation Army; as the modern drama “Waiting Reunion with a Loved One” and a film entitled “Caiyunngui” to be released soon by the Changchun Film Studio. The song “Caiyunngui” from the opera version is in fact heard on the mainland today.

The Sailboat

In the modern drama “The Sailboat Returns” produced by the China Youth Art Theater, Luo Shiikui comes back after 30 years to a city on the southeast China coast where he had once been Kuomintang garrison commander. From there he had withdrawn to Taiwan in 1949, but soon afterward had left the army and gone to live in the United States. He is received by one of the city heads, only to find that it is Cai Chenghua, who had been born in Taiwan and had come to the area before the liberation to lead the Communist underground. As garrison commander Luo had offered a big reward for his capture.

Luo is even more surprised to find that the man he had viewed as his enemy before liberation helps him to find his wife whom he had not seen for 30 years—killed in the war, he had thought. After their reunion, the couple also locate their long-lost daughter, and are surprised to find that unknowingly, Cai Chenghua has adopted this “orphan” as his daughter. The young woman and the man she is about to marry at first view Luo with hatred and suspicion but are won over by Cai Chenghua.

At the end of the play, as they are being married by the sea, a returning sailboat (Taiwan) glides into sight across the backdrop.

Both the returned Kuomintang general and Cai, whose actions illustrate the policy of the Communist Party get a big hand from the audience.

Two artists of Taiwan origin took part in the creation of this play. The music was written by Wei Li, a musician born in Taiwan who is now conductor of the China Railway Art Troupe. The role of the daughter Cai Mengyuan is played by the young actress Lin Lifang, who left Taiwan with her parents at the age of six and has since lived on the mainland. Four of the ten plays she has been in over the past three years as a member of the China Youth Art Theatre deal with the theme of reunification. Motivated by the thought of her own younger brother and sister who are still in Taiwan, she gives a very moving performance. Other stage works on the Taiwan theme in the past two years include:

The opera “The Fisherwoman” showing how people on the mainland miss their compatriots in Taiwan; the modern drama “Song of Reunion”; and documentary films “Ah, Taiwan,” “The Native Land of A Zu,” “Flesh and Blood Kin” and “Patriots Are All One Family.”
Frank Coe
—Devoted U.S. Friend of China

MA HAIDE (Dr. George Hatem)

FRANK Coe was born in Richmond, Virginia, USA in January 1907 and died in Beijing in June 1980. He was one of the galaxy of forward-looking Americans whom the Chinese people remember with respect and love as their true friends. He saw hope for the world in China’s revolution, and in Chinese-American friendship based on the new groundwork of equality and the common interest of the two peoples. For these aims he worked unremittingly and courageously. An internationally known economist, a man of principle and determination, a modest and warm human being, he was one of those unsung heroes who strive all their lives to make our earth a better place for the generations to come. As such, he of course had to bear the stresses and strains of our unquiet times—and he stood the test.

His last 22 years were spent in China. Here he made notable contributions to its people’s cause, which had enlisted his sympathy since his youth.

As an adviser to the new China on international economic matters, in which he had exceptional experience and expertise, he worked literally until his last breath. I saw him in the hospital the day before he died. His bedside table was still piled with books, papers, and journals from many lands, of which he was a tireless reader. His interest in everything going on in China was undimmed. “How’s production in Guangxi?” he asked me. (I had just come from a medical trip there.)

Fighter Against Fascism

Progressive causes had attracted Frank since his student days at the University of Chicago, where he was one of the most brilliant graduates in 1927, and where he later taught and did research. There he found his Marxism and met his first Chinese friends. It was at the time of China’s First Revolutionary Civil War (1924-27) with its great victories and bitter reverses. From then on, he felt personally close to the struggle for liberation of one-fifth of mankind. So it was no accident that he chose China as the place to work in the last decades of his life.

In between came a varied and distinguished academic and public career. In 1934, while on the economics faculty of the University of Toronto, he was called in to assist the New Deal administration of U.S. President Franklin D. Roosevelt. At first it was on a part-time basis, as monetary consultant to the Treasury Department. Then, in 1940, he was made assistant director of its Division of Monetary Research under Dr. Harry Dexter White. During World War II, he helped set up the Foreign Funds Control, an essential financial weapon against fascist powers, and held such posts as deputy head of the U.S. Board of Economic Warfare and executive secretary of the Joint War Production Committee of the U.S. and Canada in the victorious war effort.

After the war, Frank participated in discussions of the draft plans for a new monetary system drafted by Harry Dexter White and the British economist J.M. Keynes. He became technical secretary-general of the United Nations International Monetary Conference at Bretton Woods. In 1964, he was named first executive secretary of the International Monetary Fund.

Target of Reaction

What followed was the “cold war”. Because Frank, in his public career, had shown himself a staunch New Dealer and anti-fascist he inevitably became a target of the McCarthyite witch-hunt. Called before innumerable grand juries and congressional committees specializing in the persecution of whatever they chose to call “communist” or “communist-front” or “un-American”, he was forced to resign from the International Monetary Fund in 1953.

The upshot was that from 1953 to 1958 this accomplished economist and public servant had to eke out a living in odd jobs that included carpentry and house painting, selling brushes, and serving as cashier in a small restaurant. His savings were eaten

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up by legal expenses. Many former acquaintances lacked the courage to keep in contact with him. His first marriage broke up. Some persons, under far less pressure, compromised their consciences to keep position, income, or what then passed for reputation. But Frank Coe did not budge. Though a man gentle in speech and manner, when it came to principle he was a rock.

Another disability imposed on him was the denial of a passport and the right to travel abroad, where he had been offered appointments in universities and central banks. It was not until 1958 that he was able to leave the U.S.A. for England, where a professorship in money and banking awaited him. He chose, however, to go on to China, a country so long in his thoughts. His advocacy of U.S. recognition of the newborn people's republic, indeed, had been one of the reasons for the McCarthyite hue and cry against him in the early 1950s.

Work in China

Arriving in Beijing with his wife Ruth and their infant daughter Katy, he was received with honor as an eminent progressive victim of political persecution and was soon appointed a special research fellow of the Chinese Academy of Social Sciences, attached to its institutes of economics and of world economics. His incisive analyses of the economic backgrounds of political developments abroad were valued by China's leaders—Chairman Mao Zedong, Premier Zhou Enlai and others talked with him repeatedly. Chairman Mao praised him as one of the "revolutionaries from the West who come to help the revolution of the East."

Frank, in his turn, had a long-standing and growing respect for the leaders of China's revolution. He considered Mao Zedong the foremost Marxist-Leninist of our day. For Zhou Enlai his feeling was such that he wept when he heard the late premier, already shockingly worn with illness, addressing a National Day celebration in the Great Hall of the People in October 1974—his last public appearance.

Over several years, besides his economic studies, Frank made valued contributions to the shaping of the English translation of the Selected Works of Mao Zedong. All who worked with him remember his meticulous and responsible attitude. His first concern was to convey the full meaning—to this effort he brought all his analytical capacity and erudition in Marxism. To the form, too, he made a notable contribution—his writing style was as lucid as his mind. He constantly urged that the transla-

With Premier Zhou Enlai in 1972.

With Chairman Hua Guofeng in 1977.
tion of Chairman Mao's works should be so done as to be easily understood by ordinary people, especially those of the Third World, and that difficult words and over-technical terms be kept to a minimum.

After the death of Chairman Mao, Frank wrote in a moving tribute:

"It is correct now to call our science Marxism-Leninism-Mao Zedong Thought. This science is complex, consisting of philosophy and the various social sciences such as political science (which includes military science and international relations), political economy and history. . . .

"Let us speak only of philosophy. Chairman Mao's comparatively short philosophical essays became the clearest and most accurate analysis of dialectical materialism we have. . . .

"The foreign policy he stood for was elucidated by Premier Zhou Enlai in the Bandung Conference of 1955 and thereafter . . . and latterly in 1974 when Comrade Deng Xiaoping set forth fully China's three-world analysis of the international situation in the U.N. General Assembly. The foreign policy of China, set by Chairman Mao over a long period, has succeeded. China has made progress. It did not succumb to U.S. imperialism nor to Soviet social-imperialism. As he himself said, 'China has friends all over the world,' and now this is evident.

"As to proletarian internationalism, the record is that China, led by Chairman Mao, has always supported genuinely proletarian revolutionary struggles abroad and struggles for national liberation. But it has not sought to control. The people of each country have to decide where they want to go. If they decide to take the road of socialism, it is right for a socialist country to help them, but wrong for it to try to dictate."

In this assessment, Frank Coe also gave expression to his own strongly-held views on the proper policy for a socialist country.

As an American patriot as well as an internationalist supporter of the new China, Frank rejoiced in the advancing rapprochement between the two countries since 1972, and particularly since the normalization of diplomatic ties in 1978. Before normalization, he had done much to enlighten American visitors on various aspects of China. With increasing exchanges, he was able to do much more in this respect.

At the memorial meeting for Frank Coe in Beijing, floral tributes were sent by Chairman Hua Guofeng, Vice-Chairman Soong Ching Ling, Vice-Premier Deng Xiaoping, and many other leading individuals and organizations, as well as a host of personal friends. Speakers included Vice-Premier Ji Pengfei, who also heads the International Liaison Department of the Chinese Communist Party, Vice-Foreign Minister Han Nianlong, and friends both foreign and Chinese.

Han Nianlong summed it up. After lauding Coe's valuable help to the Chinese people in their socialist revolution and construction, and in promoting friendship and understanding between the Chinese and American peoples, he added, 'He lived and fought together with us, sharing our joys and sorrows, as one of us and not as a bystander.'

**Inspiring Qualities**

One of his oldest and closest associates wrote: "We were on the same side in many fights in which he was a valiant and resourceful ally and elder brother. Endowed with great and exceptional gifts, he enjoyed nothing so much as unstintingly putting them to the best use in the service of the progressive causes he so ardently believed in. It was always a rich experience to be in his company whether at work or when relaxing."

Another told how, in Frank, a sharp and penetrating intellect was combined with a warm heart and great compassion. "Seeing Frank with friends who had been wronged or suffered during the cultural revolution gave us a glimpse of how emotionally and sensitively he felt for others."

A third recalled that, after Frank's cancer was diagnosed, friends urged him to write his memoirs. "But Frank said that if there was time left he would rather devote it to China's modernization. A few days before he passed away, he was still discussing economic and monetary problems with our comrades."
Many spoke and wrote of his selfless, unassuming spirit. Though he had spent so many years at high levels of government, he had no trace of “official airs.” Though his scholarship was great, intellectual conceit was alien to him. He was unconcerned with material gain, even though, elsewhere, he could have commanded a huge salary or made a private fortune.

I myself recall how he would work deep into the night. Once I asked him if he was a fast reader. “Not as fast as I would like,” he replied. “There is so much to keep up with, so much to do.” And he always wanted to do more. When, in the final months of his life, he was appointed adviser to the Administrative Commission for Import and Export Affairs he was happy and set about studying these matters and framing recommendations.

In times of rapid and sometimes perplexing change, a common question among those who know him was, “What does Frank say?” — for he had so often been proved right. Yet he never delivered pronouncements, was quick to warn that his judgments might be fleeting or temporary, readily acknowledged any error that he made, and was generous with the errors of others.

Modest though he was, nothing could make Frank accept, from any quarter, things that he himself, after study, found to be dubious or wrong. For example, he refused to take part in the editing of some pamphlets “authoritatively” put out in English in the so-called “criticism of Lin Biao and Confucius,” which was in fact an unprincipled attack on Premier Zhou Enlai. And when the gang of four, which promoted that and so many similar distortions, was finally toppled — no one was happier than Frank.

Frank Coe, a great American and devoted internationalist, will be sorely missed. By his own last wish, his ashes have been scattered over the soil of socialist China. Among its people, his memory will live.

On Population Article

Allow me to congratulate you on the excellent article “Solving China’s Population Problem”, not only for the straightforward, to-the-point writing of the author, but also for the way that China is attacking a problem that is not only her own, but that of the whole world if we are to maintain any quality of life for our descendants.

I have passed the book on to many to read, and who knows one day the rest of us may follow where you are leading. More articles of this kind please, and also on the measures you are taking to protect the environment and combat pollution in the areas of close settlement and heavy industry.

John Staples

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Many Americans Love China

Your goal of friendship and understanding could easily be achieved through greater distribution of China Reconstructs. It is excellent reading. “Language Corner” certainly is different and appreciated. Chinese History” very informative. This writer would like to read more concerning Sun Yat-sen. Great Man! Culture, art, travel, all these themes have worldwide appeal. Perhaps we could read more concerning Xi’an and background of articles unearthed therein (for example, tombs of the family of Empress Wu). “Stamps of New China” superb. As a stamp collector on the People’s Republic of China I find it is a favorite.

The article on Agnes Smedley was appropriate and familiar to me. Are you aware of the fact that the Americans who love China are legion? Is it true?

Anne Nowak

Saddle River, U.S.A.

Yuan Dynasty Article Fills Gaps

I very much appreciated the article, “The Yuan Dynasty: 3—Foreign Relations, Science and Culture” in the July issue of your magazine. It helped fill in some gaps I had on this aspect of history quite significant to both China and the West. Also I think that is just as a significant lesson in history is your article, “An English Fighter in a Chinese Peasant War”. No boundaries are too great to prevent the friendship of two peoples, wherever and whoever they are, by a curtain of fear and repression.

Daniel Nardini

Elmhurst, U.S.A.

Wants More on Buddhism

I appreciated very much the articles about Buddhism in China in your July 1980 issue. Would it be possible to publish more often articles on this subject with photos of sites and buildings?

I hope some day I will be able to visit China to know better your great and magnificent country.

Jean A. Dumez

Amoignies, Belgium

Good Cover Picture

The photo for the front cover of the July issue (of bicycles on a street — Ed.) is well done. Just as your articles become more and more interesting, so do your photos. What progress!

At the Canton fair I saw some Chinese photo equipment. I would like to see an article on this subject. There is still much to be done in the sphere of postcards and views from the air.

Fabiennge George

Strasbourg, France

Children Articles Too Short

I hope you can describe more on the topic about children for I think they are rather short. I was really moved by the article “I Go to School Too” in your January 1980 issue. I certainly agree with the child, Wen Hongmei, that despite her legs being paralyzed, there is no reason why she shouldn’t go to school. I am glad to know that there are so many friends and teachers who are willing to help her. This shows how people of China feel for their country. I would like to wish Hongmei a very speedy recovery and best of luck in her studies.

Ong Chin Bee

London, England

I wish to suggest that the Children’s Page be enlarged. All you deal with in this column seems not yet finished. This gives the impression that it will be continued in the next issue, but there are no more. Subjects are always varied from one issue to the other. Could you improve on this point in the future issues?

Nyemb Ilunga

Kamina, Zaire

Not Enough About Music

My criticism is that your magazine publishes too little about music. Many non-professional music lovers like me are interested in the development of music and its utilization.

Bernd Rautenberg

Düsseldorf, West Germany
The Jinjiang River hugs the city on the south.

Chengdu:
Cultural Shrines, Famous Food

TAN MANNI

TWO thousand two hundred years ago Li Bing, governor of the province of Shu, behind the mountains far up the Changjiang (Yangtze) River, with his son led local laborers to tame the turbulent Min River with embankments of bamboo baskets filled with stones. Chiseling a canal through a mountain of rock to lead the water to the alluvial plain formed in the Sichuan basin, they created the richest agricultural area in China. Chengdu, biggest city of the plain, became a prosperous place. Today this ancient engineering marvel, the Dujiangyan irrigation system,* is still in service providing water for 6.67 million hectares of land, and Chengdu, capital of Sichuan province, is the center of political, economic and cultural life in China’s southwest. Today it has a population of 1.2 million and covers an area of 60 square kilometers.

Surrounded on all sides by high mountains, the Sichuan basin was often a place of refuge for emperors fleeing their capitals in central China during the chaotic wars of ancient times. With them to Chengdu on the basin’s northwestern edge came nobles and scholars.

Chengdu was also a prize to be seized as a place for setting up a kingdom out of reach of the central government. Most famous of these was Liu Bei in the third century, who declared himself emperor of the Kingdom of Shu. His rivalry with two other kingdoms has given its name to the Three Kingdoms period in Chinese history (A.D. 220–280) and is celebrated in the classic novel Romance of the Three Kingdoms.

City of Brocade

The first to rule in Chengdu was the legendary figure Can Chong, chieftain of the local Shu tribe sometime before the eighth century B.C. His name means “cluster of silkworms”, proof that silkworm raising was already done at that time. Chengdu became famous for its brocades in the Han dynasty (206 B.C.-A.D. 220). The part of town where the silk-weaving shops were concentrated was made into a special enclave under state management. City of Brocade became one of the names for Chengdu.

We can still see the exquisite colors and designs from one thousand years ago in shoes and fabrics with floral and bird brocade designs unearthed at the Turpan oasis in Xinjiang. To add lustre to their fabrics, the silk weavers used to wash them in the river which flows by the city on the south, to this day called the Jinjiang (Brocade River). The name is also preserved in a modern nine-story Jinjiang Hotel beside the river. When you come across the name Jinjiang, or Chinchiang, on a Chinese restaurant, hotel or shop anywhere in the world, it generally has something to do with Chengdu or Sichuan.

During the Han dynasty, the city also became a center for highly-developed handicrafts. It had a thousand gold and silversmiths and lacquerware craftsmen. Chengdu was also a hub of trade. Marco Polo, visiting Chengdu in the late 13th century, reported that “the number of boats moving up and down the river was so great that no one would believe it unless they saw it.”

Most of the city was burned during a peasant uprising at the end of the Ming dynasty (1368-1644) and rebuilt during the Qing dynasty (1644-1911). It remained basically the Qing city until liberation. Now it has trebled in size. A 30-meter central thoroughfare bisecting the city from north to south is flanked by multi-storied offices, department stores, theatres and workers’ housing. Viewed from above, the city is a sea of old-style low wooden structures in which the 4-5 story apartments stand out prominently.

*TAN MANNI is a staff reporter for China Reconstructs.


CHINA RECONSTRUCTS
The hibiscus for which the city of Chengdu is famous.

Cheng Beilong

Peppery "dandanmian" noodles get their name from the street vendor's carrying pole.

Emei Film Studio

The Pavilion Overlooking the River, a Chengdu landmark.

Huo Jianying

Peddlers of bamboo-baskerware at a street market.

Huo Jianying
Chengdu handicrafts:
Silver filigree (top) and lacquerware.

Pavilion on the site where the great Tang dynasty poet Du Fu lived in a thatched cottage.
Temple dedicated to the memory of the great strategist Zhuge Liang, Marquis of Wu, Prime Minister of the Kingdom of Shu in the Three Kingdoms period.

Liang, NQ of Shu: memory of the great strategist Wu. Prime Minister, Jiqiying's.
The main thoroughfare South People's Road. Most of its buildings were built after the liberation.
Chengdu and the Sichuan basin are no longer an impenetrable stronghold reached only by traversing almost impassable mountains, sometimes on a narrow plank walk above a sheer cliff so that the great Tang dynasty poet Li Bai (701-762) said, "The road to Sichuan is more difficult than the road to Heaven." Now many rail lines have been cut through the mountains and from other cities one can reach Chengdu by air in a few hours.

Southwest Industrial Center

Modern communications have accelerated the building of Chengdu into a mighty industrial base for southwest China. The number of factories has gone up from the original 10 to 1,900. Main industrial products include aircraft, steel tubing, measuring and cutting tools and electronic instruments. Natural gas abounds on the plain and is piped to the city from fields 250 kilometers away.

But, "Chengdu is one of the few Chinese cities to have a cultural heritage of 2,000 years and we don't want to build a modern city at the expense of the ancient one," a member of the city planning department told me. No more heavy industries are to be built there. Instead, stress will be given to science and education.

Historically Chengdu was a magnet for men of letters. Many immortal works now valued as gems among the Chinese classics were written by Han and Tang dynasty poets while sojourning there. The first state-run school was founded there in the second century B.C. by Wen Weng, governor of the province of Shu. It has continued down to today in Chengdu Middle School No. 4. There one can see a stone tablet with the school's first name: "Wen Weng's Stone House."

Chengdu has many industrial and scientific research institutes, with a total of 19,000 scientists doing work in such advanced fields as satellite communications and lasers. There are 14 universities and colleges. Sichuan University, founded in 1927, is known for its faculty of Chinese language and literature.

Chengdu still upholds its title as the City of Brocade. In the Chengdu Brocade Factory, with electronically-controlled power looms, one thousand workers produce 1.4 million meters of brocade and satin a year, some of them in the ancient designs. But the factory keeps a wooden hand loom for weaving complicated designs with more colors than the power loom can handle. A piece of such brocade, with gold thread in the design, sells for thirty times as much as machine-made ones. Silver filigree is another Chengdu specialty. Silver wire of 3 mm. to half the thickness of a human hair is made into designs of pines, bamboos, flowers and human figures for use on wall plaques, vases, ornamental pagodas and jewelry. Chengdu lacquerware and pottery encased in woven bamboo are also well-known. Art wares are produced not only in large workshops but by home craftsmen in the small lanes and outlying villages.

Leisurely Atmosphere

Living as they do in an atmosphere permeated with ancient culture, perhaps it is not surprising that in their conversation the local people, well-educated or not, frequently cite a line from an ancient poet to substantiate their views. In manner, they are polite and unhurried. Even at rush hours one can hardly find any eager elbowers in the calm, orderly flow on the street.

The teahouse is an inseparable part of local life. In those in the center of town one can find professors chatting on academic matters, retired oldsters coming together for company, lovers talking in murmurs and others conducting private deals in whispers. In teahouses in the suburbs one meets peasants who have sold their wares in the market and have come in for a rest or a short nap. But, alas, there is no place for an unaccompanied woman. In no time she will be frowned out by disapproving male customers.

The local people cling to their feudal prejudices as well as their ancient culture.

One teahouse in bustling Dongfeng Street is the ground for battle over the numerous chess boards and the room is packed with 500 concentrating contenders and enthusiastic kibitzers. The tap of the chessmen on the boards can be heard even in the street. They pay 10 fen for a cup of tea that is continually refilled, bring from home something to eat and spend the whole day there. The local sports commission arranges for master players of Chinese chess, weiqi (Chinese draughts, or go in Japanese) and international chess to hold exhibition matches and give pointers.

At night the teahouses offer storytelling performances in the yangqin style — narration and singing by two persons to the accompaniment of the yangqin (a stringed instrument played with two small bamboo hammers) and other instruments. The audience seated at the small tables consists of mostly old people, the men often with long beards or smoking tiny long stemmed pipes. They sit back with eyes closed, nodding their heads to the rhythm, shout bravos at a good rendition, wipe their eyes at a moving incident and in between sip tea with great satisfaction.

Famous Food

Sichuan dishes and Chengdu's snacks are considered the high point among the many Chinese regional cuisines. Sichuan style includes more than 20 different types of tastes. Best known is "home style", salty, hot and slightly sour, like the famous Sichuan dandanmiean (carrying-pole noodles). They get their name from noodles sold by a vendor from two pots on either end of a carrying pole. Then there is the "strange taste" a pi-quant combination of peppery hot, sweet, salty and sour, as in Strange-taste Chicken (guaiweiji), "peppery and hot" as in Pockmarked Grandma Chen's Beancurd (Chenmapo doufu) which is frequently found on the menu of
famous Chinese restaurants at home and abroad and is even exported from Japan in plastic packages.

This world-famed dish is of modest origin. In 1860 the pock-marked hostess of a very small restaurant in Chengdu used to cook beancurd with minced beef in chili sauce for peddlers who paid her with cooking oil they had brought to the city to sell. It is very peppery and the soft beancurd retains its shape in cubes. The fame of her dish spread far and wide and her method was handed down only to the family's daughters-in-law. The daughter-in-law of the fifth generation has just retired from the shop. Today this dish is cooked in many ways all over the world, but one can find the authentic flavor only by sitting at one of the unpainted wooden tables in this humble-looking shop, Chennapo Doufu Dian, in the heart of Chengdu, eating the peppery concoction and sweating alongside the most discerning gourmets of the dish, the local peasant peddlers.

Chengdu boasts 200 varieties of snacks, some of them famous for a century. To sample seven or eight of them in shops on the market street costs only one to two yuan and takes two hours. One can savor Chef Lai's sweet glutinous rice dumplings (Laitangyuan), Chef Zhong's boiled meat dumplings (Zhongshuwaijiao), dandanmian and husband-and-wife beef tripe (fuqifeipian — the shop was first opened by a couple who sold sliced beef and tripe with chili and wild pepper).

Flowery Names

Chengdu was once known as the City of Hibiscus. In the tenth century Meng Chang, a local lord, took a fancy for the flower and had hibiscus trees planted all along the streets and atop the 20-kilometer-long city wall. There are few hibiscus trees today, so one does not see many flowers but the name furon still shows up in girls' names and shop signs.

Previously, during the Song dynasty (960-1279) Chengdu had been noted for plum blossoms. They are described in the famous lines by the Song poet Lu You: "Riding once west of the City of Brocade, I was intoxicated by the plum blossoms. For twenty li their fragrance prevailed..." The idea of Chengdu as a flowery city has been kept alive by the annual flower festival held since the Tang dynasty on the birthday of the founder of Taoism, the fifteenth day of February on the lunar calendar. Then, in the Taoist Temple of Black Goats plum blossoms and other blooms are displayed in competition and also for sale. The other great day is the Lantern Festival dating back 1,300 years (according to the lunar calendar) and celebrated in January or February. In the 1978 festival 20,000 elaborately designed lanterns were displayed. One was a fascinating arrangement of swan and fish lanterns floating on a pond amid lighted "lotus blossoms".

In 759 the great Chinese poet Du Fu resigned his position as a petty official in the Tang court in Chang'an and finally took refuge from war and unrest in Chengdu. With help from friends and relatives he built a thatched cottage in a desolate area on the outskirts of the city and lived there for more than three years. The 240 poems he wrote during that time are an important part of the 1,400 which have come down to us. His greatness lies not only in that he was a master of language and romantic expression, but also in his intense love for the people and his anxiety over the fate of the country. The wind blowing the straw thatch from his roof one autumn night brought forth one of his greatest expressions of feeling for the poor, "Song of the Autumn Wind and the Thatched Cottage."

... dozing toward morning I saw in a dream
An immense building with thousands of rooms
Where all who needed it could take
Welcome shelter, a mansion as solid as a hill
Nor fearing wind or rain; and waking, thought,
How absurd — when could I ever see such a house?
Yet could such thing come to pass,
Even though this poor hut were wrecked entirely
And I frozen to death, I would be content.

Mansions, including a shrine and memorial halls did come to be built — in memory of Du Fu a thousand years after his death. Though he received little recognition during his lifetime, he was loved and honored in succeeding ages. First, in the tenth century, the poet Wei Zhuang located the foundation of Du Fu's house and built a cottage on it. In centuries that followed a delightful garden was laid out around the site with exquisite temple and pavilions, but the name Thatched Cottage remained.
After liberation the people's government restored the place according to plans carved on stone tablets from the Ming and Qing dynasties. Efforts have been made to reconstruct the garden with trees and flowers as described by Du Fu in his poems. A museum in the park has a collection of 29,000 editions of Du Fu's poems from hand-copied and block-printed ones of ancient times to modern editions and translations from other countries. It also contains historical data for research on the poet's works. An association for Du Fu research was set up this year.

**For Strategist and Poetess**

Another famous resident of Chengdu was Zhuge Liang (181-234), prime minister to Emperor Liu Bei and his son. He was a celebrated statesman and strategist and his name has become the synonym for one with great wisdom. In the Tang dynasty a temple was built in his memory outside Chengdu's southern gate. Zhuge Liang had the title Marquis of Zhong Wu conferred on him posthumously so the place is known as the Temple of the Marquis of Wu.

Under the dark green cypresses stands a tablet erected in 809 in praise of Zhuge Liang's contributions. The temple itself has been rebuilt several times. West of the temple is the tomb of Emperor Liu Bei and his two consorts.

Pavilion-Overlooking-the-River Park on the bank of the Brocade River outside the city's east gate is another cultural shrine. The stately four-story tower (also called Pavilion of Lofty Beauty) and several other pavilions and halls were built in 1880 to commemorate the Tang dynasty poetess Xue Tao (768-831). It is said that here she used to go down to the river to fetch water for making the pink-colored note paper on which she wrote her poems. This beautiful paper known afterward as Xue Tao paper, is still sold, imprinted with a verse, in Chengdu today.

Famous for her gift for poetry, Xue Tao had many friends and admirers among the great poets and scholars of her times, including those who held positions as prime minister, governor and general. They corresponded in verse. Her plaintive poems reflect the sorrowful life she led. It is said she lived in poverty and was viewed by self-righteous feudalists as a loose woman.

Because Xue Tao loved bamboo — she praised it as being humble and upright — after her death the people planted bamboo here. Now the park is a world of bamboo, over 130 varieties. Among the rare types are Fairyland (the surface between two joints protrudes in outlines resembling a human face), Chinese Violin (dark purple in color, it makes a clear-toned, resonant neck for stringed instruments and needs no paint), Solid Stem (with a very small hollow inside), Fernleaf Hedge (with long leaves and slim stem no taller than one foot, it is used in miniature landscapes) and Golden Brilliant (golden trunk with emerald stripes).

The groves and clusters of bamboo provide a quiet shady place for study to students from nearby Sichuan University. Students of foreign languages there like to strike up conversations with tourists from abroad.
Performers from Abroad

TAN AIQING

Dance from “Eugene Onegin” as presented by the Stuttgart Ballet. Wu Chuping

From “Cinderella” by the Boston Ballet. Zhang Shuicheng

The Chinese stage was brightened by the appearance of thirteen groups or individual performers from eight countries in the first half of this year.

- The Stuttgart Ballet from the Federal Republic of Germany headed by Marcia Haydee performed ballets based on Pushkin’s “Eugene Onegin” and Shakes-

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Scene from the Australian Ballet’s “Don Quixote”. Zhou Youma

Mme. Lycette Darsonval, choreographer-director of L’Opera de Paris, coaches young ballerina Zhang Dandan and others for “Sylvia”. Yang Yalan
peare's "Romeo and Juliet". Chinese ballet circles were particularly impressed by the way the dances revealed the inner world of the characters.

- **The Boston Ballet** from the United States presented the modern ballet "Aureole", and the classical ballets "Cinderella" and "La Fille Mal Gardée". Twelve first-year pupils from the Beijing Dance Academy played the clock dwarfs in "Cinderella".

- **The Australian Ballet**, a new company that has risen quickly to join the world's finest, selected for presentation in China "Don Quixote" from its repertory of some 60 works. Their third act of "Wedding Ceremony", whose long pas de deux is viewed as one of the high achievements of ballet art, won round after round of applause.

- **The French ballet 'Sylvia'** was performed in Beijing by China's Central Ballet Troupe last June. The Sino-French Cultural Exchange Agreement had granted to China rights to performance of the work which has been the property of L'Opera de Paris for more than a century. The Beijing production was directed by Mme. Lycette Darsonval, choreographer-director of L'Opera, with the help of its grand master of ballet Pascal Vincent and the famous French scenery designer Bernard.

- **The Pucar Song and Dance Troupe** of Pakistan offered Chinese audiences vivid scenes of country life, work and a wedding. In these, and in scenes from a dance drama and Pakistan classical and folk dances, the bold, unrestrained and straightforward character of the Pakistani people came through.

- **The Netherlands Chamber Orchestra** of 29 members was the first performing group from that country to visit since the establishment of diplomatic relations between it and China. The orchestra played works by Dutch composers C.E. Graaf and J.B. Van Bree and pieces by Haydn, Mozart and Tchaikovsky. Their exquisite, well-knit performance enabled the Chinese audience to appreciate the high attainment of European chamber music. The guest musicians also impressed the audience.
with their serious attitude toward Chinese music, for in a very short time they had learned to play the Chinese composition "The Moon Reflected in the Second Fountain."

- The Welsh Orpheus Male Choir sang more than 30 songs in Shanghai. Their Welsh folk songs and hymns were especially welcomed by the audiences. This amateur group spent two years preparing for the China tour and their fine performance did credit to their effort.

- Jean Perison, first-prize winner at the International Young Conductor Competition held in Besançon, France, worked with China's Central Philharmonic Orchestra as part of the Sino-French cultural exchange. During his stay in China he conducted three concerts by that orchestra, leading it in playing some difficult works by the French composers Debussy, Ravel and Bizet. "He is not only an outstanding conductor, but also an experienced teacher," the well-known Chinese conductor Li Delun observed.

- Daniel Pollack, the American pianist, gave solo concerts in Beijing and Shanghai in January. He performed Sonata by the modern American composer Samuel Barber and works by Chopin, Schumann and Liszt.

- Fan Siao-Ping, the French pianist, performed works by Schumann, Chopin and Ravel in May in the concert auditorium of the Central Conservatory of Music. A student of the piano in France since childhood, in 1975 she took part in the concert for the 100th anniversary of Ravel's birth. On the recommendation of her grandfather Miao Yuntai, a member of the Standing Committee of the Chinese People's Political Consultative Conference, she was invited to lecture at the conservatory on piano music in France.

- Prof. Si-Hon Ma, the well-known violinist, and his pianist wife, Kwong-Kwong Ma, from the United States played Brahms' Thun Sonata in A Major, Andreae Volkman's Sonata in D Major and the Kreutzer Sonata in A Major by Beethoven, the same three pieces they performed in Shanghai in 1945. That was the first time they had worked together. This year's performance in June was in Beijing at the invitation of the Central Philharmonic Orchestra.

- The Youth Envoy Song and Dance Ensemble of Brigham Young University in the U.S. came to China on a vacation-performance tour in May. Their numbers included an American Indian dance and one popular in the Rocky Mountains. A fourth-generation Chinese-American, who sang a Chinese folk song "In That Faraway Place There Is a Fine Girl" in a long gown, got a big hand. The group also presented another aspect of American culture with the mask characters of Minnie Mouse and other Disneyland personalities.
SINCE the announcement early this year that eight mountains in western China would be opened to the international mountaineering community, alpinists have beaten a path to China's door. Qomolangma (Mt. Everest), of course, is the most sought-after climb and is already booked solid through 1985.

A Japanese mountaineer, Kato Yasuo, reached the summit of Qomolangma via its northeast ridge at 20:55 (Beijing time) on May 3. He thus became the first person to have conquered Qomolangma from both its north and south slopes, the latter in 1973 through Nepal. Two other Japanese alpinists, Ozake Takashi and Shigehiro Tsuneo, successively reached the peak at 20:50 and 21:02 on May 10; they were the first in the world to have scaled the difficult north wall.

At the same time, two teams from the Federal Republic of Germany were climbing Xizabangma (Gosainthan). The first team — Gunter Sturm, Fritz Zintl, Michael Dacher and Wolfgang Schaffert — reached the summit on May 7, and the second — Siegfried Hupfauer and Manfred Sturm on May 20.

On July 21, three Americans accomplished the historic feat of climbing Muztagata (Muz Tagh Ata) on skis and then skiing downhill. The team included Ned Gillette, Galan Rowell, and Janet Reynolds. Reynolds's achievement was a world record in women's mountaineering.

The Japanese, German and U.S. teams were the first privately-supported foreigners permitted to climb in China since 1949.

The eight peaks opened to mountaineers are Qomolangma (8,848 meters above sea level), on the Chinese-Nepalese border; Xixabangma (8,012 meters) in Tibet; Kongur (Kungur, 7,719 meters), Kongur Tiubre (7,595 meters), Muztagata (7,546 meters) and Bogda (Bogdo-ola, 5,445 meters), all in the Xinjiang Uygur Autonomous Region; Gongga (Minya Konka, 7,556 meters) in Sichuan; and A'nyemagen (Amne Machin, 6,282 meters) in Qinghai. Of these, Kongur and Bogda are virgin peaks which no climbers have yet reached.

Chinese Mountain Peaks

Of the world's 14 mountains taller than 8,000 meters, eight stand on China's western border and one is inside Tibet. In western China, where the Himalaya, the Altai, the Karakorum, and other ranges punctuate the landscape, there are many peaks taller than 6,000 meters. Interest in them is not only scientific and recreational: some have religious significance as well. Mt. Musur in the Tengger mountains, for example, once attracted pilgrims because Xuan Zang (602-644), a Tang dynasty high monk, reached its peak on his way to India in search of Buddhist scriptures.

A British team made seven attempts on Qomolangma's north slope between 1921 and 1938. They climbed to 8,600 meters — an astonishing achievement under the circumstances; even the south slope was not conquered until Hillary and Tenzing reached the peak in 1953 — and left a great deal of valuable data for their successors.

China did not develop mountaineering as a sport until 1956, when a Sino-Soviet expedition climbed Muztagata. The Chinese Mountaineering Association was founded two years later. Between 1960 and 1975, Chinese expeditions
twice reached the summit of Qomolangma from its north slope and made several successful assaults on other peaks. This activity drew attention from abroad and in the past two decades a hundred mountaineering organizations from 30 countries sought permission to climb in China.

The Sport’s New Era

In mountaineering history, 1786-1872 was the golden age of the Alps; and all 14 of the mountains greater than 8,000 meters were conquered between 1950 and 1964. With the great peaks thus vanquished, the sport has in recent years developed to a new stage, in which the difficulty of the approach is paramount. That China has opened eight peaks to climbers is therefore welcome news to alpinists around the world.

The Chinese Mountaineering Association actively cooperates with foreign alpinists in China, sending its members as liaison officers; offering interpreters, assistants, carriers, cooks and campsite attendants; providing drivers and trucks; renting out radio sets; helping hire horse carts, yaks and camels; contracting for overland transportation; and providing other needed facilities. Members of the recent Japanese expedition said several times that without the cooperation of the Chinese Mountaineering Association they could not have succeeded. The C.M.A. sent its secretary-general, Wang Fuqhou, as the liaison officer, with the Japanese. (Wang was one of the three Chinese alpinists who conquered Qomolangma in 1960.) A 22-member support party participated in the transportation along the two routes up the north wall and eight carriers brought three tons of equipment and supplies up to the 7,700-meter camp.

For the West German expedition, Xu Jing, 53, vice-chairman of the C.M.A. and a pioneer of Chinese mountaineering, was the liaison officer. The support party helped the climbers set up campsites at 5,800, 6,400, 6,900 and 7,300 meters. To acclimate themselves, the climbers spent four days in Lhasa, Tibet, an exotic place in the Westerners’ eyes, where they visited the Potala Palace, the Zuglakang Monastery and other sights.

The Sport in Full Swing

Reinhold Messner, the famous Italian mountaineer, is at this writing climbing Qomolangma alone. If he succeeds, he will be the first person to reach the roof of the world in the rainy season. This fall quite a few foreign mountaineering parties will be in China. A team from the Austrian Friends of Nature Club is going to climb Xixabangma, two U.S. teams will make expeditions to Gongga, and an Austrian team will attempt the difficult Bogda climb over the Tianshan mountains.

It’s expected that 1981 will see even more foreign alpinist organizations in China. A Japanese women’s expedition headed by Junko Tai, the first woman conqueror of Qomolangma, will come to climb Xixabangma.

Between March and July of this year, the Chinese Mountaineering Association signed agreements with two dozen foreign alpinist organizations. Qomolangma is booked through 1985. Given this interest, it’s likely that more mountains will soon be open for climbing.
China's Wildlife
Yesterday and Today

WEN HUANRAN and HE YEHENG

With only 6.5 percent of the world's land area, China is the home of between 12 and 14 percent of the world's wildlife species, some of them rare and extremely valuable.

Examples are the black gibbons on Hainan Island, one of six such species in the world; the savage South China tiger in the Nanling Mountains; the Yangtze alligator, found exclusively along the Changjiang River; and the Northeast China tiger and sika deer in the virgin forests of the Changbai Mountains. Moose weighing 500 kg., but able to run across

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Dolphin in the Changjiang (Yangtze) River.

Otter in the Changbai Mountains.

marshland and swim rivers, inhabit the Greater Hinggan and Lesser Hinggan ranges. In southwestern and western China there are the wild elephants, peacocks, yaks and other highland animals as well as the world-famous giant panda. In the arid northwest dwell such rare animals as the wild ass and wild horse.

Changes in Habitat

The distribution of China's rare wildlife has undergone enormous changes over the centuries. Its history is a fascinating subject for investigators.

Between 1,000,000 and 100,000 years ago the giant panda roamed broad sections of the Changjiang River basin and provinces south of it. Small pockets of them were also to be found to the north in
In the 19th and early 20th centuries, the last of China's wild rhinoceroses died out in the southwestern part of Yunnan province.

People in the north China plains began to domesticate wild elephants 3,000 years ago, according to historical studies. Significant is the fact that the character "yu", another name for Henan province, in its original pictographic form consisted of a man leading an elephant. In the Yin dynasty (c. 16th-11th centuries B.C.) they were first used in warfare, as far as we know. In the Tang and Song (960-1279) dynasties elephants were used to plow farmland in some parts of south and southwest China. Tang accounts also mention that elephant trunks were much sought after as a gastronomical treat by the inhabitants of what is now Guangdong province and the Leizhou Peninsula—which shows the prevalence of these pachyderms in those days. Today, only limited numbers survive in the southwestern part of Yunnan province.

**Why the Changes?**

For one thing, a changing environment.

Animal remains discovered at the Yin dynasty ruins at Anyang
Rare White Animals in Shennongjia

White chevrotains, white chamois and white bears have been discovered recently by members of a surveying team in the Shennongjia Mountains in northwestern Hubei province. The existence of these unusual white animals, scientists believe, probably has something to do with the area’s geological conditions, climate and environment. Since brown is the usual color of these animals, the exact reason for their change in color is a matter of much interest and scientific significance.

The white bear living in Shennongjia at an altitude of 1,700 meters above sea level is unrelated to the polar bear of the Arctic Ocean; its habits are much the same as those of the black bear.

White musk deer. Li Delu

White chamois. Li Delu

White bear.

in northern Henan province indicate an environment entirely different from what it is today. Unearthed bones of wild elephants, rhinoceroses and Malay tapirs—all tropical fauna—show that the climate there was a good deal warmer 3,000 years ago. And also much wetter, making possible the growth of large tracts of lush grass and swampland flora, as indicated by the skeletons of such marsh animals as wild water buffalo, David’s deer and Malay tapir. Remains of tigers, leopards, bears, badgers and bamboo rats point to the presence of vast forests and bamboo thickets.

Environmental changes came about as a result of a general drop in temperature in China over the past 2,500 years, added to the felling of forests and reclamation of swampland by expanding populations in the Huanghe River basin since the Western Zhou dynasty (c. 11th century-771 B.C.). Wild animals that could not adapt to the changes moved away or died out.

Another reason was the wholesale slaughter of wildlife. In former times hunting was the primary occupation of the human population, and wildlife their main source of meat. Hunters managed to kill large numbers of wild animals with their crude hunting tools, even such big game as the rhinoceros. Later, the use of rhinoceros horns in medicine hastened the decimation of these luckless beasts. In areas south of the Nanling Mountains the local people used to pickle parrots in salt and cure the flesh of peacocks for their tables, with disastrous consequences for these species.

Lastly, certain declining species were no longer able to adapt to new conditions. Examples are the bulky rhinoceroses which has a low reproduction rate and a gestation period as long as 400 to 500 days; and the giant pandas who give birth to at most two cubs a year, few of which survive. Other causes are the mature giant panda’s large food requirement—15 to 20 kg. of bamboo shoots daily, loss of cutting ability due to degeneration of carnassial teeth, and devolution of offensive organs.

Since the founding of the new China in 1949, the people’s government has paid much attention to the country’s wildlife. A State Council directive in 1962 called for active protection of wildlife resources and laid down policies for their management. Measures were stipulated for such aspects as reproduction, domestication, hunting and rational utilization.

Such work came to a virtual standstill during the decade of turmoil brought about by the gang of four. It was resumed again in late seventies when the Chinese government promulgated the Forestry Law and Law on Environmental Protection and set up more than sixty nature preserves. But, China being such a large country, the existing preserves are still too few and too small. Government institutions are now studying further means by which the natural ecosystem and the wildlife therein can be effectively protected.
The Guqin
—Age-Old Musical Instrument

LI XIANGTING

ANYONE interested in Chinese music or ancient Chinese culture will soon encounter the guqin; and no one familiar with it can remain untouched by its unique capabilities, its position in the history of music, and its indelible influence on ancient and modern culture.

A seven-stringed plucked instrument once known as the qin, the guqin (literally, ancient qin) is rich in tone color, elegant in form, and impressive in conception. It originated 3,000 years ago, and nearly 1,000 musical compositions—some dating from the first century B.C.—have come down to us. Moreover, today's musicians are still performing on guqin made in the distant past, among them the earliest guqin unearthed, from the Warring States period (5th century B.C.) found in Sui county, Hubei province, in recent years, and one of the Western Han dynasty (1st century B.C.) discovered at Mawangdui in Hunan province.

Honored as the symbol of ancient Chinese music, the guqin was played, in the old days, by nearly every intellectual to express his feelings and hopes and to mold his personality and temperament. So adored was it that the player was supposed to bathe and burn incense before touching the instrument, and to be decently dressed and sitting straight while playing it. The guqin was then regarded as something supernatural that transcended the realm of art.

Out of this belief many myths developed. The ancient philosopher Han Fei wrote that Shi Kuang, a lutanist of the Spring and Autumn period (770-476 B.C.), attracted a crowd of black cranes that whooped and danced to his music. Historical records say that Ji Kang, a lutanist of the 3rd century, learned to play "Guanglingsan" (a 2,000-year-old qin melody, the world's oldest extant musical composition) by the inspiration he got from the souls of other ancient lutanists.

Romantic History

Innumerable touching stories about the qin have been related by poets, writers, historians, and painters over the past 2,000 years. Yu Boya and Zhong Ziqi, goes one account, were good friends. Their understanding of and feelings for each other are vividly described in the book Master Li's Spring and Autumn Annals written in the 3rd century B.C. When Boya was thinking of high mountains while he played the qin, Ziqi would exclaim: "Marvelous! I see lofty mountains before me!" When Boya had flowing water in mind, Ziqi would cry: "Wonderful! I hear the flowing of water in the music!" Ziqi was known as Boya's zhi yin, literally "the one who understands his music," a term now referring to a bosom friend. They became so attached to each other that when Ziqi died Boya felt there was no longer anyone worth playing his qin for, so he broke his instrument and never played again.

The guqin was also a means of expressing love. As early as 2,500 years ago The Book of Songs recorded a story about a beautiful woman being attracted by qin music played by her lover. China's great historian Sima Qian (c. 145-90 B.C.) wrote in his Records of the Historian about a very intelligent and learned young woman, Zhuo Wenjun, who was so moved by qin melodies played by the scholar Sima Xiangru that she fell in love with him. Enthralled by his music she went to him one night. They eloped and got married.

There are also tragic stories related to the guqin. According to the book Stories About Qin Songs, "Guanglingsan" was first known as "Nie Zheng Kills the King of Han." The story is that the king beheaded a skilled swordsman who had made him a keen blade but failed to deliver it at the proper time. The dead man's son, Nie Zheng, resolved to avenge his father. Going to the remote mountains, he met a fairy with whom he spent ten arduous years mastering the qin. His fame as a musician spread, and the king summoned him to play at court. When the monarch, enchanted by the wonderful music, came closer, Nie Zheng drew a sword concealed beneath the instrument and slew him. Then he committed suicide.

Ji Kang, a scholar and lutanist, was condemned to death for opposing the corrupt imperial court. He asked permission to play "Guanglingsan" one last time. With a sigh of grief and sorrow he said, "From now on 'Guanglingsan' will be no more." He was only 40 years old.

Characteristics and Melodies

Strings for the qin were once made of silk, but are now usually nylon and steel. The body is a sound box with two holes at its back. The front is made of tung wood, the back of Chinese catalpa, and the entire instrument is lac-
The qin has a range of 4 octaves, with a total of 91 overtones — 13 to each string. The qin is placed horizontally on a table; the strings are plucked with the right hand and fretted with the left, which may also glide to and fro to change the pitch and produce a singing effect. There are more than 200 finger positions. Playing techniques are complex and richly expressive.

The system of notation for the qin is quite unusual. There are no signs for the length and value of notes. The traditional notation consists of complicated signs which tell the location of the note to be played, the finger to be used, and the manner in which the string should be plucked.

Despite the upheavals and unrest throughout centuries of dynastic changes, 150 or so handwritten and printed qin melodies have survived from the Tang dynasty (618-907) — a rare legacy in the cultural heritage of mankind.

Most of the music is written for solo qin. The two most famous melodies are “Guanglingsan” and “Flowing Water.” Other important ones are “The Floating Clouds and Roaring Water of the Xiang River,” written by the lutanist Guo Chuwang of the Southern Song dynasty (1127-1279) in memory of lost northern territories; “Ode to the Plum Blossoms,” a Tang dynasty piece taken from a flute melody, extolling the staunch and hardy spirit of that flower; “Eighteen Laments” written sometime before the Song dynasty, describing the misfortunes of the talented poetess Cai Wenji of the Eastern Han dynasty (25-220); and “In Memory of an Old Friend,” from the Qing dynasty (1644-1911).

Singing to one’s own accompaniment, one of the main forms of qin performance, dates back to the Spring and Autumn period (770-476 B.C.). It formed part of the yueh music studies which was one of Confucius’ compulsory courses for his students. Later, with improvement in performing techniques, more impressive themes could be handled by the solo performers. But the form of singing to one’s own accompaniment has always existed. Fifty per cent of the thousand or so qin melodies extant have lyrics and can be sung. The oldest, “Lament for the Past,” is by the famous poet Jiang Baishi of the Song dynasty (960-1279). By means of allegory, it deplores the decline of the state.

Another popular melody is the passionate love song “The Courtship of the Phoenixes.” And “Parting Song at the Yang Guan Pass,” developed from a farewell poem by the great Tang dynasty poet Wang Wei, is cherished by the people.

Besides the noted lutanists mentioned above, there are also Confucius’ qin teacher, Xiang, and Cai Yong of the Eastern Han dynasty, a famed scholar and lutanist who compiled Qin Songs, a collection of 50-some songs popular in his day. Zhu Changwen of the Song dynasty wrote Qin History, in which many anecdotes about lutanists from ancient times to the Song dynasty were included. Zhu Quan’s The Mysterious Score, published in 1425, records 40 or more qin melodies dating from the Han dynasty to the Tang and Song dynasties. This is the oldest and most important extant collection of qin music.

The Lei Wei brothers of the Tang dynasty were master qin makers whose instruments were highly prized by their contemporaries. By the Song dynasty, every qin they made had become a rare treasure; one is now preserved at the Palace Museum in Beijing. It is mentioned in historical records that the Lei Wei brothers’ qin were made chiefly of pine instead of the usual tung wood. It’s said that they went deep into the pine forests during windstorms and chopped down any pines that produced unusual sounds. With these they made their marvelous qin.
Although the qin enjoyed great popularity in ancient times, its later development was left to the vagaries of fate. By the 19th century it was gradually declining. On the eve of China's liberation in 1949, surviving lutanists could barely make a living and their art was dying out.

Shortly after the liberation, in the effort to salvage China's cultural heritage, cultural departments of the people's government paid special attention to restoring the art of the qin. The late qin expert Zha Fuxi, vice-chairman of the Chinese Musicians' Association, made a nationwide tour and collected quite a number of important historical records. His 24-volume Collection of Qin Melodies with photostatic copies of ancient music is being published in installments by the Zhong Hua Book Company. Melodies like "Guanglingsan" and others that no one has been able to play for hundreds of years are being revived and transcribed into modern notation. Qin performances have become popular in concerts, and on radio and TV. Some writers are using qin melodies as background music for dramas and films.

Scholars abroad are also showing interest in the qin. The chamber music adapted from a qin melody by a Chinese-American composer, Prof. Chow Wen-chung, is a striking example. Manfred Dahmer, a graduate of the Frankfurt Conservatory of Music, learned to play the qin at the China Central Conservatory of Music. He is the first foreign student to have done so.

The qin was introduced to Japan as far back as the 5th century. In the 1940s, people in Europe were already learning and studying the qin, notably the Dutchman, R.H. van Gulik, whose book The Lore of the Chinese Lute has won international recognition. The 3,000-year-old qin will undoubtedly play an important role in the increasing cultural exchanges between China and other countries.

New Hands for Accident Victims

YU DACONG

Bone specialists in Shanghai have made a new right hand for a patient who lost both hands in an accident four years ago. The hand, shaped like a pincer, consists of a metal metacarpal bone and two of the patient's own toes. It can do most of the work done by a normal hand. The operation, the first of its kind in China, has been pronounced successful after more than a year's observation.

The patient, Gao Tianshe, a construction worker at a reservoir in Shaanxi province, had both of his hands blown off by a blasting cap. For a time he wore a pair of artificial hands. But they were uncomfortable — hot and clammy in summer and icy in the winter. And they did not help much.

Breakthrough

Dr. Yu Zhongjia, vice-director of the orthopedics department of the Shanghai No. 6 People's Hospital and his colleagues had seen such cases before and for many years had considered the possibility of reconstructing some sort of a hand on the stump of the forearm. In 1978 they decided to give it a try. In three months they worked out a detailed plan, and on October 21 that same year built a new hand for Gao Tianshe during a grueling, 12-hour operation assisted by colleagues from the departments of medicine, surgery and orthopedics.

Back in 1963 Chinese surgeons had succeeded in reimplanting a severed limb, and three years later, a severed finger. But a hand could not be reattached if it had been separated from the rest of the arm too long, or if the palm were missing.

Subsequent advances in limb reimplantation and microsurgery made it possible to perform more complicated grafting surgery — for example, of large flaps of the subject's own skin. In 1966 Chinese medical workers reconstructed a thumb by transplanting a toe, with good results. Lately, they have
been simultaneously transplanting two toes to replace missing fingers. But no one had tried yet to remake a whole hand.

Dr. Yu's operation on Gao Tianshe was the first attempt. Asked about details, he told me:

"Making a hand differs from finger reconstruction. In the latter case the palm still exists, and the problem is simply to graft toes onto the metacarpal bone in the right way. But when the entire hand is lost, the first thing to do is to make a new palm. Transplantation of toes comes next.

"Nature has built the palm over a framework of metacarpal bones," he went on. "With assistance from the Shanghai No. 6 Medical Instruments Factory we made an artificial one in the shape of a Y, using a high-strength titanium alloy developed by the Shanghai Iron and Steel Research Institute. The lower section is inserted into the radius of the forearm, and the forked section into the metatarsal bones of two or three toes, to hold them in place. The angles of the artificial palm bone have to be carefully planned, to enable the re-implanted toes to move in apposition the way a normal thumb and fingers do. The man-made bone is then surrounded and fixed in place with muscles and soft tissues, and the blood vessels, nerves, muscles and sinews of the toes linked up with those in the forearm."

Following a period of growth, healing, functional exercises and physiotherapy Gao Tianshe's reconstructed hand gradually acquired sensation and the ability to pinch and hook. In seven months nerve recovery had reached the stage where the hand could feel pain and cold and heat, differentiate between hard and soft objects, and perspire. Gao Tianshe can now write, hold a cup or spoon, strike matches, and lift objects weighing up to 5 kilograms. He can also pick a thin sheet of paper up from a table top or grain of millet out of a bowlful of rice.

Hope for the Handless

Dr. Yu and his assistants have subsequently performed two more such operations on patients who lost both hands and wrists. Now each has a reconstructed right hand with two or three transplanted toes serving as thumb and index (and middle) fingers and capable of doing 70 percent of the work a normal hand does. Removal of one or two toes from the feet does not cause any inconvenience in walking, running or jumping.

These operations are still very new and need to be perfected. But to those who suffer from the disabling consequences of the loss of one or both hands, Doctor Yu and his colleagues have brought hope of a more normal and productive life.

Chen Zhongwei, director of the Orthopedics Department (first right), vice-director Yu Zhongjia (first left) and Dr. Wang Yan examine the functioning of the reconstructed hand.

With This Issue

'China Reconstructs' in Chinese

In response to requests from overseas Chinese and Chinese living in Hongkong and Macao, China Reconstructs will appear in a Chinese language edition. The October issue is now available.

The content of the Chinese edition will be mainly the same as in other language editions: vivid, factual reports on China's politics, social conditions, life of the people, progress in modernization, education and the arts, and special articles on historical subjects and China's splendid culture and famous scenic spots.

Special features in the Chinese edition will be articles on the ancestral places of the overseas Chinese and a special column to help them locate their relatives. The Chinese edition will be printed in the original unsimplified characters set vertically, in the style most familiar to overseas Chinese.

For a sample copy or to subscribe, write our distributors, GUOJI SHUDIAN. P. O. Box 399, Beijing or direct to: CHINA RECONSTRUCTS, Promotion Department, Beijing (37) (Rates are the same as for other language editions)
THE "rare earths" have been the bane of beginning chemistry students for a century. They are not listed individually in the short-form periodic table of the elements, their names are hardly household words, and their uses are arcane; so they are usually forgotten after the first-semester exam.

But the rare earths are not in fact rare; they are of immense importance in many industries from porcelain to petrochemicals; and more than half the world's known reserves are in China.

The invention of the ion-exchange technique 30 years ago enabled metallurgists for the first time to investigate the particular properties of each of the 17 metals called rare earths. Previously, they had been difficult to separate from one another and from the complex minerals in which they are found because they behave almost identically in ordinary chemical reactions. They were known and used principally in the form of oxides and salts. Now, nearly 200 years after the first rare earths were discovered in Sweden, their metallic characteristics can be used to advantage. They can be hammered into sheets, extruded into wire, and alloyed with other metals, among other things.

In petrochemistry, rare earths are used as catalytic agents to boost oil-refining capacity by 30 percent and to increase the recovery ratio of gasoline and diesel oil from crude. Nearly all the rare earths have applications in the glass and ceramics industries, both traditional and modern: Long used to impart characteristic colors to porcelain, they are now added to picture-tube glass to produce better color television. In agriculture, small amounts of certain rare earths can raise yields of wheat and vegetables by ten percent. Rare earths like dysprosium and samarium form highly magnetic compounds; small amounts mixed with cobalt and placed on the body's acupuncture points improve the treatment of arthritis, high blood pressure, and a dozen other ailments, with no adverse side-effects observed so far. New uses have been found in the aviation and atomic energy industries, and of course thorium and cerium are still used, as they have been for many years, to make flints and gas-lamp mantles. China's Wuxi Diesel Engine Factory makes its crankshafts of cast iron alloyed with rare earths and reports that they work better than steel crankshafts.

China's Reserves

So far are the rare earths from being rare that, as a group, they are several hundred times more abundant than such common metals as lead, tin, zinc, or tungsten. Until the results of a Chinese geological survey were known in the early 1950s, the world's largest deposits of monazite and the other minerals in which the rare earths are found were thought to be in Scandinavia, Brazil, India, and the United States. The Chinese survey indicated, however, that China has more than half the world's reserves of these minerals.

In 1978, the Chinese Ministry of Metallurgy published Rare Earths, noting several distinct characteristics of the country's reserves. First, the reserves are so vast that although 98 percent of them are located in Inner Mongolia, large tracts are found in more than half the provinces and autonomous regions. Second, China has the world's greatest variety of rare-earth-bearing minerals. some of them unknown elsewhere. And third, these minerals contain nearly every important rare-earth element.

The Bayan Obo Mine in the Inner Mongolian prairie is China's major producer of rare earths, including scandium, which is truly rare in nature. Southern Jiangxi province abounds in rare-earth resources; its Ganzhou prefecture alone has seven proven deposits of good-quality ores in tracts large enough to be strip-mined.

A New Industry

China began to turn out its own rare-earth products only in 1958. The country now manufactures more than 200 such products and applies rare earths widely in the fields of metallurgy, machinery, petrochemicals, glass and ceramics, electronics, medicine, building materials, light industry, and national defense. Exports of rare-earth products started in 1978.

Chinese scientists have also registered some notable feats in rare-earth chemistry. They have caught up with the state of the art in using the one-step method to extract relatively pure yttrium oxide, and in the extraction method of separating lanthanum oxide. They have also been able to produce 60-percent concentration rare-earth oxides, greatly simplifying and reducing the cost of melting.
Inside a workshop.

Using the ion-exchange technique to extract pure rare-earth oxide.

Separating the oxide from refined ore.

Photos by Song Xingzi

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OCTOBER 1980
Gunpowder and Ancient Rockets

XU HUILIN

China’s latest success in rocketry—the launching on May 18 of her first carrier rocket to a destined area in the South Pacific—was an occasion to recall her long history in rocketry. Rockets were first invented in China and true rockets were used there at least as early as the Southern Song dynasty (1127-1279), and incendiary arrows much earlier.

A well-known early instance of the latter is from the third century Three Kingdoms period. On the orders of Zhuge Liang, the famous strategist of the Kingdom of Shu, troops set up ladders and built a “roof” to shield them from arrows when scaling the wall of a city of the Wei Kingdom. But incendiary arrows from 3,000 Wei defenders set fire to the ladders and cover and wiped out the Shu troops. Attached to the head of each arrow was a package of fast-burning Chinese mugwort, resin and oil, which was ignited before firing.

Later, in the Northern Song dynasty (960-1127) such arrows bore five ounces of gunpowder near the tip.

Under Northern Song, invention of weapons was encouraged and inventors usually presented their ideas to the government. In August of the year 1000 the naval commander Tang Fuxian was cited for using rockets and fire balls he had made himself. Two years later the officer Shi Jin claimed that he could make fire balls and rockets. Song dynasty Emperor Zhen Zong summoned him to the capital for a demonstration.

A huge quantity of arrows loaded with gunpowder—17,000 in one day, records say—were used in 1221 by Song dynasty generals in the 25-day defence of Qizhou in today’s Hubei province against the Jin invaders from the north.

Powder Propulsion

Rocket propulsion as used by the ancients was essentially the same as today. A paper tube attached to the arrow was packed tightly with powder. The continuous jet of rapidly expanding gases propelled the projectile forward. The first rocket of this kind appeared late in the Southern Song period. Powder-propelled firecrackers were invented during the reign of Emperor Song Xiao Zong (1127-1194) and these led to festive fireworks. True rockets were used in battle by Kublai Khan, first emperor of the Yuan dynasty, in military expeditions against Japan in 1274 and 1281.

A Japanese historical record says they “fell for a time like rain.”

Further improvements were made to rockets during the Ming dynasty (1368-1644). Tips of different shapes gave them names like flying broadsword, flying spear, flying sword and swallow-tail. A volley of them fired simultaneously proved more effective. The book entitled Magic Fire Dragon Tactics written in 1377 by Jiao Yu notes that at the firing of a signal gun 100 chambers released 36 “fire-dragon” rockets each, which inflicted heavy casualties on the enemy troops.

A primitive missile invented early in the Ming dynasty utilizing the principles of the rocket and the kite is cited in Records of War Preparations written in 1621 by Mao Yuanyi. One of the earliest missiles, called the “Heaven-shaking thunder gun”, was a ball woven of bamboo with paper pasted over the surface and wings on either side. Inside was a paper tube packed with powder and a fuse. A charge propelled it toward...
Song-dynasty “fire gun”. An explosion propelled arrows and pellets, making it the predecessor of the modern gun.

its target and it exploded as soon as the charge burned out. It was very useful in breaking up the enemy’s ranks or when attacking a city.

Another early missile was the “magic fire flying crow”, also of bamboo and filled with powder. After flying a distance of some 300 meters it began its descent and an attached firework ignited the powder. It was used to set fire to enemy barracks or boats.

Carrier and Multi-Stage

In his 1962 book The History of Inventions in Chinese Mechanical Engineering the well-known scientist Liu Xianzhou cites a story from the book Rockets and Jets by Herbert S. Zim (New York, 1945). Zim gives credit for being the first to experiment with rocket power to Wan Hoo, a Chinese gentleman and scholar who lived at the turn of the 15th century. To a framework between two large kites Wan Hoo fixed a chair backed by 47 of the biggest rockets he could buy, but the experiment was not successful.

As rocket technology improved, many kinds of primitive two-stage rockets made their appearance. “Fire-dragon emerging from the water” is one mentioned in Records of War Preparations. It was a 160-centimeter tube of wood or bamboo in the shape of a dragon. The first-stage rocket on the underside propelled the tube forward. When it burned out the fuse in the dragon’s mouth ignited the second stage rocket.

The “flying sand tube” had two rockets facing in different directions fastened to a bamboo pole. One propelled the pole forward. Over enemy territory the tube of sand exploded, scattering dust in the enemy’s eyes. Meanwhile the rocket pointing in the other direction would be ignited and drive the pole back to its point of origin, so the enemy couldn’t be sure what hit them.

Gunpowder was of course the prerequisite for the invention of rockets. The mixture used in ancient rockets was about 75 percent potassium nitrate, 10 percent sulphur and 15 percent charcoal. The latter had been produced for bronze-making as far back as the Yin dynasty (16th-11th centuries B.C.). By Western Han times (206 B.C.-A.D. 24) considerable quantities of saltpeter and sulphur were being mined and used. There were quite a number of natural sulphur deposits located in Hunan, Sichuan, Shanxi and Henan prov-

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Bronze cannon made in 1332 (Yuan dynasty), oldest found in the world.
Recent Rocket Success

China launched her first carrier rocket to a destined area in the South Pacific on May 18, 1980.

For a long time the use of gunpowder was linked with alchemy. It was an experiment for longevity pills that produced China's first known formula for gunpowder. From the Warring States period (475-221 B.C.) on there had been great interest in eternal life. One tack was to seek the elixir of life.

During the reign of Han Wu Di (140-87 B.C.) extensive researches for it and for making silver and gold were carried on. Such experiments did not yield the desired results (five Tang dynasty emperors died as a result of taking immortality pills), but in the course of it, discoveries of scientific value were made. The earliest book about alchemy extant today, Zhou Yi Can Tong Qi by the well-known third-century alchemist Wei Boyang, contains much important scientific information.

The Tang dynasty physician and pharmacologist Sun Simiao, in his book Dan Jing Nei Fu Liu Huang Fa wrote the following prescription for making immortality pills: “Place two ounces of ground sulphur and two ounces of ground saltpeter in a pan for frying. Ignite three geditsia pods and throw them in to make the mixture burst into flame. When the flame dies down add 3 jin (1.5 kilograms) of wood and the same quantity of charcoal and fry again. Remove from fire when the charcoal has been reduced by one third.”

It was, in fact, the world's first formula for gunpowder.
As a commodity economy and primitive capitalist production developed after the middle of the Ming dynasty (1368-1644) China continued in the front ranks of world science and technology. Degeneration of the feudal system gave rise to democratic, anti-feudal ideas. These trends were reflected in the cultural scene.

The Ming dynasty produced three works of particular value summarizing scientific achievements of the period. They were the *Compendium of Materia Medica* by Li Shizhen, the *Complete Treatise on Agriculture* by Xu Guangqi and *The Exploitation of the Works of Nature* by Song Yingxing.

Li Shizhen (1518-1593), the great pharmacologist, was the son of a physician in Hubei province, and grew up to be one himself. Many new drugs had been discovered since the last pharmacopoeia had been published 400 years before, and the classification and analysis was inaccurate in many places.

He began to collect and verify materials for a book of his own, traveling far and wide through the valleys of the Changjiang (Yangtze) and Huanghe (Yellow) rivers. Wherever he went he sought the advice of old peasants, woodcutters, fishermen, hunters and medicinal herb growers, and collected folk remedies and samples of herbs.

Twenty-seven years later, in 1578, after the study of 600 references and countless hours of his own investigation and notation, he completed the *Compendium of Materia Medica*.

This monumental work in 52 volumes with 1.9 million characters lists 1,800 medicines, 374 of which had not been written about previously. It includes the description of color and smell and 1,100 drawings of the herbs, their various local names, a note on the place where they are found, the method of procurement and preparation and ailments treated by them. The book also contains 11,000 ancient prescriptions and folk remedies. It was the most complete and detailed classification anywhere at that time. Translated into Latin, French, Japanese, Korean, German and English after its publication, it became known throughout the world.

**Agricultural Lore**

Dealing with a broad range of farming theory with notes and diagrams, the *Complete Treatise on Agriculture* describes planting methods for all kinds of crops, farm implement manufacture and water conservation engineering. It includes both China's own farming lore and that of the West. Its author Xu Guangqi (1562-1633), a native of what is now the Shanghai area, was well-read in agricultural science. His translations of scientific works brought to China by the Italian missionary Matteo Ricci (1552-1610) stimulated the development of China's science. From the *Complete Treatise* we learn that cotton was already being grown in both north and south
China, and the techniques for cotton growing, spinning, and weaving are described in detail. It also introduces water conservation knowledge from Europe.

The three-volume *The Exploitation of the Works of Nature* by Song Yingxing who lived through the late Ming and early Qing dynasties was a scientist from Jiangxi province. He gives extensive information on the processes of handicraft production such as the making of textiles, salt, sugar, porcelain and armaments and explosives; he also gives details on oil extraction, coal mining and copper and iron smelting. The book describes the workshops and the division of labor and has many illustrations. Song Yingxing spent long periods living and doing research for his book among the common people. Translated into Japanese, French and English, it was acclaimed abroad as an encyclopedia of 17th-century Chinese handicrafts.

**Anti-Feudal Philosophers**

Neo-Confucianism had developed in the Song dynasty (960-1279) and remained the official philosophy all through the latter period of feudal rule. But by the Ming dynasty a number of well-known philosophers had begun to attack it. One of these was the progressive thinker Li Zhi (Li Chih 1527-1602), an ardent opponent of neo-Confucianism and the feudal code of ethics, who, influenced by the Buddhism of his day, made his attacks from a fundamentally idealist position.

The neo-Confucianists were, he maintained, hypocrites who used high-sounding words like "humanity" and "morality" but who, deep in their hearts, craved high posts and riches. Li Zhi lashed out at the teachings of Confucius (557-479 B.C.) whose original ideas had been taken over by the neo-Confucians for their own purposes, and Mencius (390-305 B.C.), an adherent and promoter of Confucianism. The feudal ethics they advocated should not be the criterion of right and wrong.

Li Zhi also promoted the idea of equality of men and women. Women's ability to make judgments, he asserted, was no less than that of men.

The Ming rulers abhorred Li Zhi's ideas as "flood and wild beasts." He went through several rounds of persecution and finally at the age of 76 was driven to suicide in prison.

**Anti-Manchu Stimulus**

Huang Zongxi (Huang Tsunghsi 1610-1685) was one of the outstanding democratic political thinkers and historians in Chinese history. In his youth he had fought the Manchus as they moved down from the north capturing lands from Ming dynasty control. After the Manchus established the Qing dynasty in 1644 he was hunted for a long time. Later he lived in seclusion in his home town in Zhejiang province and wrote many books lashing out relentlessly at the rotten feudal monarchy.

A monarch, he said, cruelly slaughters the people when contending for the throne. After ascending the throne, he brutally exploits them. The feudal rule of monarchy is the root of social instability. The people's hatred of the monarch is justified by his indifference to their interests. Officials, therefore, are not necessarily bound by loyalty to the monarch.

What the monarch considers correct, he observed, may be incorrect; what he considers incorrect may not be so. The public should be the judge. The laws the monarch makes are not for the benefit of the whole country but for himself and his family. The law should be made by the public to serve the public interest. All Huang Zongxi's political arguments were aimed at establishing a rule of "virtuous men," but of course in his time they would still have been of the exploiting class. His ideas had some influence on the democratic revolution.

Wang Fuzhi (Wang Fuchih 1619-1692) in his youth organized armed resistance to the Manchu army in his native Hunan province. When it failed he secluded himself for many years at the foot of the Shichuanshan Mountains.
near Hengyang in Hunan and devoted himself to writing.

Wang Fuzhi continued in the tradition of materialism of the great Han dynasty philosopher Wang Chong (27-c. 97). His philosophy in fact summed up the primitive natural materialism of ancient China and raised it to new heights. With it he attacked neo-Confucianism.

He held that the world is composed of matter and not created by god. That consciousness comes from matter and can not exist without it; also that knowledge comes from objective things and that these are independent from subjective consciousness. One cannot deny the existence of a mountain just because he doesn't see it, Wang Fuzhi said, because the mountain really is there objectively. Knowledge comes from practice, but cannot replace practice: You can't learn to play chess by merely reading the chess manual; one has to play with others and master it gradually.

Era of Great Novels

Short stories had made their appearance between the 3rd and 6th centuries. By the Tang dynasty (618-907) they flourished and had become very sophisticated. Script books for storytellers began to be written down in the Song dynasty and later these were taken up by writers in the late Yuan (1271-1368) and early Ming dynasties as the basis for novels. Many good short stories and novels were written in this period. Among the latter Water Margin*, Romance of the Three Kingdoms and Pilgrimage to the West are the most outstanding and are today known in every household.

Basing himself on Tang and Song dynasty storytellers' scripts, Luo Guanzhong (c. 1330-1400) wrote the historical novel Romance of the Three Kingdoms. It is set in the stirring and troubled 3rd century when China was divided into three kingdoms. Covering the period from the Yellow Turban peasant uprising in the last years of the Eastern Han dynasty (A.D. 25-220) to the time when China was unified under the Western Jin dynasty (265-316), it shows the open clashes and secret feuds between different political groups, reflects the decaying feudal society and the rulers' cruelty and people's sufferings, all providing the great impetus for the peasant uprising.

The novel contains a wealth of historical detail on the political and military struggles, and is noted for the many distinctive characters described in it, among them the strategist Zhuge Liang; the upright and daring generals Zhang Fei and Guan Yu of the Kingdom of Shu; Zhou Yu, the shrewd and intelligent general commander for the Kingdom of Wu; and Cao Cao, depicted as a cunning statesman of

for a long time. Storytellers' scripts of these were woven together into a novel, Water Margin (also known by the translation titles Outlaws of the Marsh and All Men Are Brothers). It relates the beginning, development and failure of the uprising, exposes the conflicts in the feudal society of the time and extols the fighting spirit of the peasants. The author makes the novel into the tragedy of how the main leader was bought off by the emperor. However, despite his admiration for the rebels the author retains a strong sense of loyalty to the sovereign.

Many legends had grown up around the travels to India by the Tang dynasty Buddhist monk Xuan Zang (Hsuan Tsang also known as Tripitaka) and it had been the topic for novels and dramas before the Ming period. Wu Cheng'en (1500-1582), a native of Jiangsu province, drawing on these, created the novel Pilgrimage to the West. In it the monk and his three disciples Sun Wukong (the Monkey King), Zhu Bajie (Pigsy) and the Monk from Sandy River, surmount unbelievable hardships and defeat many demons and spirits before they reach the Western Heaven and obtain the Buddhist scriptures.

One very famous episode is "The Monkey King Subdues the White-Bone Spirit." The latter, whom the novel gives a female form, wants to capture the monk. She successively takes on the forms of a Buddhist devotee, an innocent-looking old lady, and an old man. But the Monkey King sees through all her disguises and strikes her with his magic golden cudgel to return her to her true form—a skeleton.

Although the novel contains some of the Buddhist ideas of preordained fate and retribution, and stresses the all-conquering power of the Buddha, the struggles of the Monkey King against the personification of the feudal forces were in tune with the awakening democratic aspirations of the people. That is why he has been so loved down to today.

* A new three-volume English translation has just been issued by the Foreign Languages Press, Beijing, under the title "Outlaws of the Marsh."
LAST spring, at the invitation of Beijing's Chinese Art Gallery, I brought 138 paintings by artists in Jinshan county outside Shanghai to the capital. When I saw the palatial building in which the works of my county's ordinary peasants were to be exhibited, my eyes blurred, I was so happy and proud for them!

A Great Sensation

April 27 was the first preview. The gallery had sent invitations to Beijing's art organizations, but it poured that morning and not many people came. The next day was for the press, and though the weather improved, only one group of journalists came. I wondered whether the city people's prejudice against the country people could ever be overcome.

But beginning on the third day, more and more people came to the exhibition. The numbers kept increasing, until finally the big display hall seemed to become small. The audiences showed great interest in the exhibit, expressing surprise that peasants could paint so well and praising the beauty and simplicity of their work.

Many, including some foreigners, asked me questions about the artists and their backgrounds. After seeing the reproductions in this issue of China Reconstructs, our foreign readers might have the same questions, so I'll try to answer them here.

Background in Folk Art

Situated on the north shore of Hangzhou Bay, Jinshan county is a land of fish and rice. Its many lakes and rivers make for picture-postcard scenery. Beautiful songs are frequently heard from the peasants working in the fields. Arched bridges of typical Chinese design stretch over creeks. Teahouses in the market towns are distinctively Jinshane.

The peasants' homes are like small museums of folk art with their robust, unstudied kitchen paintings, carved wooden beds, delicately designed dressing tables, colorful lacquer trays, exquisite teaspoons and hand-made indigo-print bed sheets. The carved window lattices and beautiful roof designs, and the embroidery, cross-stitch work and hand-made cloth are all works of art.

But the most attractive things in these houses are the paintings hanging on the walls. It is just this beautiful scenery of Jinshan and the fine tradition of local decorative art that have nurtured the new peasant artists.

I grew up in this environment. As a child I developed an interest in the fine arts, and later I became a professional art worker. After my discharge from the army, I went to work on fulfilling my dream of organizing the peasants to develop their talents in the fine arts. First I organized some women who were good at embroidering and weaving into an amateur painting group. They ingeniously applied their embroidery and weaving techniques to painting and gradually created an indigenous style.

'Clever Girl'

On a village street one day my eye was caught by some colorful things hanging under the eaves of a house. They were embroidered pillowcases, mosquito-net borders, pouches and children's caps. Their designs, colors and style all had strong local accents. I looked up their owner, a middle-aged woman named Cao Jinying, whom the villagers call "Clever Girl." She told me they were her dowry and that she had embroidered them herself. When she was young, her family was very poor, supported only by her mother's embroidery. Often, the mother had to work late into the night to get a dowry.
Making Hand-woven Cloth

Chen Dehua
Buffalo Fight

Chen Weixiong
Village Fish Market  
Cao Jinying

The Return of Spring  
Zhang Xinying
ready for a bride from a rich family. At the age of 13, Cao Jinying began to learn to embroider and help support the family.

Pointing to the embroideries under the eaves, she said, “I like to do things well, so some of the patterns on them were my own inventions.” After our talk Cao Jinying joined our amateur painting group, applying her talent to patriotic themes. Her first work, derived from the traditional mosquito-net border, was entitled “Celebrating the National Day.” Against a red background, she painted many jubilant figures doing lantern, dragon, or boat dances. The sharp contrast of colors and the exaggerated dance movements portrayed the holiday atmosphere well.

Her second work, “Fish Pond,” is in the tradition of the local indigo prints. Using only two colors, blue and white, and patterned designs, it depicts rural life south of the Changjiang (Yangtze) River.

Like Doing Embroidery

Cao Xiwen, a bright and cheerful girl, returned home to work in the fields after graduating from senior middle school in 1977. Having acquitted herself well, she was elected leader of a young people’s trouble-shooting brigade and became a first-aid worker in her production team. She enrolled in the Jinshan cultural center’s amateur painting group.

Cao Xiwen is quick to learn, but the first time she put brush to canvas, she was timid. When she painted, I told her, she could imagine she was doing embroidery. She took my advice and felt more at ease.

Her first painting, “A Brigade Health Worker,” depicts her own life as a health worker. She used bright colors as she did on embroidery. Three years later, her painting “Collecting Medicinal Herbs” showed distinct progress. It is implicit and is done in the style of traditional lacquer painting. On a black background, it portrays a girl collecting flowering herbs.

‘Duck Commander’

Chen Muyun, a young tractor driver, has loved to paint since he was a child. He often paints pictures for his villagers to put on the walls above cooking stoves, where paintings of the kitchen god used to hang in the old days, and also paints on glass, a unique local form. During breaks at work in the fields, he likes to watch the ducks swim and peck at insects.

Chen Muyun’s younger sister has a good hand for embroidery. Watching her choose various colors of silk thread for her embroidery, he gradually developed his own style of painting — using colors without regard to whether they represent reality. The villagers love his ducks, which are usually more gorgeous than the real ones. So they affectionately call him “Duck Commander.”

In 1974 he attended a training class for peasant painters at the Jinshan cultural center, where he learned to deal with a wider range of subjects and the number of his works increased. “In the Bamboo Groves,” his first painting after joining the training class, was well composed. In the picture the colors and shapes of the chickens have been exaggerated to resemble those of the phoenix. When asked why, he said he thought the homely chickens ought to be as beautiful as the phoenix. Among his recent works are “Spring Ducks,” “The Rustling Morning,” and “Girl Duck Raiser.” They are all full of life and local color.

A 74-year-old Artist

People in Jianguo brigade, Caojing commune, Jinshan county, like to tell visitors the story of a 74-year-old woman, Ruan Sidi, who learned how to paint in the county’s cultural center. Ten of her paintings have been sold to Americans.

At 13, Ruan Sidi began to do embroidery and cross-stitch work, and became very skillful. But for more than 50 years her talent went unnoticed. Recently, with the development of Jinshan peasant painting, her artistic potential has been tapped. She is superb at painting the flowers and plants in the area south of the Changjiang River. Her designs all come from the patterns on pillowcases, scarves, wrapping cloths, and indigo prints. She is a connoisseur of the various local flowers and can paint eight different varieties of chrysanthemum alone. She draws quickly and never corrects or changes a line.

Ruan Sidi went through great hardships in the old society. In her first painting, “A Blaze of Color,” her love for the new life and socialism pours out. Flowers of many kinds bloom in the picture, which is full of charm and vitality.

Jinshan peasant painting has a very short history. To develop the art we often go to the countryside to collect information on folk art and local customs. We have run 90 training classes, each lasting 20 days and attended by 20 trainees. Three hundred peasants in our county have become serious amateurs and have created 2,000 paintings, 400 of which have been displayed either in China or abroad. The ones reproduced elsewhere in this issue of China Reconstructs are some of the best.
XIAO HUI didn’t make it into fifth grade. He was eleven years old and would not pay attention in class. If anybody made the suggestion, even ever so tactfully, that he start to settle down, he would shake his fist and say, “You’d better watch out or my army will get you!"

One day when he didn't show up some members of his class decided to go out and look for him. At a nearby construction site they found him and his "army". It was a gang of lower-grade pupils he had gathered around him and they stood there at combat readiness bristling with broomsticks and wooden pistols.

Xiao Hui was posed atop a pile of rocks, his jacket unbuttoned and flung open, the very figure of the much-admired greenwoods outlaw — but what was his cause?

"We dare you to come any closer!" they shouted and started throwing rocks and sand. The class got angry. Xiao Hui’s gang had often got into fights with other children after school. Sometimes they would frighten the smaller ones with firecrackers. They called these their “time bombs”.

Some suggested the class organize a “self-defence corps” to give Xiao Hui tit for tat. Just then the teacher appeared on the scene.

“Our whole class is the 'corps',” she laughed, “but it’s not going to fight any battles with Xiao Hui and his friends.”

Back at school she got them talking about how to have more interesting after-school activities to try to attract Xiao Hui.

A few days later the class announced that it would hold a “We Love Science” meeting. The "Old Man of Knowledge" would come and pose interesting questions to those who attended. Some of the members of the class started digging into science pamphlets.

What was this Old Man of Knowledge like, Xiao Hui wondered. How would he get here — by plane? Xiao Hui decided he’d go and see.

The day of the meeting finally arrived. The children had been expecting a man with a long white beard. Instead, Teacher Lin, the natural science instructor, walked in. He hadn’t come by plane, but he was carrying a model rocket in his hand.

They played a game. Someone beat a drum as they passed the rocket around. The one who had the rocket in his hand when the beating stopped had to pick a folded slip of paper out of the rocket and answer the question on it. Questions like: Why doesn’t a boat sink? What makes a plane fly?

Xiao Hui sat there wishing the rocket would stop with him. But he was also afraid he wouldn’t be able to answer the question.

After the meeting the class marched to a park. They divided into four teams to see who could find the most signs of spring.

“We're still in our padded jackets,” Xiao Hui muttered. “How can you find signs of spring?”

But pretty soon he heard one of his classmates call out, “Hey, I've found something!” Looking where the boy was pointing, Xiao Hui saw willow twigs covered with small green buds.

More reports came in — some had found places where the grass was turning green. Others found blossoms about to burst open on the forsythia bushes. Xiao Hui couldn’t find anything new and felt ashamed of himself. He began to think that maybe he was spending too much time fighting and fooling around and wasn’t learning enough.

The next time the class had a science meeting each member was asked to bring a toy and explain the scientific principle that made it work. One boy told why his top spun when he whipped it. A girl showed why her roly-poly toy couldn’t be pushed over.

Xiao Hui had decided he would give a demonstration of plate-spinning like the acrobats. He was so nervous he didn’t do well and couldn’t give an explanation, but the class didn’t laugh and gave him a big hand anyway. He appreciated that. He recalled how on the march to the park the boy who was leading the way took a wrong turn, but nobody had scolded him. If somebody in his "army" had done that, Xiao Hui thought, they would all be down on him. Things were different here. It felt kind of good to be part of the class.

While the science meeting was going on one of Xiao Hui’s gang slipped in and told him that they were in a fight with children from another school. Xiao Hui raced out and over to the “battlefield”. But this time he didn’t egg them on.

“Stop fighting,” he shouted. “We’ve got to stop having our army. I’m not going to be commander-in-chief any longer. You’d all better get back to class.”

A True Story

THE next time the class had a science meeting each member was asked to bring a toy and explain the scientific principle that made it work. One boy told why his top spun when he whipped it. A girl showed why her roly-poly toy couldn’t be pushed over.

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Liulichang Street

(加拿大 华人 旅游团 来到 (Canada visit China tourist group come to)
琉璃厂) Liulichang)

王: 琉璃厂是 北京一条古董 de xiǎojī, tā yì jīngyíng zhēngguì de small street, it for dealing in valuable
dé chǔ míng. Zhē tiáo jiē bāguó yì English called. This street only one
公里, 原来有近二百家 gōnglǐ, yuánlái yǒu jìn érbāi jià 200
的文化商店。后来有些商店 wénhù shànghǎi. Hòulái yǒu xiē shànghǎi cultural shops. Afterwards have some shops
合并了, 扩大了业务。 héng le, kuòdà le yèwǔ. combined (and) enlarged business.

史密斯: 难怪这条街被称为 Shìmíshì: Nánghuá zè tiáo jiē běi chēngwéi “文化街”、“博物馆 街”。“Wénhuájiē”、“Bówùguānjìe”.

萨克斯: 除了 书画以外, 还有 Sàkēsǐ: Chúle shūhuà yìwài, hái yǒu “中国“书 店”, 专卖古书、

王: 种类 很多, 这是“中国 Shàngléi hén duó, zhè shì “Zhōngguó

Wang: 琉璃厂 is Beijing one ancient
de xiónjié, tā yì jīngyíng zhēngguì de small street, it for dealing in valuable
shop, sell old books, relics, calligraphy and painting

等出了名。 这条街 不过
déng chǔ míng. Zhē tiáo jiē bāguó yì English called. This street only one

200

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The passive with 被 bēi.

A sentence like Tā názōule zhàoxiāngjì 他拿了照相机 (He took away the camera) can be changed into a passive sentence with the character 被 bēi: Zhàoxiāngjì bēi tā názōule 照相机被他拿了 (The camera is taken away by him).

When 被 is used, the person or thing performing the action can be omitted. For example, the sentence Zhè tiáo jiē bēi chénguéi Wénhùà Jīè 这条街被称为文化街 (This street is called Cultural Street) means: Zhè tiáo jiē bēi rénmen chénguéi Wénhùà Jīè 这条街被人们称为文化街 (This street is called by the people Cultural Street), but the doer of the action can be omitted.

Sometimes you will hear people speaking colloquially substitute 在 zài or 向 xiàng for 被 bēi.

Passive without 被 bēi.

Some sentences are passive in sense even if 被 is not used. Yīfu xìgānjìng le 衣服洗干净了 (The clothes are washed clean). Yòu xiē shāng-diàn hébìng le 有些商店合并了 (Some shops were combined). 衣服 and 商店 are both receivers of the action.
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