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# Beijing Review

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June 23, 1986

**HU YAOBANG ON STATE POLICY**



**China — New Force in the  
World's Shipbuilding Industry**





## SPOTLIGHT

Ancient-style porcelain ready for the kiln.

### News From Porcelain Producer Jingdezhen

With a history of more than 2,000 years, Jingdezhen, the centre of China's porcelain production, not only manufactures porcelain for daily use, but has also produced many works of art treasured by collectors through the ages.

photos by You Yungu



Zhou Guozhen (right), associate professor of the Jingdezhen Ceramic Institute, teaching his students new techniques.

This set of tableware made in Jingdezhen won three gold medals at international fairs in 1984.



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**COVER:** 1. An oil rig platform made in China; 2. A home-made 10,000-ton oil tanker; 3. A corner of the workyard in the Dalian Shipbuilding Works.

## HIGHLIGHTS OF THE WEEK

### Hu's UK and FRG Visits Successful

■ The first half of General Secretary Hu Yaobang's four-nation West European tour has been a success. His visits to the United Kingdom and the Federal Republic of Germany are expected to foster improved mutual co-operation and exchanges (p. 5).

### Understanding China's Developmental Trends

■ General Secretary Hu, in London, outlined the two key points to China's development: to promote a sustained and steady growth of China's economy by carrying out the policy of reform and opening to the outside world; and to ensure that China concentrates on development without interruption by pursuing an independent foreign policy of peace (p. 14).

### China Makes Progress in Shipbuilding

■ Unknown before 1980, China's ships are now up to international standards and selling well abroad. In addition, the Chinese navy has strengthened its defensive capabilities and ships for important research projects have been built (p. 17).

### Improving the Rural Co-operative System

■ New economic associations, formed by several dozen households on a voluntary basis, have emerged to overcome the defects of the former rural co-operative system and to meet the needs of commodity economic development (p. 4).

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# Beefing Up Rural Co-operative System

by Dai Yannian

Some of China's new specialized grain-growing households now want to contract more land from the rural co-operative organizations—formerly the production teams and production brigades to which they belonged. These households, however, do not have access to all the farm machinery and water conservation facilities they need. To meet this need, some rural co-operative organizations have set up farm machinery, agrotechnology, water conservation and plant protection stations to serve these specialized households, making things more convenient for their business activities.

Apart from farming their contracted land, some farm households also engage in such activities as industry, commerce, sideline occupations, transportation and construction industries. The expansion of these activities, which are conducted on a household basis, however, is being restricted. To overcome this impediment, some economic associations have emerged. For instance, 310 farm households in an area in Anhui Province have switched to making clothing. At first, they looked for raw materials, tried to obtain market information and to sell their products. All this, however, increased their work load, wasted a lot of human and material resources, and left their goods less competitive. Later, several dozen households grouped together to send buyers and sellers to scout the market and invite technicians from large cities to join them. As a result, their business improved. In Guizhou Province, many farmers who have quit farming have gotten together to open up the province's mountainous areas. At present, more than 2,200 tree farms are

jointly managed by 17,000 farm households, and a number of other farm households have been exploiting local mine resources.

The above examples show that with the raising of productive forces and the development of the commodity economy, China's rural areas are gradually perfecting the co-operative system, giving it new dimensions and diversifying its forms. By the end of 1985, there were 480,000 new economic associations formed on a voluntary basis to develop commodity production. They hired 4.2 million employees and netted 13.3 billion yuan. Most of these associations are engaged in industry, construction and transportation industries and in commerce, catering and other service trades.

Because the former rural co-operative system overemphasized unified management and followed an absolute egalitarian distribution method, employees were all paid the same regardless of their contributions, dampening the farmers' enthusiasm for production. Following the institution of the household contract responsibility system in 1979, the farmers' enthusiasm soared, production developed rapidly and notable achievements were made in just a few years. As a result, hundreds of millions of people now have enough to eat and wear, and some rural families have become well-off.

It is noteworthy that the implementation of the household contract responsibility system has eliminated the drawbacks of the rural co-operative system, and only its drawbacks, not the system itself. China will hold fast to this co-operative system. Based on China's needs, the rural co-operatives should be run under a two-level management system: One is individual household

management and the other unified management by the co-operative organization. This two-level method would help spark the farmers' enthusiasm, give full play to the superiority of the collective economic organization and expedite production. Though some people maintain that the household contract responsibility system encourages individual farming, they are wrong, for this system represents a level of management in the co-operative organization.

Under this two-tiered management system, when productivity is low, family management will predominate and the unified management will have only minimal influence. With the development of production and the transition from a rural natural economy to a commodity economy, however, many things cannot be accomplished by one family or household alone. The co-operative organization is thus required to give fuller play to its unified management functions. Some rural co-operative organizations, however, have not functioned properly. As a result, some collectively owned farm machinery and water conservation facilities have been damaged, greatly reducing their efficiency. The farmers' complaints about such abuse led these co-operative organizations to improve their performance and their management.

Today, in some of China's rural areas, regional co-operative organizations based on villages coexist with inter-regional specialized associations. Some farm households also joined several co-operative organizations at the same time. But these co-operative organizations have one point in common: They base co-operation on family management.



The development of production in various regions and trade is uneven, as are the demands of farmers in different regions and trades on economic co-operation. Farmers are therefore confronted with serious decisions: What business should they undertake? With whom should they co-operate? When should they begin co-operation? What methods should they adopt for co-operation? And, on how large a scale should they co-operate with each other? Previously, while the collective economy was organized in China, the directives of the leaders were implemented in the form of a mass movement. Such a method now would, however, probably make farmers less enthusiastic and slow the development of the rural economy. People should draw on this historical lesson. The Party and government have an active and prudent attitude towards improving the rural co-operative system. They often remind rural cadres that they should be patient and pursue quality rather than quantity, and that they should guide the farmers forward in accordance with the farmers' needs and desires.

It can be expected that the gradual improvement of the rural co-operative system will further boost the development of the rural economy and make it easy for the wealthier farmers to help other farmers prosper. ■

## Hu Seeks Further Co-operation With W. Europe

**C**hinese Communist Party General Secretary Hu Yaobang on June 12 began his five-day visit to the Federal Republic of Germany, after concluding satisfactory talks with British Prime Minister Margaret Thatcher in London.

During his four-day stay in Britain, which was the first leg of his four-nation West European tour, Hu Yaobang also had wide-ranging conversations with heads

of major British political parties, including David Owen, leader of the Social Democratic Party, Neil Kinnock, the British Opposition Labour Party leader, and Norman Tebbit, chairman of the Conservative Party.

On June 11, Queen Elizabeth II, who will make a state visit to China this October, held a luncheon in Hu's honour at Buckingham Palace.

**Queen Elizabeth II invites General Secretary Hu to a luncheon at Buckingham Palace.**

BY WANG CHUANGUO





BY QI TIYAN

Hu Yaobang and Helmut Kohl greet German students visiting the Chancellery.

During his visit, Hu and Thatcher exchanged suggestions on further developing bilateral cooperation between the two countries and discussed a wide range of global issues. Referring to the Sino-British agreement on Hong Kong, Hu said that satisfactory settlement of the Hong Kong issue had created favourable conditions for furthering Sino-British relations. Hu said the agreement set a good example of peaceful settlement of international disputes through negotiation, thus bringing honour to the two countries. Margaret Thatcher described the Hong Kong agreement as "the most striking achievement of creative policy."

The expansion of bilateral trade between Britain and China was covered during their talks.

On June 9, a memorandum of understanding was signed in London between China, Britain and the Sir Yue-Kong Pao Foundation aimed at establishing a Sino-British friendship scholarship programme. The 10-year plan, which will begin in April 1987, intends to provide scholarships in Great Britain for Chinese students, particularly those majoring in science, technology, economics and social sciences.

Under the scheme, the Sir Yue-Kong Pao Foundation and the Chinese government will each contribute 1.4 million pounds while Britain will contribute 700,000 pounds as well as the cost of management services.

The main goal of Hu's trip, however, was to outline China's current foreign and domestic policies for his Western hosts. On June 11, Hu said in a major policy speech at the Royal Institute of International Affairs in London that China's basic national policy in this century and the next boiled down to two points. The first is to promote a sustained and steady growth of China's economy by the execution of the policy of reform and opening to the world. The second goal is to ensure that China concentrates on development without interruption by pursuing an independent foreign policy based on maintaining peace.

In Bonn Hu further made his points for a group of industrialists and businessmen at the Congress of Industry and Commerce of the Federal Republic of Germany. Hu said that no country could succeed in its modernization drive if it shut the door to the outside world. The opened door of China will never

be closed again, Hu said. If any further change should occur in the open policy, it will render the system more conducive to economic co-operation and exchange, Hu stressed.

Hu called on West European businessmen to take a long-term perspective in their transactions with China to help boost the country's exports.

During his stay in Federal Germany, Hu held talks with Chancellor Helmut Kohl and Willy Brandt, chairman of the Social Democratic Party. He met with Federal German President Richard Von Weizsacker at the presidential residence on June 13.

Over the years, Federal Germany has been China's number one European trade partner and ranks third in China's foreign trade volume, next only to Japan and the United States. The total value of bilateral trade between the two countries in 1985 exceeded US\$3 billion, 38.3 percent more than the previous year and more than 11 times greater than in 1972, the year the two established diplomatic relations. ■

## Regional Exchange Draws Gains

As the idea of inter-regional cooperation has proved to be a catalyst for economic growth, China has accelerated its pace in forming new economic network links, as witnessed by the establishment of the Bohai Bay economic zone and the Beijing-Tianjin-Tangshan economic zone.

From May 26 to 29, 14 mayors and prefecture leaders from the country's coastal cities came to a Tianjin conference, bringing with them proposals on co-operation projects. They decided to organize the 14 cities and prefectures along the coast of China's Bohai Bay into an economic co-operation organization.

This Tianjin-based economic zone, known as "the Bohai Bay Ring," consists of 12 cities, namely, Dandong, Dalian, Yingkou, Panjin, Jinzhou, Qinghuangdao, Tangshan, Tianjin, Dongying, Weifang, Yantai and Qingdao and the Cangzhou and Huimin prefectures. Economists describe the areas along this section of the coast as China's "golden necklace," because they are among the most developed areas in China.

Participants at the Tianjin conference believe that the establishment of the new economic co-operation zone will help these coastal cities and prefectures better develop and utilize their local natural resources, promote their technology advancement and information interflow, expand the market for their products and raise their overall economic performance.

Dalian and Yingkou in Liaoning Province, Qinhuangdao in Hebei, Yantai and Qingdao in Shandong and the municipality of Tianjin are the country's important foreign trade outlets and industrial hubs. Tangshan in Hebei is a major coal mining area which produces about 20 million tons of coal annually.

"The Bohai Bay economic ring aims at co-ordinating the efforts of the participating areas to expand foreign trade, accelerate information exchange and co-ordinate the use of ports," said Zhao Weichen, vice minister of the State Economic Commission at the conference.

Zhao said that the objectives of the efforts also include joint production of export goods and unified management of import and export business. In industry, he added, specialized production will be further developed by placing emphasis on quality products.

The authorities of the participating areas will also work together to develop natural resources by setting up production centres for industrial raw

materials and aquatic products. In the meantime they will supply each other's needs.

The vice minister summed up 10 advantages of inter-regional economic co-operation, saying that horizontal economic co-operation is an important part of the current economic structural reform. It is of great significance for the development of the commodity economy. He said during the Sixth Five-Year Plan (1981-85), materials valued at 34 billion yuan were put into the efforts for economic co-operation nationwide, including 41 million tons of coal, which were used to produce 100 billion yuan of output value and 20 billion yuan of profits and taxes. The figure is only one indicator of the enthusiasm generated by the inter-regional co-operation, he said.

Economic co-operation also has promoted technological progress. In 1985, some 35,000 economic and technological co-operation contracts were signed. With less input and more output, these projects have taken in better economic returns and improved the performance of enterprises.

The co-operation has enabled successful enterprises to do even better still and those on the verge of bankruptcy to get on their feet again. Zhao said. In addition, the co-operation has helped to open more commodity distribution channels. For example, 670 units from across the country have set up factories and shops in Shanghai, with the help of the local authorities. The total turnover reached 300 million yuan last year.

The conference disclosed that the Bohai Bay economic ring will devote its major efforts this year to the establishment of an information network and organizing technology exchange meetings.

The other economic venture mentioned above was recently announced by China's official newspaper *People's Daily*. It includes Beijing, Tianjin and six

## News In Brief

**A**fter more than one year's preparation, the All-China Lawyers' Association will be established. A meeting will be held in early July to inaugurate the association, discuss its constitution and elect the leaders.

■ ■ ■  
**C**hina exported 350,000 tons of cotton in 1985 and will see a still bigger increase this year. That will probably make the country the third-largest cotton exporter in the world, after the United States and the Soviet Union. Cotton was shipped to more than 30 countries and regions in the first five months of this year. The country began to export cotton in 1983. Prior to that, China had to depend on imported cotton to meet its domestic needs.

■ ■ ■  
**A** 45-member expedition team has left Lhasa for the fountainhead of the Changjiang (Yangtze) River in the Geladandong Mountain in southern Tibet. They will try to canoe down China's longest river. Drifting down along the 6,300-km river has been the ambition of many explorers since the Amazon was explored by a Japanese in 1976. Last June, Yao Maoshu, a 34-year-old photographer at the Southwest China Jiaotong University in Xian, was killed when his rubber raft capsized. The 45 volunteers of the team are 19 to 52 years old and they include scientists, sportsmen, teachers, doctors, army officers and journalists from 10 provinces and cities. ■

cities and 47 counties in Hebei Province. "The formation of the Beijing-Tianjin-Tangshan economic zone has broken down economic barriers, which used to hinder co-operation between the areas," the paper said.

The urban and rural areas in the newly founded economic zone have co-operated with each other over the last few years in the supply of skilled workers, funds and technology for various forms of production, such as farming, rural sidelines and industrial endeavours.

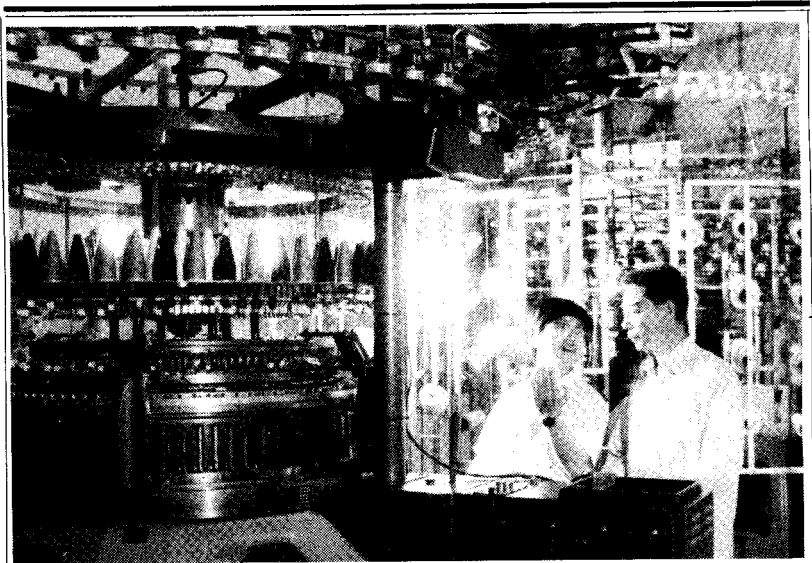
Statistics from Hebei's five prefectures show that they have attracted 11,000 scientists and technicians and raised 270 million yuan from Beijing and Tianjin for 13,000 co-operative schemes. Meanwhile, they have supplied the two cities with 1.1 billion yuan worth of farm and sideline produce during the past year. At present an farm and sideline production network aimed at serving Beijing and Tianjin is taking shape.

Moreover, the Hebei provincial authorities are encouraging local industries to set up further economic links with the two major Chinese cities. ■

## New Generator Added at Gezhouba

The Gezhouba Dam on the Changjiang (Yangtze) River, China's largest hydroelectric power project so far, has already begun to live up to its full economic potential, with the 125,000-kw No. 8 power generator going into operation on June 9.

A report approving the new generator was passed early this month by a 40-member assessment committee authorized by the Ministry of Water Resources and Electric Power. Chen Genyi, the committee director, said that the generator, the first installed during the second phase of construction at Gezhouba, had



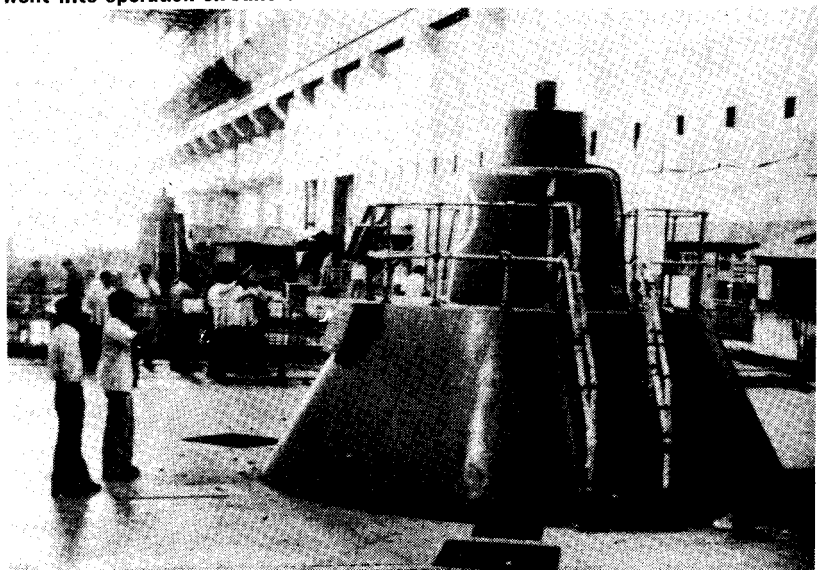
## Weaving Research Centre Established

China's largest weaving research and experimentation centre has been built recently and put into operation in Tianjin. The centre includes a research building, academic activity building and an experimental workshop. It will undertake the research of major new technology, techniques and the development of new products, collect and provide data on the domestic and international markets, determine product standards and conduct tests.

been completed a month ahead of schedule and was "working well."

He said another generator would begin operation at the end

The 125,000-kw No. 8 generator of the Gezhouba Hydroelectric Power Station went into operation on June 9.





of June and that two more would be completed by the end of the year. This would bring the project up to a generating capacity of 1.46 million kw, producing 8 billion kwh of electricity annually—about 10 percent of China's total hydroelectric power output.

The Gezhouba Hydroelectric Power Station has now been connected to the central China power grid to supply electricity to four provinces—Hubei, Hunan, Henan and Jiangxi.

The second stage of the project, which began in 1982, has cost about 2.4 billion yuan and involved the construction of the western section of the dam, which included the installation of 14 generators and the construction of a ship lock enabling 10,000-ton vessels to pass.

The remaining 10 generators will be installed in the next two years and the whole project is expected to be completed by 1988—a year ahead of schedule.

The first phase of the project, with a designed capacity of 965,000 kw, was completed in 1983.

The power station has generated 26.7 billion kwh of electricity since 1981 and produced an industrial and agricultural output value of 80 billion yuan.

Yue Rongshou, chief engineer of the Gezhouba Engineering Bureau, said that the construction of the dam had raised the water level of the Changjiang River, alleviating the problem of blockages caused by landslides at the Xiling Gorge. ■

## China & the World

■ **Zairian Prime Commissioner Visits China.** Kengo Wa Dondo, prime commissioner of state of the Executive Council of the Republic of Zaire, and his party left Shanghai on June 12 for home, after completing a six-day official goodwill visit to China. Invited by Chinese Premier Zhao Ziyang, Kengo was the first Zairian prime commissioner to visit China. During his stay, he met with CPC Central Advisory Commission Chairman Deng Xiaoping and Premier Zhao Ziyang, and visited Beijing, Hangzhou and Shanghai. ■

■ **Chinese Kids Off to Pakistan.** Ten Chinese School children have left Urumqi, the capital of the Xinjiang Uygur Autonomous Region, for Pakistan to join a "Sino-Pakistani Youth Expedition," in a bid to promote mutual understanding and friendship. The 10 children of seven ethnic groups were chosen from all parts of the autonomous region.

■ **Vietnamese Charge Called "Sheer Fabrication."** A Chinese Foreign Ministry spokesman on June 11 rejected the accusation by Viet Nam that Chinese armed forces shelled a summer youth camp in Viet Nam's Ha Tuyen Province on June 1. The spokesman said the accusation was "sheer fabrication and vicious slander." The fact was Vietnamese troops continued their armed provocation and bombarded the Chinese border areas in Yunnan Province on June 1, killing and wounding several Chinese civilians, he said. ■

## China Backs Anti-Apartheid Struggle

**P**remier Zhao Ziyang on June 15 pledged China's support for the proposed international sanctions against the Pretoria regime in a message to the World Conference on Sanctions Against Racist South Africa, which opened in Paris on June 16.

Wishing the conference a complete success, Premier Zhao says, "In recent years, the South African racist regime has intensified its apartheid policy. A few days ago, it flagrantly declared a so-called nationwide state of emergency, brutally suppressing the South African people's just struggle for racial equality and social justice."

"The South African authorities have also continued their illegal 'occupation of Namibia,'" Zhao added. "Not long ago, they even carried out armed raids against their neighbours, Zimbabwe, Botswana, Zambia and Angola, encroaching upon their sovereignty and territorial integrity," he said.

"The Chinese government and people strongly condemn the South African authorities for the series of crimes they have committed and will, as always, support the South African people in their struggle against racism, the Namibian people in their struggle for national independence, and various countries in Southern Africa in their struggle for safeguarding sovereignty and security," the Chinese premier said.

Zhao said China also supports "the reasonable proposition and just demand of the international community for applying sanctions against the South African authorities."

On June 13, a Chinese Foreign Ministry spokesman in a statement condemned Pretoria for declaring the state of emergency in South Africa on the eve of the South African people's commemoration of the 10th anniversary of the Soweto uprising. ■

US-USSR

## Arms Race Still on Grueling Course

*US-Soviet relations over the past six months have been characterized by the usual arms race, stalemate in arms reduction talks and regional contests.*

Commentary by News Analyst Peng Di

**D**espite worldwide pleas to curb the escalating arms race between the two superpowers, neither side is ready to relinquish superiority in the name of sensibility.

The US government recently proposed a military budget of US\$311.6 billion for fiscal year 1987, an increase of 8.2 percent over 1986. Its programme for the development of new strategic weapons includes turning out and deploying more MX missiles; stepping up research and production of miniature intercontinental missiles; building the 14th Trident submarine and advanced submarine-based missiles and conducting further research on "invisible" bombers capable of shunning radar pursuit.

Since Washington thinks the Soviet Union exceeds the United States in chemical weapons by a ratio of 10:1, it has resolved to resume its production, which was halted 17 years ago. Conventional weapons also will be renovated. And US President Ronald Reagan's pet project the Strategic Defence Initiative (SDI) will absorb US\$4.8 billion of the defence budget in 1987, compared with this year's US\$2.7 billion.

Moscow does not intend to lag behind in its arms stockade. With highly destructive SS-25s—the fifth-generation of USSR-made intercontinental missiles in the process of deployment—and the highly accurate SS-18s—the fourth generation of intercontinental missiles near the end of deployment, the Soviet Union is

working on SS-X-24 mobile intercontinental missiles while directing more efforts towards the production of SS-20 medium-range missiles and a new type of SU-27 aircraft. Moreover, thousands of Soviet scientists and engineers are occupied with the research of laser technology capable of missile interception.

The Kremlin has been more active on the issue of disarmament. It is quite outspoken in its call for arms control with a series of highly publicized arms reduction plans. The Soviets introduced in January a long-term programme for the elimination of nuclear arms in stages. Twice, in April and June, they put out proposals for the reduction of conventional weapons and forces in Europe. And they made repeated calls for a mutual end to nuclear testing.

Unable to compete with Moscow in this respect, the White House has been more reticent. It has, nonetheless, called for separating the issue of strategic weapons from medium-ranged ones, while urging for a link in the reduction of weapons in Europe and Asia, maintaining that the Soviet Union has the upper hand in Asia. It also feels that there is a real danger that the United States will be behind its rival in both offensive and strategic defensive weapons. Therefore, ignoring the Soviet calls for a halt to nuclear testing, the United States goes on.

Debate over regional issues between the two superpowers has grown intense.

In the name of anti-terrorism the United States launched a military attack upon Libya and posed threats against Syria as a warning signal to the Middle East.

Equally active in the region, the Soviet Union has provided weapons to some Arab countries, while increasing contact with the Gulf nations and promoting a reconciliation between different factions within the Palestine Liberation Organization. It also has called for an international conference on the Middle East in order to further its influence in the region and contend with the United States.

In Central America, apart from offering military aid to the contras in Nicaragua, the White House has also employed diplomatic means to pressure the ruling government to change course so as to restrict or diminish Soviet influence in the country.

Moscow has been concentrating on its economic problems at home while talking profusely about disarmament internationally. In regional rivalry, it continues to hold fast to its spheres of influence. Far from giving in, it is ready to expand wherever there is an opportunity.

Afghanistan is a case in point. Dissatisfied with mere military assaults on the resistance forces, the Soviets have replaced Karmal with Mohammad Najibullah as leader of the People's Democratic Party. They have also stepped up their pressure against Pakistan. As the United States has repeatedly claimed, the Soviet expedition in Afghanistan has been motivated by the rich Gulf oil fields to which Afghanistan is the pathway.

In Southeast Asia, while offering continuous support to Viet Nam's attempt to control Kampuchea, Moscow has turned down the 8-point peace proposal by the Coalition Government of Democratic Kampuchea. This has made it more obvious that the Soviet interest lies in expansionism in the South Pacific area.

## CENTRAL AMERICA

### **Draft Unsigned, Peace Process Goes On**

*With the new peace proposal by the Contadora Group and the willingness of Central American nations to continue talks, the future of the peace process seems brighter than before.*

**A**t the June 7 meeting of foreign ministers from 13 Latin American nations, a new draft of the peace proposal was advanced by the Contadora Group, pushing the tenuous Central American peace process one step forward.

The five Central American nations—Nicaragua, Guatemala, El Salvador, Costa Rica and Honduras—were scheduled to sign the Central American Peace and Co-operation Draft Treaty, proposed by the Contadora nations of Panama, Mexico, Columbia and Venezuela, at a meeting in Panama on June 6.

Prior to the meeting, however, Nicaragua and the other four Central American nations were not able to bridge their differences over the crucial issues of reduction of arms, international military manoeuvres and their supervision.

Nicaragua insisted on an immediate halt to military manoeuvres and that talks on limitation of offensive weapons begin soon after the signing of the peace treaty.

The other four nations, however, opposed a curb on military exercises and called for a ceiling to be placed on armaments in the region before the peace accord was ratified.

The failure to reach an agreement cast a pall of gloom over the meeting, caused concern about Central America's future, and even created doubts in some people's minds about the continued existence of the Contadora Group itself.

Facing these difficulties, the Contadora Group refused to give up its long-time peace efforts. Joined by the Lima Group of Argentina, Uruguay, Brazil and Peru, and taking all differences into account, the Contadora Group proposed a new draft treaty, which reiterated that Central American nations should restrict their military exercises for the time being, and eventually end such exercises after they had reached an agreement on disarmament.

In the current draft, the Contadora Group called on these countries to freeze the purchase of arms in preparation for a gradual arms reduction, to begin after their parliaments approve the treaty.

In a bid to break the impasse, the Contadora and Lima Groups issued a three-point joint communique, suggesting that the five Central American nations should neither allow their territories to be used as training grounds for troops against neighbouring countries nor should they provide military and logistic assistance to non-governmental forces and subversive groups.

The communique also proposed that no nations should establish military and political alliances that would directly or indirectly threaten peace and security of the region or involve the region in an East-West confrontation.

It further recommended that no superpower should offer military or logistic assistance to non-

governmental forces and subversive groups in the region, nor should they use these forces or groups as a tool to overthrow governments.

The communique went on to urge that all nations having a common interest in Central America show their goodwill and undertake the obligations set by the treaty.

Observers pointed out that if all the principles were strictly met, negotiations would be accelerated and an agreement could be expedited.

The first reactions to the new draft treaty and communique were positive. Participants at the meeting praised the Contadora Group's contribution to peace in the region and expressed the hope that the group continues in its efforts.

The three-year-old Contadora Group has made painstaking efforts to seek regional peace. So far, it has already proposed four drafts of the peace treaty, all to no avail.

There are many reasons for this procrastination. While the Central American nations are all for peaceful co-existence, their deep-rooted differences have led to distrust and even head-on conflicts over a number of specific issues. Moreover, outside intervention, particularly that from the United States, has exacerbated the already complicated problems in the region.

In the weeks before the Panama meeting, the United States had staged military manoeuvres in Central America while US officials and a congressional delegation made a tour of the region. In the wake of these activities arose a pessimistic view of the Panama meeting. In the United States, Congress is once again about to discuss the most recent Reagan proposal for US\$100 million in aid to the contras in Nicaragua.

Peace is the common aspiration of the Latin American countries. They hope that the

Central American issue will be resolved in the interests of the continent and an East-West conflict be avoided. Now that a new draft has been put forward

without any deadline for signing, the peace process will continue to move ahead.

by Lin Liangyou

**LEBANON**

**Palestinian Camp Wars Rage Again**

*Fighting around the Palestine refugee camps has flared up once again, despite the renewal of talks between all sides.*

The camp war between Palestinian guerrillas and Shiite Moslem militiamen has escalated again in west Beirut.

In the west Bekaa region of east Lebanon, fighting between the Iranian-backed Hezbollah (Party of God) militia and the pro-Syrian militia has erupted again.

Meanwhile, on June 13, Lebanese Islamic leaders meeting in Damascus agreed on a new security plan for west Beirut.

The plan entails forming a special force composed of 1,200 to 1,500 Lebanese army men already stationed in the war zones.

Lebanese Prime Minister Rashid Karami is authorized to supervise the setting up of the security force, assisted by Defence Minister Adel Usayran, Education Minister Salim al-Hoss, Amal leader Nabih Berri, Druze leader Walid Joublatt and some military officials.

Prior to this, on June 10, under the mediation of visiting Iranian Deputy Minister Muhammad Ali Basharaty, leaders of the Palestine National Salvation Front (PNSF) met with the leader of the Amal Movement in the Iranian embassy for talks on evacuation of the injured under Iranian supervision.

A ceasefire agreement was reached between the Amal and PNSF on June 14.

Since the camp wars around Sabra, Shatilla and Burj Brajneh in west Beirut erupted on May 19, more than 650 people have been

killed and 1,500 wounded. The new round of fighting between rival Moslem groups followed off-and-on shoot-outs last year that took more than 600 lives and left at least 1,000 wounded.

In April, heavy skirmishes between guerrilla factions killed 46 and left 150 wounded. Afterwards the Amal Movement charged the Palestine Liberation Organization (PLO) with attempting to return to Beirut and set up armed strongholds among the camps. The Palestinians in turn accused the Amal of attempting to destroy the Palestinian armed forces in the refugee camps.

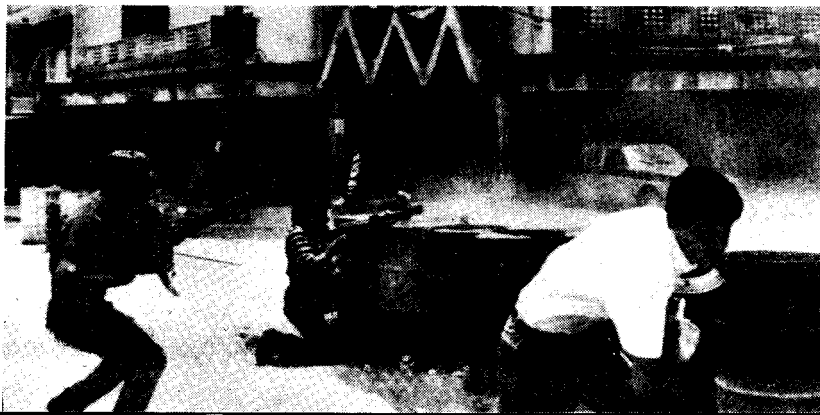
The Palestinian camps in Lebanon were set up in 1948 when Israel invaded Palestine and forced the Palestinian refugees to Lebanon and other Arab countries. After several Middle East wars, more and more Palestinians became homeless. Today there are 13 Palestinian refugee camps in Lebanon, with hundreds of thousands of Palestinian refugees. Sabra, Shatilla and Burj Brajneh are the three big refugee camps

located in the suburbs of Beirut. In 1969 the PLO and the Lebanese government then in power issued the Cairo Declaration, allowing the Palestinian refugees and armed forces to stay in Lebanon! In June 1982 Israel launched a large-scale attack on Lebanon under the pretext that the Palestinian refugee camps posed a security threat. In September of the same year Israel, with the Christian right-wing Lebanese forces, slaughtered 1,500 Palestinian refugees in Sabra and Shatilla — an event that shook the world.

This attack on Lebanon and Palestinians brought about radical changes in the region. The PLO's armed forces withdrew from Beirut in September of 1982 and from Tripoli in December 1983. The Palestinian refugee camps have since depended on their own forces to safeguard their security.

The balance of forces within the various factions in Lebanon has been fundamentally altered. The Moslem militias supported by Syria have gained an edge over the Christian militias after repeated skirmishes between them. The Sunni faction, backed by the Palestinians, and the Shiite faction have gradually fallen into steep contradictions. In February 1984 the militias of the Amal Movement and the Socialist Progressive Party jointly controlled the western and southern suburbs of Beirut. The Amal Movement has further demanded the disbandment of the Palestinian armed forces in the camps, claiming that it would be responsible for their

**The Shiite militia in fierce battle with Sunni militiamen.**



security.

The Palestinians, however, have rejected their claims and demanded the right to safeguard their own security. The month-long conflict around the camps last year was calmed through negotiations, but the causes for the tension remain. At the end of last year the Amal Movement, the Socialist Progressive Party and the Christian Lebanese Forces signed an agreement in Damascus to end the civil war. The main points of the agreement were to end the

existence of all the non-Lebanese armed forces in this country; dissolve the militia organizations and take over all the arms of the Lebanese and non-Lebanese people.

The bloody conflict over the camps has caused concern and anxiety from around the world. The United Nations Security Council and Secretary-General Javier Perez de Cuellar have repeatedly called on the two sides to reach a ceasefire. ■

by Chen Jichang, Zhou Guoming

## WARSAW PACT

### Troop Slash and Verification Proposed

*The Warsaw Pact proposal for East-West troop reduction and verification is politically timely, following Reagan's vow to pull out of SALT II.*

Now that leaders of the seven-member Warsaw Pact closed their two-day summit in Budapest on June 11 with a major East-West troop reduction proposal, the United States and its NATO allies will have to sit down to scrutinize this arms reduction appeal before drafting their own version.

The Warsaw Pact proposal, which calls for an East-West troop reduction of 100,000 to 150,000 soldiers by each side over the next one or two years, a 25 percent cut in troop strength by the early 1990s, appears to be more dynamic than earlier proposals. It contains details of a general reduction call made by Soviet leader Mikhail Gorbachev on April 18 when he addressed the Socialist Unity Party Congress of Democratic Germany and suggested a definite timetable for the reductions.

The Warsaw Pact also broadened its former stand on disarmament by agreeing to verification measures for arms reduction, including on-site inspection of disarmament and troop reduction efforts.

The issue of verification has long been a sensitive point in the

unproductive Vienna negotiations of the past 13 years.

Miklos Barity, deputy Hungarian foreign minister and secretary-general of the Pact, said at a press conference that the member states were prepared to introduce measures to monitor troop reductions through an "international consultative committee" with the participation of NATO and Warsaw Pact countries, interested neutral and non-aligned states, and other European countries.

Through NATO's eyes, however, the latest initiative—which to some extent reflects the wishes of Europeans who do not want to see an armed confrontation between the world's two biggest military blocs—would squeeze the US armed forces out of Europe while maintaining a strong Soviet military presence there.

It is evident that the proposed equal troop-cuts for both NATO and the Warsaw Pact would leave the Soviet Union with an advantage because the number of troops the Soviet Union now has stationed on the continent is much greater than that of the United States.

The United States has about 300,000 servicemen in Western Europe, but in Democratic Germany alone the Soviet Union has the same number of soldiers.

NATO may also consider it disappointing that the proposal fails to mention medium-range missiles positioned east of the Ural Mountains when it offered to withdraw the Soviet rockets installed in Democratic Germany and Czechoslovakia in exchange for the dismantling of US medium-range missiles in Western Europe.

Washington has repeatedly stated that any deal on missiles in Europe should take into account Soviet medium-range nuclear weapons based in Asia because these weapons may easily be moved into Europe in an emergency.

Despite all these differences, the proposal may signify a step towards agreement, particularly over issues such as verification.

According to reports from Brussels, a NATO spokesman said the Warsaw Pact proposals would be carefully considered. "It would be wrong to comment on the details before these ideas have been properly studied. But we certainly welcome all constructive contributions towards our objective," the spokesman said. It is significant that he refrained from calling it a propaganda ploy.

West European countries are expected to probe further what they may believe are constructive points in the Warsaw Pact proposal.

Whether it can break the decade-old deadlock in East-West disarmament talks remains to be seen.

One thing appears to be certain: The proposal will put more pressure on the Reagan administration for some positive move towards disarmament as major NATO members, Great Britain included, are opposed to the US decision to scrap the SALT II agreement. ■

by Xin Zong

# Key to Understanding China

*General Secretary Hu Yaobang spoke at the British Royal Institute of International Affairs in London on June 11. The following are excerpts from his speech.*



BY LU YUXIANG  
General Secretary Hu Yaobang speaking at the British Royal Institute of International Affairs.

China may appear to be an "inscrutable" country to some of our friends in the Western world. This is because a vast distance separates us and our cultures, languages and customs are quite different. Furthermore, we have followed different courses of social development in modern history. China was long closed to the outside world; it waged a titanic struggle for liberation over the last century; and since the founding of New China more than three decades ago, while great progress has been achieved, there have also been many twists and turns. All this has added to the sense of mystery.

Where is China headed? I submit that China's basic national policy in this century and the next boils down to two goals: First, to promote a sustained and steady growth of China's economy by the execution of the policy of reform

and opening to the outside world; and second, to ensure that China concentrates on uninterrupted development by pursuing an independent foreign policy of peace. If these points are grasped, one will have grasped the key to understanding China's trend of development. Now allow me to use this key to open the door to understanding China and to dwell on the following four questions.

**The first question: China's reform and opening to the outside world.** After making a detour, we came to realize that after the establishment of a new social system, our fundamental task is to develop the productive forces and gradually improve the people's material well-being and their cultural life. In order to ensure a sustained and steady growth of the national economy, it is imperative to open to the outside world, reform the rigid

and highly centralized structure in which administrative means are used to manage the economy and develop a planned socialist commodity economy based on public ownership. So, in the past six to seven years, while pursuing the policy of opening to the outside world, we have made a bold exploration of the reform.

The reform which first began in the rural areas is in full swing today, covering economic, scientific-technological and educational structures as well as the political realm. It is being carried out in both material and cultural and ideological fields. The all-round, speedy and steady growth of China's economy and the marked improvement in the material and cultural well-being of the people in the past few years have all shown that the reform and the opening to the outside world have yielded initial successes and the people are pleased with it.

Some people abroad did not favour our opening to the outside world and our reforms. They suspected that our policies deviated from orthodoxy and were nothing but heresies. But these suspicions have tapered off in recent years and our policies have begun to be viewed in a new and favourable light. Others believe that in opening to the outside world and carrying out the reform we will lean to and eventually merge with the model of Western society. Developments over the past three decades show that it is socialism that has helped China shed its former image of "a sick man of the East" and stand up in the world. Socialism has enabled China to basically solve the problem of food and clothing

for a quarter of the world's population and has made it possible for China to approach the level of the developed countries economically after 60 to 70 years of endeavour. Only after long years of sufferings and summarizing their own experience have the Chinese people found the correct road for building socialism with Chinese characteristics. This socialist road has become the fundamental faith of the one billion Chinese people. Alteration of the path China has chosen will not only be rejected by the Chinese people but will also turn China back to the turbulence and unrest of former days and will be detrimental to world stability and security.

Now, people have seen more and more clearly that opening to the outside world has not led China "astray" and reform will only help further perfect China's socialist system. Therefore, it is our unalterable and fundamental state policy to persevere in the reform and the policy of opening to the outside world, to try to avoid mistakes in our work and, through the untiring efforts of several generations, turn China into a highly civilized, highly democratic and modern socialist country.

**The second question: China's foreign policy.** Some friends have asked what are the basic points of China's independent foreign policy of peace? Will this foreign policy be adhered to in the long run?

With regard to the main content of China's foreign policy, Premier Zhao Ziyang, in the recent Fourth Session of the Sixth National People's Congress, summarized the ten aspects which, briefly speaking, comprise the following three basic points: First, we

support everything that is in the interests of world peace and stability. We oppose all acts of hegemonism, no matter who practises them and what form they take. Secondly, China will never attach itself to any superpower, nor will it enter into alliance with either side. China is willing to develop friendly relations with all countries of the world on the basis of the Five Principles of Peaceful Coexistence. Thirdly, China firmly sides with third world countries and stands for fairness and justice.

Development in peace is the common aspiration of the people of all nations. It is, moreover, the strong desire of the one billion Chinese people. China needs peace and does not want war. Having suffered untold hardships under foreign aggression and the scourge of repeated wars for more than a century, China has not yet completely lifted itself from poverty and backwardness. It is impossible for us to bridge the historical gap between China and the developed countries without decades or even a century of peaceful economic development. Therefore, we are determined to work together with people the world over to prevent the outbreak of war in this century and the next. As for our wishes, it would be best if war never breaks out.

A policy of military expansion and war is diametrically opposed to the basic beliefs and principles upheld by the Chinese Communists. Those who worship military might, seek hegemony, commit aggression and expansion under whatever pretexts, or even perpetrate military occupation of other countries, are bound to run their heads against a brick wall and end in failure. Therefore, we teach our children and children's children

that even when China becomes prosperous and powerful, they should continue to uphold the policy of peace and never seek hegemony.

Past experience tells us that if China attaches itself to or enters into alliance with a certain big power, it will not only be subjected to the control of others, unable to hold its own destiny, but also jeopardize its own development, to the detriment of world peace and stability. Therefore, we are determined to remain independent in our foreign relations and maintain friendly ties with other countries in accordance with the Five Principles of Peaceful Coexistence. We will not let such relations, whether close or estranged, hinge on the similarity or difference in social systems and ideologies.

By pursuing the independent foreign policy of peace, China will gain the best possible international environment for its peaceful reconstruction, and enable a big country, like ours with one billion people to make greater contributions to the relaxation of international tension and the maintenance of world peace and security. China's foreign policy is in the fundamental interests of the people of China and the rest of the world, and it will remain unchanged no matter what sudden shift of events will happen in the international arena.

**The third question: the relationship between national defence and economic development.** Economic development requires huge investment while expansion of military strength needs all the more increased funds. The two are mutually exclusive and it is hardly possible to lay

***After careful considerations we have come to the conclusion that the right thing to do is to concentrate on economic development and gradually improve the people's livelihood and on this basis to strengthen our defence capabilities step by step.***

***Our basic policies have struck deep roots among the people and are therefore full of vitality; they will not be changed when changes in the leadership occur. China will follow the present road in its successful march towards the 21st century.***

equal stress on both. To tell you frankly, China lacks funds in launching the modernization drive and it is not possible today nor will it be in the next several decades for China to spend heavily on expanding its military forces. After careful consideration over the past many years, we have reached the conclusion that the right thing for us to do is to concentrate on economic development and gradually improve people's livelihood, and on that basis, to strengthen our defence capabilities step by step. We shall never become a party to the arms race. On the contrary, we are opposed to the arms race and the nuclear arms race in particular. We stand for the complete prohibition and thorough destruction of nuclear, chemical and biological and space weapons. We also stand for the drastic reduction of conventional arms.

Being realists, we are fully aware that as the danger of a new world war has not been eliminated, we must be prepared against any surprise attacks. But within the limits of our capabilities, we can only do two things: First, we must maintain an adequate defence capability; second, we must keep an eye on and study the advanced defence means of the world. Of course it is also necessary for us to import some advanced military technologies with the sole purpose of strengthening our defence capability. We are not going to squander our limited amount of foreign exchange on heavy purchase of military hardware. We shall not be intimidated if war is imposed on us. As a country with a vast territory, China has much room for manoeuvring and the populous Chinese nation is conscious and capable of fending

off foreign aggression. Aggressors may harbour their own wishful thinking, but we have our own ways of defence. We are confident and capable of defending our motherland. It is on this conviction that the Chinese government made the decision in June last year to cut the size of its armed forces by one million. What is more, the proportion of China's defence expenditure in its national budget has been reduced annually in recent years.

**The fourth question: Whether or not China's basic state policies will be changed.**

Now that I have briefed you on China's basic state policies, someone may ask: Who can guarantee that you will adhere to your basic state policies over the next several decades? This is indeed an important issue which has a bearing on the direction of China's future development. It is also an issue we have tried to resolve over the past few years. I can say in all seriousness that China's basic state policies have struck deep roots and are full of vitality mainly for the following four reasons:

First, our current policies have already brought the people substantial benefits and have thus won the wholehearted endorsement and support of the overwhelming majority of the Chinese people. These policies are deeply rooted in the masses and have been grasped by them. No one can in the true sense abandon them—for to do so would be to violate the will of the people. Of course, no specific policies are free from the limitations of the times and they must develop along with the march of events. If you call this development a "change," then our policies will only change for the better.

Second, the entire set of major policy decisions currently in force in China are collectively taken on the basis of an earnest summing-up of the past experience, an extensive solicitation of opinions from all quarters and consultations with various democratic and non-party personages and people from all walks of life. True, leaders of the older generation have been at the helm. However, our policies are not determined by a certain individual but are the crystallization of collective wisdom.

Third, we are also determined to further develop socialist democracy and make it institutionalized and legalized so as to bring into play the people's initiative as masters of their own affairs and ensure their democratic rights and effective supervision in political, economic, cultural and social activities. In so doing, we will be able to effect the sustained and steady implementation of a whole set of correct policies and guidelines on the track of socialist democracy and legal system.

Finally, over the past few years, we have achieved gratifying successes in our efforts to promote younger people to posts of leadership at various levels from the central authorities to the grass roots. Now, a big contingent of energetic, competent and enterprising young people have taken up leading posts. This is of great importance to the vitality of our cause and the continuity of our policies and guidelines.

With the above four points of understanding, we have reason to believe that our basic state policies will not change when changes in our leadership occur. China will follow the present correct orientation in its successful march towards the 21st century. ■



# China's Shipbuilding: Good Days Ahead

In little more than six years, Chinese-made oceangoing vessels have sailed out of nowhere to worldwide renown. Their unique designs, superb engineering and reliability are unmistakable signs of China's position as a rising ship exporter.

by Our Correspondent LI Rongxia

Recently the Suez Canal authorities awarded China's Shipping Inspection Bureau a membership in the international classification society. As a member of the society, it will have the authority to sign and issue seaworthiness certificates for ships on the Suez Canal. China is the ninth country to receive the right, the others being the United States, France, Britain, Japan, Italy, the Soviet Union, Federal Germany and Norway.

With this authority, the China Shipping Inspection Bureau can conduct technological examinations on Chinese and foreign ships registered with it. The honour is a significant one demonstrating the reputation and maturity of China's shipbuilding industry.

## A New Ship Exporter

Before the 1980s, China's shipbuilding was little known abroad and no one ever considered purchasing ships from China. In 1980, C. L. Pao, chairman of the board of the Hong Kong Regent Shipping Co. Ltd., ordered two 27,000-ton oceangoing freighters from the Dalian Shipyard of the China Shipping Industry Co.

It took about two years to complete the two freighters. During the ceremony in the Dalian Shipyard, Pao said, "Chinese shipbuilding is technically advanced and even better than expected. The two freighters equal or surpass various technical indices and their quality is up to world standards."

The two freighters were built in accordance with the standards of

Britain's Lloyd's Register of Shipping. R. A. Huskisson, chairman of the Lloyd's Register, praised Chinese ships for their high quality and sensible prices and predicted that China would become a crack force in the

international shipbuilding industry.

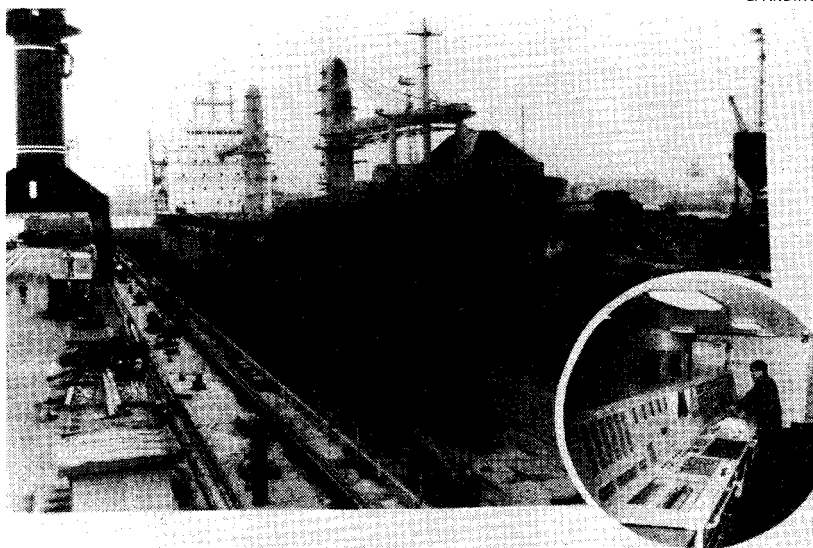
Since then, foreign orders have become more frequent. So far China has built or begun building 36,000-ton container ships, 64,000-ton bulk freighters, 69,000-ton oil tankers, and oil rigs for Hong Kong, the United States, West Germany, Singapore, Norway, Poland and Romania.

Since the 1980s, the world shipping and shipbuilding industry has been in a slump and there has been intense competition on the world market. On December 29, 1984, the Dalian Shipyard beat 68 overseas counterparts and won a contract to build a 115,000-ton shuttle crude steamer for the Norwegian Knutsen O.A.S. Shipping Co. The shuttle steamer demands high-level technology, intricate designs and advanced equipment, including twin-engines, twin-diesel engines, twin

*It seems unbelievable that China, which six years ago could only build ships at the level of the 60s and 70s, is now turning out vessels that compare favourably with the best of the world today. Since 1980, it has contracted to export ships 1.35 million tons in total shipping capacity.*

"Halhuang Blyu," a container ship loaded with satellite navigation equipment.

LI ANDING



rudders, automatic steering and an automated engine room.

The Zhonghua Shipyard in Shanghai has built 10 container ships for the Schulz Clemmesen Shipping Co. of West Germany. These ships have many functions and are capable of unmanned operation for 16 hours in any shipping line other than the polar circles. Their design, technology, structure and performance have passed rigid examinations by West German experts from six organizations. The shipowner said: "The shipbuilding quality of the Zhonghua Shipyard has reached the highest level in the world's shipbuilding industry."

Shanghai's Hudong Shipyard once built nine triple-purpose

ships for a Singaporean company. After a trial voyage, the manager of the company said the voyage was the best he had ever been on. "You should be proud of your ships," he told the Shanghai builders.

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***Imported expertise has considerably boosted the country's ability to build ships on its own and has saved a great deal of money in foreign exchange.***

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The Dalian Shipyard has also made a name for itself for the two oil rigs it built for the Baker Marine Corp. of the United States. At the naming ceremony, Larry A. Baker, chairman of the corporation, said: "These two ships are top-quality and have passed the inspection of the US Coast Guard. They can run in any country." Another deputy of the corporation said he had underestimated the Dalian Shipyard. "Now we know our expectations of the Chinese shipbuilding industry were too conservative," he said. "In fact the quality of the two oil rigs has surpassed the level of Europe and the United States."

Before 1980, China was lagging behind in shipbuilding. In the past six years, however, China has signed contracts to export 1.35-million tons of steamers and three oil rigs, and its total volume of business has reached US\$1,390 million.

### Up to World Standards

In the final analysis, the world market competition is one of price, technology and promptness of delivery. China has developed its shipbuilding industry, but all of its ships must measure up to international standards. This is the prerequisite for entering the international market.

For a long time, China had closed its shipbuilding industry off from the international market, and its ships were only up to Chinese or Soviet standards. In recent years, however, China has revised its technical specifications and strictly maintained international standards in building ships.

The rust cleaning technology used on steel plates has a significant effect on the service life of a ship. In the past, however, China did not have strict specifications for rust cleaning. Several years ago, the Jiangnan Shipyard officials discovered that most countries used Swedish standards, and they improved



their technology accordingly, and built an assembly line to treat wide steel plates. Workers at the Jiangnan Shipyard pressed and sprayed the plates with iron sand, leaving the plates smooth, bright and rust-free. After examination by Britain's Lloyd's Register of Shipping, the plates were up to Swedish SA2.5 standards.

Welding is the most important technology in building the body of a ship, and needs to be both strong and smooth. Today China's shipyards have organized classes for welders to study the specifications of Lloyd's Register of Shipping. Most of the welders participating in the classes have been awarded certificates approved by Lloyd's Register. The China Shipping Industry Corp. has also drawn up standards of quality for the China welders.

Today, standards are many, which ensure that all designs and engineering work will meet the requirements of the international classification society. Now the China Shipbuilding Industry Corp. can build a variety of ships in accordance with classification standards chosen by the shipowners.

Sir Y.K. Pao, chairman of the Hong Kong Worldwide Shipping Agency Ltd., once said, "The Chinese shipbuilding industry has made a deep impression on the world market. China has the ability to keep up with any advanced shipbuilding country."

In order to improve its navigational instruments, electronic equipment and engines, China has imported a complete set of manufacturing technology including the famous Sulzer-brand low-speed, high-power diesel engines and the manufacturing technology for low-speed and high-power diesel engines from Denmark.

In only six years, China has signed 295 imported technology contracts. Of these, 50 were for software and 245 were for hardware. Importing technology has increased China's ability to

build ships on its own and has saved a great deal of foreign exchange. In the past, 80 percent of the instruments on China's exported ships were imported, but that figure has now dropped to 50 percent.

## Shipbuilding Strength

The Chinese shipbuilding industry has gone from prosperity to decline to revival. As early as c. 1600-1100 BC during the Shang Dynasty, China had developed the



Oil/water supply ship.

GUO YIJIANG

## Oil/Water Supply Ship

Between November 1985 and early 1986, a Chinese flotilla made its first voyage abroad in 30 years and called at ports in three South Asian countries—Pakistan, Bangladesh and Sri Lanka. An oceangoing oil/water supply ship joined the fleet, making the distant voyage possible.

The oil/water supply ship, which is 168.52-metres long and 23.6-metres wide, was designed and built in China. Equipped with complete vertical and horizontal supply devices, the ship has a fairly large cruising radius and can provide a cruising fleet with fuel, fresh water, food and other necessities. Helicopters can also land on the ship to unload supplies and give first aid in an emergency.

Designed and built by the Dalian Shipyard, the largest of its kind in northern China, the supply ship was completed in 1979 and put to sea the following year. The

ship is well designed and easy to operate. While supplying oil, the pipes join automatically, and when the work is completed the pipes close on their own, ensuring against oil leaks.

On its way home from its South Asian tour, the ship was besieged by a storm for five days and battered by 8-metre waves. It weathered the storm, however, and successfully completed its trip. Over the past five years, the ship has also participated in the launching of a carrier rocket into the southern Pacific as well as other important scientific experiments.

China's prowess in shipbuilding has surprised some. After the supply ship returned from aiding in the launch of the carrier rocket in 1980, a US military attaché to China said he had not expected China to be able to conduct a formation cruise of this sort before 1985.

plank boat and then the plank sailing boat. In ancient times, Chinese shipbuilding technology led the world. The compass, which has been vital to navigation, is one of China's four ancient inventions.

China's modern shipbuilding industry began in Shanghai's Jiangnan Manufacturing Bureau in 1865. But because at that time China was a semi-colonial and semi-feudal country, its shipbuilding industry declined daily. From 1865 to 1949, China's total steel shipping output was only 500,000 tons. In 1949, China had more than 10 shipyards and 10,000 workers to build steel ships. Most of the shipyards were seriously damaged during the war, however, and production came to a standstill.

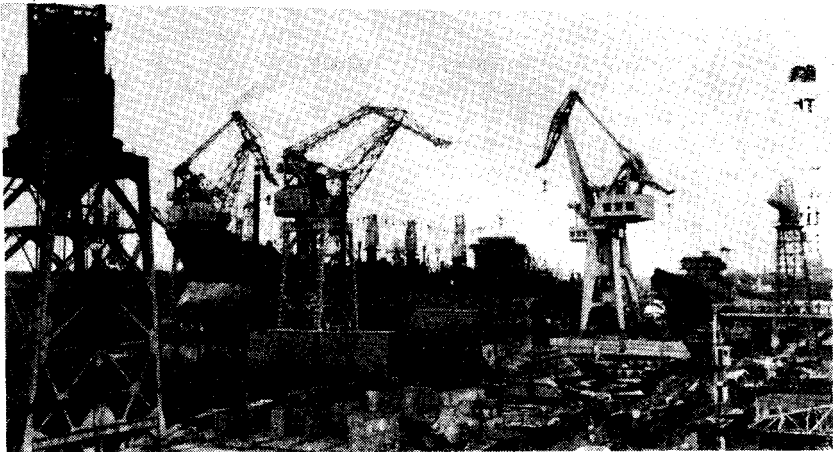
Since the founding of New China in 1949, the shipbuilding industry has rallied its forces and has formed a comprehensive industrial system that extends from scientific research and design to manufacturing.

Now China has 523 shipyards of various sizes, 160 specialized factories, 540,000 employees, more than 80 scientific research institutes and 30,000 scientists and technicians. It also has 14 berths of 10,000 ton-class and 13 docks in Shanghai, Dalian, Tianjin, Guangzhou and Wuhan, which are China's main shipbuilding and repairing bases.

Hu Chuanzhi, general manager of the China Shipbuilding Industry Corp., addressed a shipbuilding industry working conference in April: "During the period of the Seventh Five-Year Plan (1986-90), China will continue developing its shipbuilding industry. The total value of industrial output in five years will add up to 17 billion yuan, shipbuilding output will

A 10,000-ton freighter being built for export at the Dalian Shipyard.

YAO JIANGUO



## Scientific Expedition Ship

Between November 1984 and April 1985, *Xiangyanghong 10*, China's first scientific expedition ship, carried a team of Chinese scientists to the Antarctic. On King George Island the Chinese explorers established the Great Wall Scientific Observation Station, taking the first step in China's contribution to mankind's peaceful utilization of the South Pole.

With a displacement of 13,000 tons, *Xiangyanghong 10* has a cruising radius of 18,000 nautical miles and is equipped with advanced satellite communications devices, satellite navigation systems and collision-warning radars. It is also loaded with marine exploration equipment for comprehensive surveys of marine hydrology, geology,

meteorology, marine biology, chemistry and geophysics in all sea areas. During its first cruise to the Antarctic, the ship sailed more than 20,000 nautical miles, and all the equipment performed well despite the complexity of the Antarctic.

Designed by the No.708 Research Institute and built by the Jiangnan Shipyard, the ship compared favourably with the world's best in its anti-resistance ability, seaworthiness and operation.

The ship is equipped with more than 80 labs and computer cabins (including auxiliary cabins), as well as hundreds of scientific research instruments. It also has a complete meteorological system, meteorological rocket launching and sounding balloon launching systems, numerous wind- and

rain-detecting radars, and devices for receiving satellite cloud imagery, making weather charts facsimiles and conducting upper air weather observations. Its equipment can measure the upper atmosphere parameters 30,000 metres above sea level, track the formation and movement of typhoons in a circumference of 500 km, and make short-term weather forecasts. The ship can sail 20 nautical miles an hour, and its diameter of gyration is less than 3.5 times the length of its body. When sailing at low speed, its diameter of gyration is less than 3 times its body length.

Since it was launched in 1979, the ship has also participated in the launching of China's first carrier rocket into the Pacific and the launching of a geosynchronous experimental communications satellite.



The launching of a new guided-missile escort vessel.

GUO YIJIANG

*At a time when competition on the world market is intensifying and the prices are dropping constantly, Chinese shipbuilders will pay more attention to quality, strive for technological breakthroughs and develop new models.*

amount to 4.85 million tons (a 48 and 75 percent increase respectively over the total value of industrial output and shipbuilding output during the period of the Sixth Five-Year Plan). China will continue importing advanced technology in order to help its marine accessory equipment reach advanced world levels. By the end of the period, more than 80

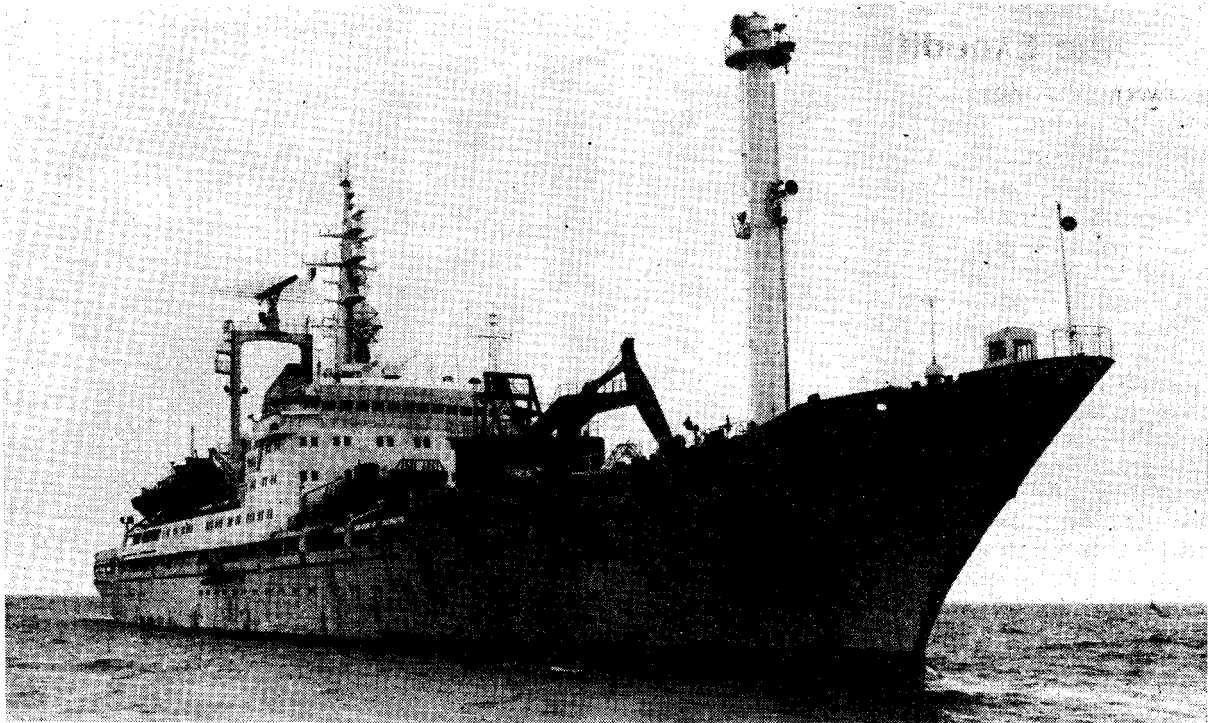
percent of the equipment on our ships will be made in China.

In an interview with *Beijing Review*, Hu also said that despite these achievements, much remains to be done to improve Chinese shipbuilding. "The competition on the world market is very acute and prices are dropping," he said. "But, at the same time, the costs of domestic materials and equipment

are going up. So we must strive for further achievements." He also said that in order to raise its competitive capacity, China should enhance the quality of its shipbuilding business, increase its ability to cope with changing circumstances, promote technological improvement and develop new shipping models. At the same time, China must lower its production costs, step up training

"Xiangyanghong 10" returned from its Antarctic expedition in May 1985.

DENG JUNZHAO



of specialists, expand export, provide better technical services, establish more sale centres abroad and in the 1990s try to become one of the main shipbuilding countries in the world.

## Updating China's Navy

In December 1985, China launched a guided-missile escort vessel, marking another step in the Chinese shipbuilding industry's efforts to modernize the navy since it switched its major efforts to building civilian vessels in the early 1980s. Over the last three decades, the shipbuilding industry has built a variety of warships, making the Navy both offensively and defensively strong.

In the last 30 years, the Chinese shipbuilding industry has beefed up the navy's strength with a variety of warships, including high-speed gunboats, torpedo boats, hydrofoils, guided-missile mosquito boats, submarine chasers, guided-missile escort vessels, guided-missile destroyers, mine-sweeping boats, torpedo submarines, guided-missile submarines and nuclear submarines.

## Prized Combat Ships

According to Liu Jinming, a captain, at the Zhoushan naval port in the East China Sea, guided-missile destroyers are the major combat vessels of China's navy. Each destroyer is 132 metres long and has a displacement of 3,600 tons. Armed with formidable weapons including two groups of six-missile launchers, a destroyer can sail alone or as part of a fleet. Captain Liu said that during last December's friendship call to some of the naval ports in Pakistan, Bangladesh and Sri Lanka, his ship was commended by local navies. A naval officer in Pakistan even said it was the most beautiful warship he had ever seen during his 20 years in the navy. Captain Liu, though proud of the ship, says it is not perfect. "My

men complain about the poor living conditions on board," he said frankly.

The vessel was designed and built by the Zhonghua Shipyard between 1977 and March 1980 and is outfitted with Chinese-made equipment.

Liu Xinhua, captain of another guided-missile escort vessel at a Shanghai naval port, said such ships are equipped with ship-to-ship guided missiles, and can also perform anti-submarine, escorting, scouting, mine-laying and patrolling tasks.

Large landing boats transport marines during wartime. These ships, which are 119 metres long and 15.6 metres wide, are the largest of their kind in service in China and can also accommodate artillery, armoured cars and ammunition. According to Capt. Ma Jianqing, foreign landing boats can provide only offshore landing, but the Chinese ships can

land on the shore. They can also be used to lay mines. Moreover, both ends can be used as exits when needed. "As a captain, I'm satisfied with my vessel and think it is up to advanced world levels," Ma said. Capt. Ma, added, however, that the electronic communications equipment on these ships are inadequate.

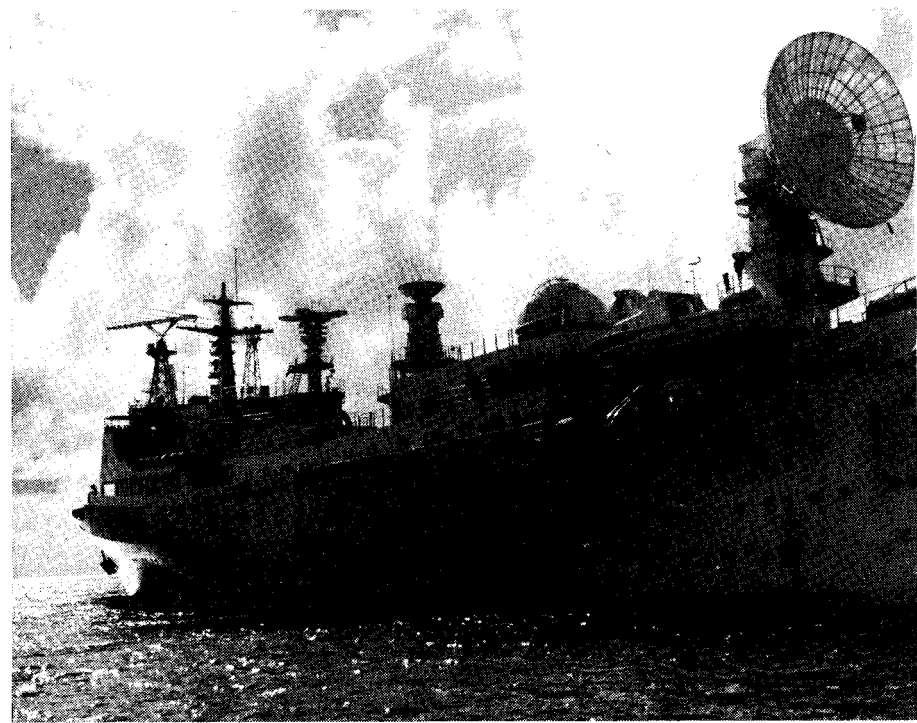
## Stages of Development

When the Chinese navy was first founded, it had only a few small and poorly equipped warships. The Chinese shipbuilding industry, which was responsible for outfitting the navy, has experienced the following four stages in its assignment to bring the nation's navy up to par.

■ **Assembling Stage.** In the 1950s, the Soviet Union transferred to China some data and equipment on assembling warships. During this period, China assembled more than 70 warships.

"Yuanwang 1," a scientific expedition ship, in the South Pacific.

DENG JUNZHAO



■ **Copying Stage.** When Sino-Soviet relations broke down in 1959, the Soviet Union recalled all of its specialists stationed in China, as well as certain technologies, among them those used in shipbuilding. This forced Chinese shipbuilders to rely on their own efforts to imitate conventional submarines and guided-missile ships and their accessories. During this period, (1960 to 1962), China was hit by a succession of natural disasters, which put the national economy into a tailspin and brought the Chinese shipbuilding industry to a standstill.

■ **Design and Trial-Building Stage.** In the late 1960s, China began designing and building medium-sized warships. By the end of the 1970s China not only built its first generation of combat vessels, including guided-missile destroyers, guided-missile escort vessels, submarine chasers and

conventional submarines, but also special-purpose vessels, including telemeter control vessels, oil-and-water supply ships and salvage boats.

■ **Scientific Research Stage.** Since the early 1980s, China has completed its first generation of upgraded warships, which include submarines, torpedo launchers, anti-submarine escort vessels and guided-missile escort vessels. At the same time it has begun work on the second generation of guided-missile destroyers, light-duty escort vessels, large guided-missile mosquito boats and submarines. China has so far developed experimental models of anti-submarine automatic guided torpedoes and medium- and high-speed diesel engines, platform compasses, co-ordinated radars, ship-borne computers, guns and anti-submarine systems, all adding considerable advantages to the nation's navy. With its home-

made nuclear submarines in service, China has joined the small group of nations with such submarines.

During the Seventh Five-Year Plan period (1986-90), China will step up its study of warship electronics equipment and weapons to boost the strike capabilities of its war vessels, submarines and aircrafts and improve information feedback and processing efficiency.

## For Self-Defence

According to Navy Commander-in-Chief Liu Huaqing, China's effort to modernize its navy is not because China intends to invade other countries. "We do this for self-defence," he said, adding, "The mission of the Chinese navy is to ward off sea attacks by imperialists and hegemonists, to defend China's territorial waters and maritime rights and interests, and to serve our country's exploitation of its marine resources and its harbour construction."

The assistant director of the Hudong Shipyard in Shanghai, Zhao Defa, said his factory is making a new generation of guided-missile escort vessels. Formerly, Zhao said, warships were built with emphasis on needs, not on economic results. But now, efficiency is stressed. He also said previously attention was paid to the quantity of heavy weapons. Now, however, efforts are being made to upgrade the technology and quality of the weapon systems on board. As a result, the factory is spending more time on research than on trial construction with a view to reducing production cost. Zhao also said his factory is determined to build more advanced ships by the end of the century. Though the Chinese navy is being modernized, its ships are at a 1970s level of sophistication when compared to advanced countries.

## Telemeter Control Vessel

At 20:36, February 1, 1986, a white carrier rocket shot into the sky from China's satellite launching centre, sending an experimental communications satellite into space. At the same moment, the telemetric aerials on *Yuanwang*, an oceangoing telemeter control vessel, started revolving, and the signals they picked up confirmed that the satellite was being monitored. Immediately, computer-processed data from the satellite were displayed on computer screens. The ship was performing as expected.

The first comprehensive off-shore tracking vessel made by China, *Yuanwang* is 190 metres long, and the equivalent of 10 storeys high. When loaded with oil and water it can more than circumnavigate the globe. The ship of 20,000 ton displacement is equipped with advanced engines

and navigation and orientation systems, as well as thousands of precision instruments for tracking, telemetry, telecontrol, data transmission and communications.

The ship's main radar, which requires dozens of people to operate, follows outer-space missiles. The diameter of the radar's large aerials is 9 metres long and that of the small ones 1.25 metres. Highly sensitive, the radar can detect objects in zero visibility. The placement of missiles and the orbit position of satellites launched by China since the ship was put into use have all been tracked by this huge radar.

The ship has plied to the Pacific five times and sailed a total of 76,000 nautical miles. It has also helped launch China's first carrier rocket into the Pacific as well as a missile from underwater.

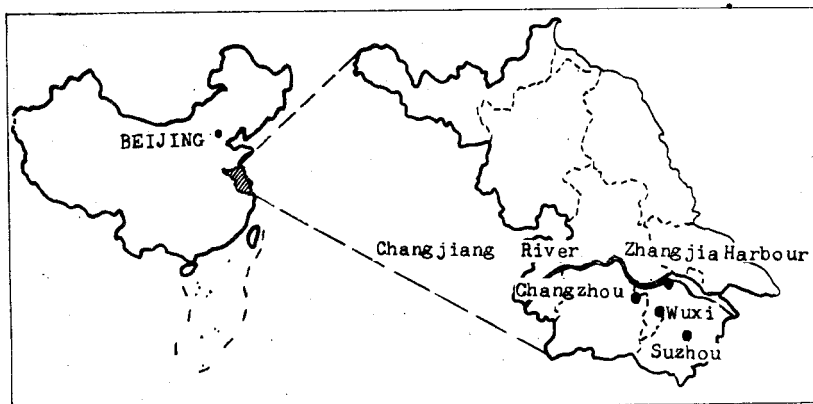


CHANGZHOU'S URBAN REFORM(II)

## Businesses Pull Together for Progress

*The shift from enterprise chains to enterprise groups was a historic change in the operation mechanism of China's socialist economy, for it meant a shift from an over-concentrated, non-commodity, planned economy to a planned commodity economy.*

by Our Correspondents Xia Zhen and Yue Haitao



**C**hangzhou's outstanding economic achievements in recent years can be attributed at least in part to changes made by the city to boost production after the introduction of public ownership of the means of production in the 1950s.

The first change was implemented in the 1960s when enterprises manufacturing the same products were formed into what were called "enterprise chains" in accordance with the principle of co-ordination among specialized factories.

### 'Dragons' Taking Off

The city's first enterprise chains were created in 1962 through the joint efforts of its corduroy factories. Mostly established in the late 1950s, these plants were small and poorly equipped. Their products were of low quality and expensive and therefore did not sell well. Though the factories wanted to expand their production, they lacked funds. Since the central government did not provide them, they had no

alternative but to rely on themselves. So, from 1961 to 1962, with the help of the Municipal Textile Industrial Bureau, eight corduroy-related factories in Changzhou merged into one chain with the most technically advanced dyeing mill as its head.

In 1963, top-rate corduroy reached 90.17 percent of the total output, up from the previous 53.4 percent. Varieties went up from 51 to 71, and output rose from 10.58 million metres to 15.24 million metres. Exports also shot up from 500,000 metres to 2.36 million

metres. These chains were also called dragons because dragons represent strength and the ability to soar, and because Changzhou was called "Dragon City" in ancient times.

***The emergence of enterprise chains helped improve Changzhou's economic setup and enabled member factories to produce more competitive products. These chains also set the stage for industrial associations at a higher level.***

The birth of the corduroy "dragon" was followed by seven others, three of which involved the production of khaki cloth, cotton print and synthetic fabric. The rest covered the production of walking tractors, radios, plastics and glass

A corduroy factory worker inspecting product quality.

CHEN ZONGLIE







At a workshop of the Wujin Bicycle-Joints Factory.

CHEN ZONGLIE

fibre reinforced plastics. All these joint efforts fared very well.

The enterprise chain was a break from the old, inefficient production mode, in which a factory, however small, had to be responsible for everything from its primary to finished products. By 1977, the eight "dragons" consisted of 94 factories, or 23.3 percent of the city's total, and had 38,530 employees, or 29.8 percent of the city's total work force. They chalked up a total of 1.1 billion yuan in output value, accounting for 47.6 percent of the city's total. Such association of specialized factories, though still in its initial stage, improved Changzhou's economic structure and enterprise organization. It also increased these plants' capacity to produce competitive products. In addition, the "dragons" also laid a sound foundation for a higher-level association.

## The Second Takeoff

The second change in Changzhou's industry involved associations between enterprises or departments in different areas of endeavour and was instituted in the 1980s. These associations came to be known as enterprise groups. While enterprise chains were confined to the field of production and put together through administrative mandates, the enterprise groups span production, circulation and distri-

bution of commodities and were instituted through economic means and the influence of the law of value.

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*Whereas an enterprise chain is held together by administrative means and limited to one line of production, enterprise groups follow the principle of voluntary participation and their operations combine production and the distribution of products.*

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Since the early 1980s, with the implementation of the open policy and the institution of structural reforms, great economic changes have taken place in Changzhou. The barriers between regions or departments, erected under the old economic management system, have been dismantled. As a result, commodity exchange and flow have developed and market competition has become fiercer. The many small and medium-sized enterprises in chains have become more productive because of increased specialization. They have turned out more than

required and have sought markets for their surplus parts and auxiliary equipment. In addition, the expansion of enterprise autonomy and the reduction of mandatory planning have loosened controls over productive elements and products. The changes prompted some fledgling members to free themselves from the shackles of the chains. Some key enterprises also had the desire for association because their further development was often made impossible by the limitation of land, labour and resources. To overcome this, they wished to have a broader inter-unit association, and so turned to rural enterprises, which have abundant land, labour and resources, and even to enterprises in other cities. All these facts show that it is increasingly difficult to keep the enterprise chains going by relying on administrative means, and so a more suitable economic association must be sought. It was under such circumstances that "clusters of enterprise" emerged.

These groups are horizontal economic associations based on key enterprises for the development of quality products. Sharing common economic interest, group members follow the principles of voluntary participation, equality and mutual benefit and their ranks include producers, research institutes, commercial and foreign trade departments, and financial institutions. The associations vary in their cohesion, and each member enterprise retains its former ownership form and is administratively and financially accountable to its former superior and responsible for its own business accounting, profits and losses.

Since 1982, 443 enterprises have been organized into 56 groups. Last year, these groups made 3.385 billion yuan in output value and turned-over 544 million yuan in taxes and profits to the state, accounting for 32.86 percent and 40 percent of the city's total respectively.



## Bicycle Complex

One group, the Changzhou Bicycle Complex, comprises a general factory, six subsidiaries, one research institute and more than 100 associates. Director Dong Huanxing said the complex is a four-layered organization. At the first level is the general factory, which is the group's leading structure, with a strong technological force capable of developing new products. The general factory and the group are led by the same board of directors. The director of the general factory is also the legal representative of the complex. The general factory is responsible for receiving the state's production quotas and orders from clients, and for making production plans, co-ordinating production among associates, monitoring progress, unifying technical and quality standards and drafting programmes for technical transformation and for the development of new products. In the interest of quality, the four major stages of finishing, electroplating, welding and assembling the bicycles are conducted at the general factory. In addition, the general factory also produces 40 percent of key parts, and its production costs make up 52 percent of the group's total.

At the second level are the six branch factories, most of which are former workshops of the general factory. After separating, these branch factories secure the status of legal persons and look after their own accounts. They work together under a "life-long" contract, and cannot co-operate with a third party without the consent of the general factory. They can freely sell their surplus only after they have met the general factory's needs for quality components and spare parts. The general factory is responsible for the branches' equipment and technical investment. For example, the NO. 2 branch factory, a former compressor producer, has

specialized in producing roller chains since 1982. In the past two years, the general factory invested 1.1 million yuan in the branch factory to push the branch's annual capacity to 4.6 million roller chains.

The six branch factories, in their turn, established 10 subsidiaries of their own within their home provinces. These affiliates now accept investment and production quotas from the branches.

At the third level are 30 or so factories. These factories, scattered in Shanghai and China's five eastern provinces, have signed contracts with the general factory for a co-operative term of three to five years and a fixed portion of their products are to be purchased by the general factory. The portion purchased bears the trademark of the general factory and must reach the state's quality standards.

At the fourth level are 80 or so factories in irregular co-operation with the general factory. As peripheral organizations of the

complex, these factories, located across the country, have supply-and-marketing relations with the general factory, which purchases parts from them, with the quantity and prices set according to quality.

Asked what the general factory will do when it finds co-operative factories' parts substandard, Director Dong said: "It's easy. We simply turn to other factories. Our 'Gold Lion' bicycle is in great demand, and many factories want to work with us." Participation in the complex is voluntary and the members are free to decide whether to leave or to remain after their contracts expire.

When asked if a small member factory runs any risk of being undercut or taken over, Tan Zhiren, director of the Wujin County Bicycle-Joints Factory, which is one of the co-operative factories at the second level, said there was no risk of being taken over. The associates, he said, keep their original ownership and are administratively and financially accountable to their original

**Changzhou's Camera Factory ranks second in the country in annual output.**

CHANG XIN



superiors. In the group, all enterprises, big or small, are equal partners and "share the benefits and risks, if any," Tan said.

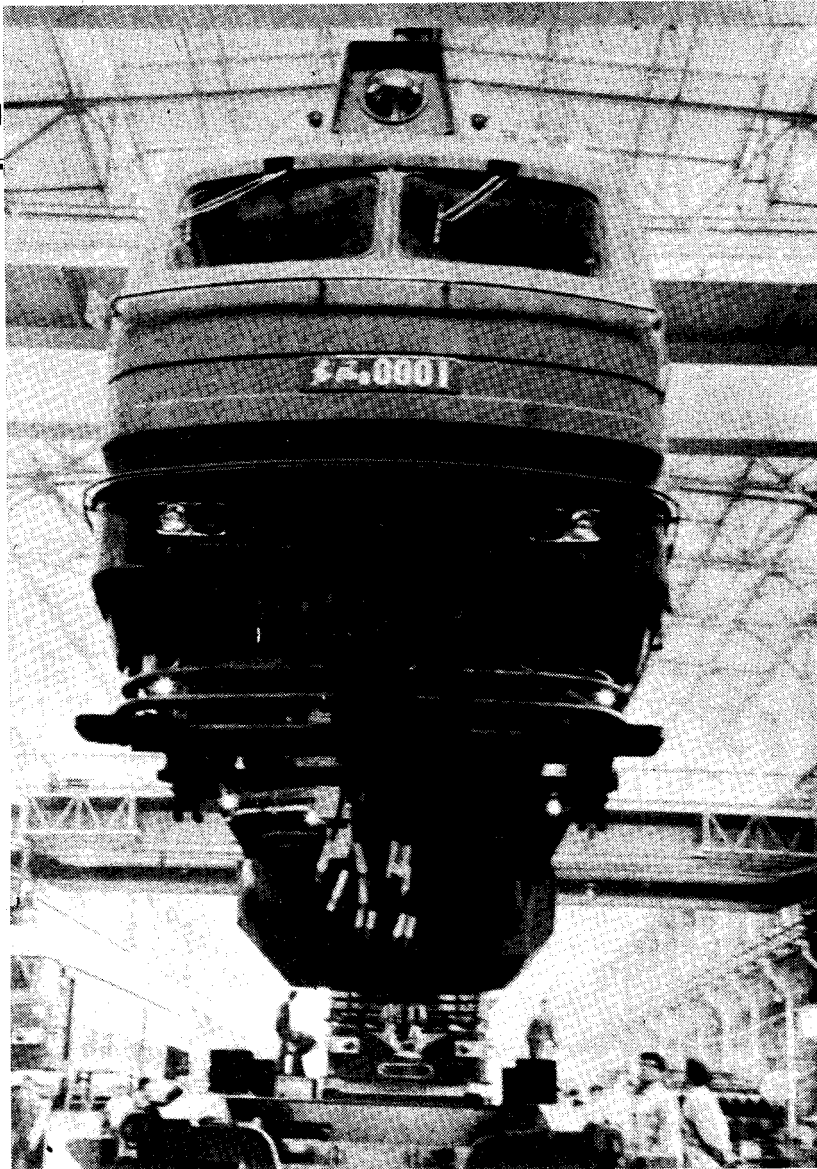
## Real Advantages

"Enterprise groups promote production," said Director Dong. During its first year of 1979, the bicycle complex produced 60,000 26-inch "Gold Lion" bikes, valued at 13.31 million yuan. In 1982 when the group was set up, the bike factory's annual output skyrocketed from 300,000 bikes to 500,000 in 1983, 780,000 in 1984 and more than 1 million last year, at an average annual growth rate of 46 percent. Last year, it logged 169 million yuan in output value and paid the state 32 million yuan in profits and taxes and increased its varieties to more than 60. In 1979, the "Gold Lion" bike was rated the 15th in a national quality assessment. In 1984 it was fourth and one of the top brands.

Changzhou's six-member electronics manufacturing group, founded in 1983, registered more than 200 million yuan in output value and logged 30 million yuan in profit in 1984, up 50.3 percent and 66.8 percent respectively.

The city's camera factory ran a deficit for years until 1981 when it grouped together with other camera-related factories. The cluster's output went up 11 times in three years to reach 190,000 cameras in 1985, or one-sixth of the country's total, and its annual growth rate of profits and taxes averaged more than 60 percent.

More significant is that in addition to their own growth, the members have promoted the development of many collectively owned urban industries and rural enterprises. Of the 443 enterprises that have merged in the city, 88 are collectively owned and 261 are rural. The rural Wujin County Bicycle-Joints Factory, for example, had only a few dozen workers in 1981 and was producing sickles, hammers and other small farm implements.



HE GUANGHUA

"The Dongfeng 8" large internal-combustion engine, a product of the Changzhou Qishuyan Locomotive and Rolling Stock Plant, being put on the tracks.

***It is most likely that Changzhou's enterprise groups will develop into limited companies in which other companies and individuals can buy stocks. In fact, some factories are considering buying and selling stocks on a trial basis.***

After joining the Changzhou Bicycle Complex, and receiving

equipment, funds, technology, skilled workers and market information from the general factory, the factory developed into the only one in China specializing in the production of bicycle joints. Now staffed with 320 workers, it turns out 9 million sets of joints of 44 varieties in four series a year. Apart from supplying the complex with 40 to 50 percent of component parts for assembling the "Gold Lion" bikes, the factory delivers joints to more than 30 bike producers scattered in 18 provinces and cities.

The enterprise groups have opened up broad prospects for cooperation between urban and

(Continued on p. 31.)

## New Outlook on Employment

"SHEHUI BAO"

(Society)

Many young people no longer regard their occupations as a mere means of livelihood. Instead, they are giving more consideration to whether their occupation will make the most of their talents and provide room for professional growth.

With the economic reform and the open policy, individual households, engaged in production along specialized line, which were once looked down upon, have become an ideal field for the youths' abilities and talents. In 1978, China had only 140,000 such households. But in 1985, the number increased to 11.22 million, with an employment of 16.69 million people, most of whom were young adults.

Changes have also taken place among university graduates. Several years ago, college students desired jobs in Tianjin, Nanjing, Shanghai, Beijing and other major cities; few wanted to go to Xinjiang or Tibet. Now, the economic reform has improved conditions in the formerly less desirable locations and, as a result, many chances for university students to put their ability to good use have arisen.

The vast tracts of virgin land in northwestern China now have a strong appeal to some university students who wish to accomplish something in their careers. For instance, in Shanghai's Fudan University, more than 250 students have formed a northwestern China economic development society. Moreover, many students from other provinces and cities have expressed their desire to

participate in the organization. Today, students in China are less concerned about where they go as long as their assigned jobs are compatible with their talents.

Since the founding of the Beijing Municipal Centre for the Exchange of Talented Persons in June 1984, more than 12,000 people have visited the centre seeking desirable jobs. About 70 percent said they had received training in areas other than those required in their posts. Many of the applicants said they considered income and unit secondary to professional satisfaction. Some said they would take pay cuts, provided they could have the chance to use their abilities.

A youth magazine recently surveyed young people in some provinces. The result of the survey indicates that 95 percent of those questioned were concerned mainly with making use of their talents, and 88.3 percent said, "Money was not nearly as important as making achievements in work." ■

## Bridging Chinese and Western Medicine

"RENMING RIBAO,"

(People's Daily, Overseas Edition)

Nowadays few people doubt the effectiveness of traditional Chinese medicine in treating certain illnesses, or the clinical value of combining Chinese and Western medicines. Opinions differ, however, on some basic theories of Chinese medicine and the question of whether basic theories of Chinese and Western medicine can be combined.

Professor Kuang Ankun, honorary head of the Shanghai Endocrine Research Institute, has been studying ways to fuse Chinese and Western medicine for several decades.

"Traditional Chinese medicine and Western medicine are two completely different systems," said Kuang. "They are not, however, entirely incompatible. In fact, they can be combined in theory as well as in practice. This is because they both have the same goal: curing the patients."

"On the surface, there is something mysterious about the Five Elements (metal, wood, water, fire and earth — held by the ancients to compose the physical universe and later used in traditional Chinese medicine to explain various physiological and pathological phenomena) and *Yinyang* (the two opposing principles in nature). These ideas, however, have been developed as

the highest, most abstract and most conceptualized summaries of the natural world. *Yinyang* and Five Elements are theories that make use of the laws of the unity of opposites and of the interrelations and transformations of opposites. There can be no doubt about the scientific character of those basic theories, from which our ancestors summarized the patterns of a large number of diseases, and which were united on the methods of disease treatment.

"From endocrinology, a new discipline in Western medicine, we can see that Chinese and Western medicine have common theoretical grounds and that they can be combined.

"Endocrinology holds that every endocrinal hormone must have at least one antagonistic hormone, keeping the system in balance," he said. "If this balance

is lost, the person becomes ill. Doesn't the idea of regulating an endocrine imbalance and of restoring it to normalcy and thus curing an illness have something in common with the thought guiding the dialectical measures of Chinese traditional medicine? We can find many other such common points."

"After liberation," Kuang said, "the Five Elements theory was denounced. Actually the concept of mutual promotion and mutual restraint between the Five Elements is very similar to the feedback theory of modern medicine. The theory of positive and negative feedback runs through the whole of endocrinology, and is the basis of the property of the hormones. Whether acknowledged or not, traditional Chinese medicine and endocrinology in modern medicine have much in common."

"Our traditional medical theories were put forward thousands of years ago," he said.

"Such theories were quite rare in the world at that time. Only a civilization as ancient as China's could have created these theories at such an early period. This is not to say that traditional Chinese medicine should stand still. We must use the most advanced experimental methods of modern science to discover, test, verify, systematize and improve traditional Chinese medical theory. We must make it concrete and give it substance."

Finally, Kuang said, "Combining Chinese and Western medicine is a formidable task and may require the vigorous work of several generations. But it is already clear that these two different medical systems can be linked up, and that a bridge can be built between them."

A native of Guangdong Province, Kuang Ankun is one of the premier researchers of the combination of traditional Chinese and Western medicines. In the 1920s Kuang studied medicine in

France. It was then, he said, that he decided to attempt joining traditional Chinese medicine with Western medicine. In 1933 he returned to Shanghai with a doctoral degree from Paris University and began studying traditional Chinese medicine. Sixty years of painstaking research has not only made him a famous specialist in Western medicine but brought him great achievements in traditional Chinese medicine.

Kuang is an authority on endocrinology, and he has moved quite naturally from endocrinology to the subject of combining Chinese and Western medical theories.

In the 1950s, he gave a new interpretation of the *Yinyang* theory on the basis of animal experiments. In the 1970s he went a step further in discovering a new substance in blood plasma that might be proof of the *Yinyang* theory. ■

## On China's Folk Dances

### "WU DAO"

(Dance)

**W**u Xiaobang, an authority on Chinese dances, writes: The folk dances of China's minority peoples are actually the "classic" dances of the various nationalities. Such dances preserve what is most representative of the ancient cultural traditions of our forefathers.

Those of us working in the field of minority classic dance should become thoroughly familiar with the forms of expression found in the daily life of the ancient ethnic groups as well as with the methods used in traditional art. Only after doing so can we put in order and create classic dances characteristic of the various nationalities.

The dances of a given ethnic group must represent the traditions of that people; we can't call just any dance performed by a given people "the dance of such-and-such a nationality."

With folk dance, we should emphasize "dances of the people," whether they were created 100 years, 50 or 20 years ago. Folk dances must above all be "popular," and distance in time from our own age can never be taken as its identifying mark.

The ballet is a Western dance form. Our ballet troupes are usually preceded by the country's name when they perform abroad, showing that they come from China. As for some dances that combine Chinese and Western techniques, these may be called

modern Chinese dance dramas. They should not, however, be given the names of national dances.

I think it is fine that some ethnic folk dance troupes use local customs and traditions in place of some traditional movements, because these can only strengthen their folk flavour.

At present, some of our classic ethnic dances are making casual uses of foreign things—the lovers' pas de deux for instance—to replace traditional Eastern ways of expressing love. Sometimes, the stylised movements of classical dance are used with modern characters to "make the past serve the present." What results is neither one nor the other. We had better be serious about such matters, so that "making foreign things serve China" and "making the past serve the present" do not become mere jokes! ■

## AT&T Reaches Out And Touches China

**A**n official from the American Telephone and Telegraph Co. (AT&T) recently announced his company's interest in co-operating with China in various communications fields, and he said, AT&T has devised both short and long-term plans to do so.

Ivan S.P. Shen, vice-president and managing director of AT&T International East Asia, Inc., said AT&T has signed three agreements with China. The first one is with the Hubei Provincial Post and Telecommunications Administration to provide the city of Wuhan with 11,000-line digital programme controlled telephone exchanges to be commissioned in September. The second one, Shen said, is with the China Electronic Equipment Systems Engineering Corp. in Beijing to provide for 52,000-line digital programme controlled telephone exchanges scheduled for operation in 1987. Shen said the third one was signed with the Guangdong Provincial Post and Telecommunications Administration for the provision of optical communications equipment. The first two agreements include the furnishing of transmission equipment, optical cables, cables and telephone sets.

The American company is now holding talks with China's Ministry of Electronics Industry on technical transfers and joint ventures, which, Shen said, can best accommodate the rapidly developing electronics industry. He also said joint ventures are convenient for training Chinese technical and managerial personnel and contributing to China's modernization. He said because the products from the joint venture run by AT&T and China will be in short supply on the Chinese market, the venture's foreign exchange reserves are more likely to balance out. China has spent large amounts of foreign



**Ivan S.P. Shen, vice president and managing director of AT&T International East Asia Inc.**

currency to import digital programme-controlled exchanges, Shen said. With the joint venture, the Chinese government will be able to use the same amount of foreign currency to buy the products from the joint venture. AT&T is an international enterprise that has a history of more than 100 years, and it has business ties with more than 250 countries and regions. In the interest of long-term co-operation with China, AT&T has established a representative office in Beijing and is preparing to set up offices in Wuhan, Shanghai and Guangzhou.

by Zong Ruiyu

## Packaging Congress Held in China

**S**ponsored by the China Export Commodity Package Institute, the 13th Asian Packaging Congress and the 1986 Asiastar Package Contest were held from June 2-4 at Beijing's Cultural Palace of Nationalities. More than 150 representatives from 10 countries and regions and UN organizations took part in the events.

Delegates at the congress discussed packaging for fragile and perishable items and viewed presentations given by specialists from seven countries.

China, which hosted the congress for the first time, sent 100 representatives from all its provinces except Tibet.

Subramanian from India was elected chairman of the congress, Xu Jianguo from China was the first vice-chairman, and Zarook from Sri Lanka, the second vice chairman. It was also decided at the congress that the 14th Asian Packaging Congress will be held in Sri Lanka in 1987.

In the Asiastar Contest, 52 new packaging devices from seven countries and regions competed. Of the 22 award-winning devices, six were from China, five from India, five from Japan, three from South Korea, and Pakistan, Australia and Indonesia each won one award.

China began developing its packaging industry in the early 1960s. Since then it has imported packaging material and production lines to update its container factories. At present, China spends US\$300 million every year on imported packaging material, including all its wrapping paper and 30 percent of its plastics. Wang Lianzhi, an official from the China Export Commodity Package Institute, said the departments concerned are considering ways to cut down on such imports.

## Beijing to Host Auto Exhibition

**T**he Second International Auto Industry Exhibition will be held July 4-10 in Beijing. More than 200 firms from about 20 countries and regions are expected to participate.

The exhibits will include cars, chassis, internal installations, batteries, windshield wipers and other electrical appliances. There



The 13th Asian Packaging Congress award ceremony.

will also be frame structures, engines, gear boxes and dampers, as well as testing, maintenance and engine remoulding equipment. Other items on display will include car designs, tyres, air-conditioning units and tools. The exhibition will emphasize technology for making component parts and testing instruments to be developed in China.

Many of the participants have already entered into co-operation with China in joint ventures,

technical transfers and other projects. Those foreign firms concerned with car manufacturing technology are: Volkswagen AG of Federal Germany, Peugeot of France, the Daihatsu Motor Co. Ltd. of Japan, IVECO of Italy, Steyr-Daimler-Puch AG of Austria and a group of American auto manufacturers. The Daimler-Benz Aktiengesellschaft of Federal Germany, General Motors Corp. of the United States and the Toyota Motor Corp. of Japan

have signed contracts for co-operative arrangements with Chinese departments. Those involved in component parts manufacturing include the Cummins Engine Co. Inc. of the United States, and the Zahnradfabrik Friedrichshafen AG of Federal Germany. The foreign companies are interested in acquainting themselves with the Chinese auto industry in order to make plans for future trade, investment and technical transfers.

Some want to learn the Chinese standards of manufacturing because they are considering to establish factories in China and sell their products on the international market. Chinese manufacturers of car components are hoping to sell their goods at the exhibition. During the exhibition, participants will also take part in symposia on 30 technological projects. The exhibition will be sponsored by the Adsale Exhibition Services of Hong Kong and hosted by the China Council for the Promotion of International Trade at the China International Exhibition Centre, Beijing. ■

## Changzhou's Reform

(Continued from p. 27)

rural areas, which, in essence, is wedding technology with resources. In a sense, this is the key to the progress for China's well-developed east and its less developed west. Therefore, the question of whether Changzhou's methods are applicable is worth looking into.

### Problems, Prospects

Despite their success, many problems remain to be solved before enterprise groups are perfected, particularly in taxation and pricing. For example, the member enterprises, which are financially independent, find it

hard to avoid double taxation. In addition, the price gap between the materials allocated by the state and those sold on the market has made the distribution of profits more complicated within each group. In the past few years, this problem has been solved through internal negotiated prices for semi-finished products and components. This pricing system, however, may equalize the profits between the general factory and its branch factories, and among the branch factories themselves, such irrationality, unavoidable as it is, may dampen the enthusiasm of some advanced enterprises. This problem and many others need to be studied and solved. An official of the Changzhou Economic Restructuring Committee said

that because the planned commodity economy is still imperfect, reforms must be carried out gradually according to the circumstances. In the future when conditions are ripe, enterprise groups will further develop. Associates may experience some changes in their relations with their superiors and in the channels through which they turn over their profits and taxes to the state. Ownership, however, will remain unchanged. It is most likely that enterprises groups will grow into limited companies, in which other companies and individuals can buy stocks. "The issue of stocks," the official said, "is now being studied by the city authorities and will be tried out in some pilot factories this year." ■

## The Dunhuang Murals Leap to Life



President Kang Boqing (left) of the All-China Women's Federation talking with Gao Jinrong, president of the Gansu Art Institute.

**A**lthough the Mugao Grottoes in Dunhuang, Gansu Province, are more than 1,000 years old, the dances depicted in the murals are taking on a new life.

Watching *The Dunhuang Fantasy*, which was brought to Beijing recently by the teachers and students of the Gansu Art Institute, is like seeing the still figures on the murals leap from the walls and spring to life. In the dance, the kind and graceful "Mugao Goddess" performs to a soft ancient melody, four "lotus flower children" play, a group of fairies dance and pluck the *pipas* behind their necks or backs, and the six-arm Apsaras sends forth music and the fragrance of flowers to the human world while she plays the *pipa*, a flute and the cymbals. The gentle glances and slight movements of the wrists and upturned fingers, the swing of the waist, the soft, light steps, the flying Apsaras and the fluttering

coloured ribbons all remind the audience that this is not ballet, not modern Western dance, but a dance indigenous to China, to Dunhuang. The performance predicts the birth of a new school of dance — Dunhuang dance.

Dunhuang's Mugao Grottoes are situated along the ancient "Silk Road" in northwest China's Gansu Province. They were carved from the 4th to 14th century. Together they include 492 caves painted with 45,000 square metres of murals and decorated with more than 2,000 painted statues. Dunhuang grotto art draws mainly from the culture of the Han nationality and also incorporates the culture of various

Plucking "pipa" group dance.

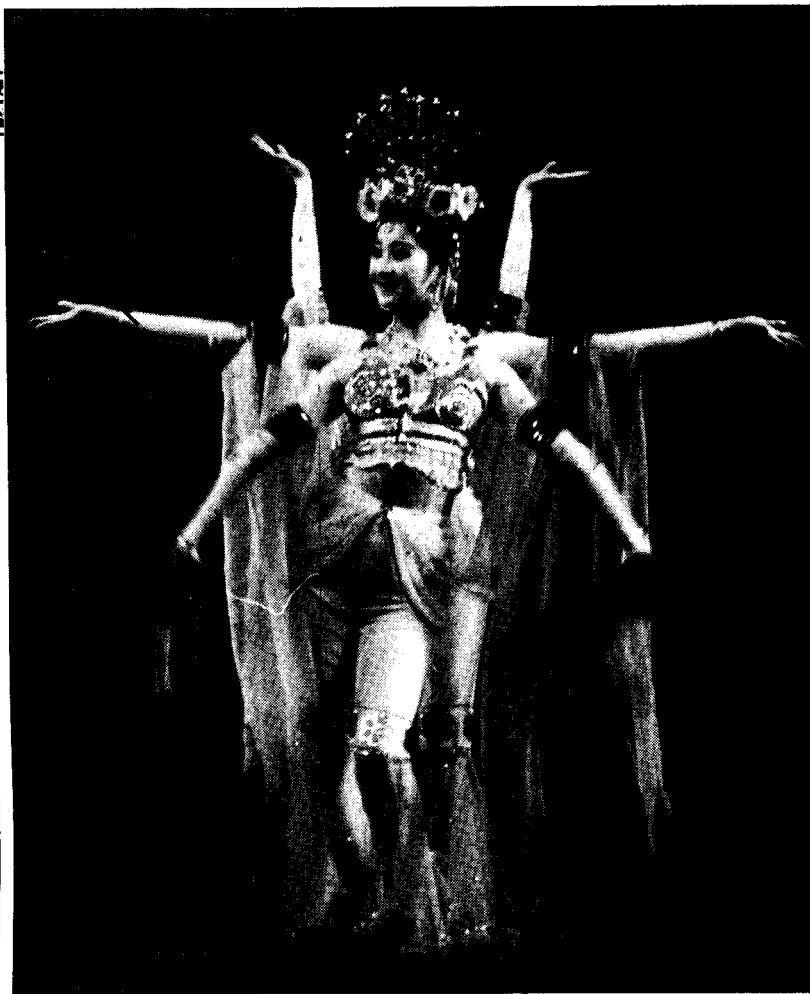
YANG LIMING





minority nationalities and that of foreign peoples.

In the past, study of the Dunhuang grottoes concentrated on its paintings and architecture. Before 1979, no research had been conducted on the dances depicted in the murals or the laws governing those dances. (The dance drama *The Tales of the Silk Road* staged a couple of years ago introduced only some individual dance movements from the murals.) In 1979, Gao Jinrong, president of the Gansu Art Institute, began studying the dance figures in the murals. Gao, who is also a dance teacher, tried to understand the rules governing their style and development. Later, she wrote a book entitled *Teaching Material on Dunhuang Dance*. "In studying Dunhuang art," Gao said, "I have emphasized compiling teaching material on the movement of the hands, eyes and feet, which embody the style and character-



The six-arm fairy Apsaras.

LU LIANG



istics of the dancing figures on the Dunhuang murals."

Because the Mogao Grottoes were completed over a period of 1,000 years that spanned 10 dynasties, the theme, style and characteristics of the murals and painted sculptures vary considerably. "I neither view the dance movements on the murals and sculptures of different periods as a mixed whole, nor do I take them as separate ones," Gao said. "I am trying to study their inner relations through their evolution and development."

The dances depicted on the thousands of square metres of murals in Dunhuang are many—solos, duets, and dances with musical accompaniment or with silk ribbons. Some are fluid, soft, while others emphasize robust-

ness. Gao said she and her colleagues visited the grottoes four times to copy down more than 200 dance movements. After reading volumes of reference materials and consulting scholars, dance experts and folk artists, they compiled a set of basic movements. The movements include changes in breathing and looks, postures and positions of hands and feet as well as leaping and twirling. The positions of hands, for example, add different effects to movements such as lowering them slowly or moving with the palms downward, upward or sideways. Putting the palms together displays a typical gesture of prayer or show of sincerity, while upturned fingers portray the elegance and subtlety of ancient Chinese women.



Sketches of the mural dance by Gao Jinrong and her colleagues.

The first part of the programme presented to the audience in the capital by the Gansu Art Institute included these basic movements by junior art students in their training suits. Although there are no characters or plots in this segment, the changing glances and movements are a scene to behold.

After mastering the basic gestures of the mural dances, Gao turned to enacting entire dances. She said though it was easy to imitate the various poses in the murals, it was more difficult to understand how they would flow together in dance. In general, Gao said breathing and facial expression affect each other. The latter, however, is visible in the murals. The former is not. By repeatedly imitating the still gestures, Gao and her students discovered that to bend the body in the shape of "S" one needs to breathe out and lower the body. Gradually from the tempo and rhythm of different mural dancers, Gao said she began to understand the laws governing Dunhuang breathing and movement. She said dancers who do soft, fluid movements inhale on the first and second beats, and breathe out on the third and fourth beats and lower their bodies slowly. The dancers who perform more vigorous movements inhale on the latter half of the second and fourth beats, and breathe out on the first and third beats while lowering their bodies relatively quickly.

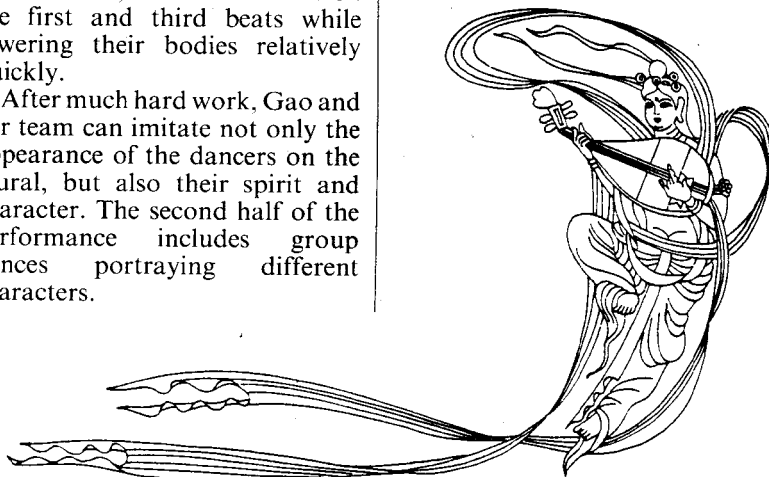
After much hard work, Gao and her team can imitate not only the appearance of the dancers on the mural, but also their spirit and character. The second half of the performance includes group dances portraying different characters.



YANG LIMING

Learning a basic movement of Dunhuang mural dance.

The Gansu artists' efforts are a valuable contribution to the inheritance and development of the cultural legacy of the Chinese nation, and to research on the methodology of compiling teaching material for dance. ■

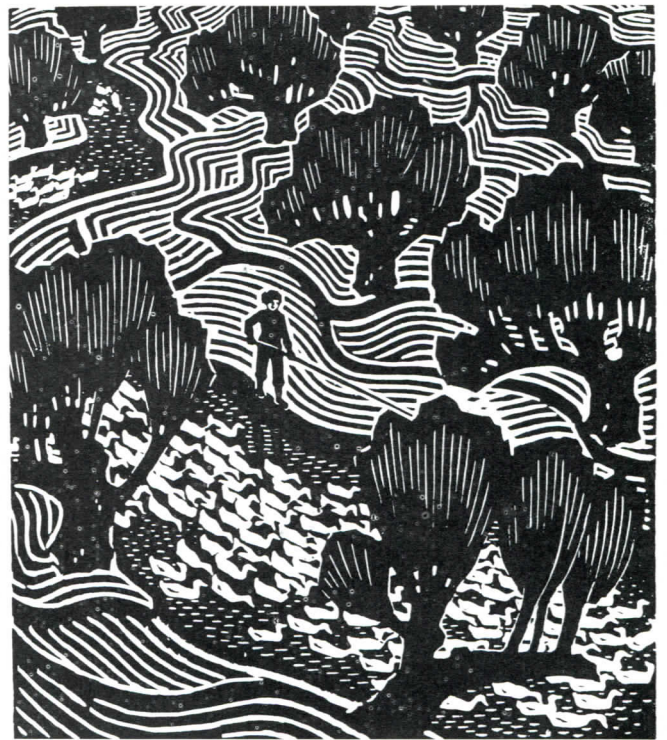




Making Paper-Cuts for the Window.

### Woodcuts by Dong Qizhong

Dong Qizhong, born in Taihe County, Jiangxi Province, in 1935, now works at the Artists' Association of Shanxi Province. Dong's engravings depict the lives of farmers and children.



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