

INSTITUTE OF CURRENT WORLD AFFAIRS

HUMAN LIFE & HUMAN RESPONSIBILITY: **A YANGTZE THREE GORGES ADVENTURE**

Part III

“Damn Dam!”

Shanghai, China
Summer 1994

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Hanover, NH 03755
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Dear Peter,

“How could it be possible that the Chinese government has still decided to build the dam at all with the great impact on the environment, cultural relics and migration?” Tony asked me when we stood on the deck enjoying the beautiful scenery of the Xiling Gorge in the early morning of our last day of the cruise.

“Is it a silly question?” Tony wanted to have my opinion.

“No, not at all,” I told Tony. “This is also the question that has puzzled me for several years.”

When I was a graduate student at Princeton, I intended to write a term paper on the feasibility of the Three Gorges Dam. But later I found it was extremely difficult to get information concerning the dam project because any data related to

Cheng Li is a an ICWA fellow studying the political economy of the coast of China.

Since 1925 the Institute of Current World Affairs (the Crane-Rogers Foundation) has provided long-term fellowships to enable outstanding young adults to live outside the United States and write about international areas and issues. Endowed by the late Charles R. Crane, the Institute is also supported by contributions from like-minded individuals and foundations.



A scene of the Xiling Gorge.

the project was China's State secret. The Chinese authorities have long restricted any open discussion of the project, but the controversies over the construction of the dam can be traced back to the early years of the Republic.

In 1919, Sun Yat-sen, the founder of the Republic of China, initiated the idea of building a dam on the Three Gorges in order to prevent floods that might inundate the vast area at the middle and lower reaches of the Yangtze River. From 185 B.C. to 1911, this vast area suffered altogether 214 floods – once every ten years on average. From 1911 to 1949, seven major floods took place in the Yangtze River area. In 1931 and 1935, for example, two floods hit the middle and lower reaches of the Yangtze. Each of them killed 140,000 people.

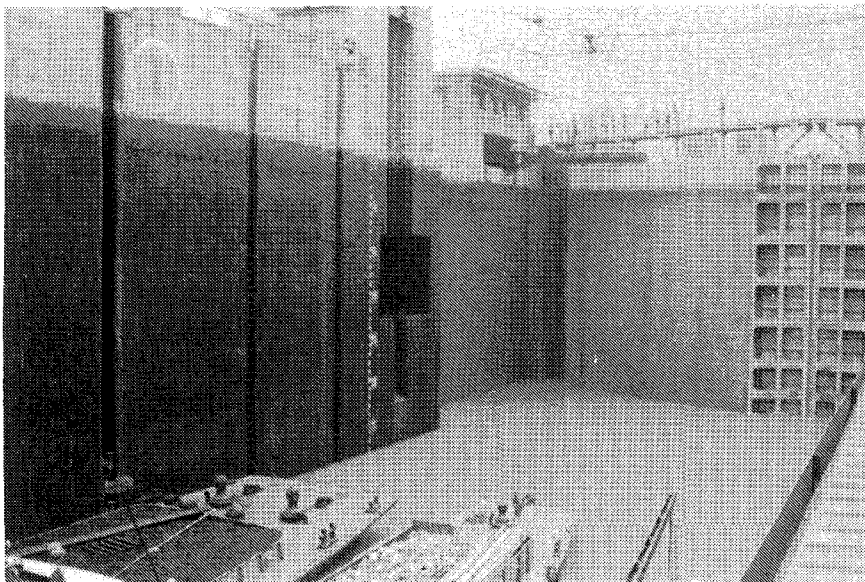
Because of the civil war and the Japanese invasion, in addition to the lack of capital, the Republican government did not turn the idea of the dam construction to a concrete project. For many decades, experts on irrigation works in the country

usually placed their emphasis on the construction of small dams at the branches of the Yangtze River instead of building a gigantic dam in the Three Gorges.

In 1953, Mao Zedong took a cruise along the Yangtze River. He ordered reconsideration of the construction of the Three Gorges Dam. "Socialist Three Gorges Dam project," said Mao, "should excel other major projects in Chinese history such as Qin Shi Huang's Great Wall and Shui Yang Di's Grand Canal" (Gongdang wenti yanjiu, May 1993, pp, 68-69).

To follow Mao's order, Chinese scientists began to study the feasibility of the Three Gorges Dam project. Some scientists and officials, for example, Chen Mingshu, publicly raised doubts about the project, but they were labelled Rightists and were persecuted. The project, however, did not start during the Mao era. The Sino-Soviet conflict and the famine in the country during the early 1960s were the main reasons that the dam project was put aside. The country did not have enough money to build such a big dam.

Another main reason, according to some insiders on Chinese politics, was the private meeting between Mao and Li Siguang, a prominent scientist and Minister of Geological Resources. Li told Mao that he would commit suicide if he could not stop the construction of the Three Gorges Dam. Li's strong criticism of the project finally aroused Mao's attention to the potential catastrophic consequences of the Three Gorges Dam (Gongdang wenti yanjiu, May 1993, p. 69).



The Gezhou Dam.

This story may be too dramatic to believe for some people, but it was by no means unusual that a scientist fought for principles at the risk of his or her life in China. When our cruise boat was entering the Gezhou Dam, the largest dam thus far, a Chinese official whom I met on the boat told me a story. During the construction of the Gezhou Dam, the team who worked on the foundation of the dam did not do their job properly. A scientist who inspected the foundation found some serious problems. He reported to the authorities on the project and demanded that the foundation be rebuilt. This meant that the completion of the project would be postponed for a year. The authorities refused to consider his demand. With a strong sense of responsibility, the scientist decided to have a hunger strike to protest. Five days after he started his hunger strike, the authorities finally realized the potential danger if they did not rebuild the foundation of the dam. The scientist won the battle.

* * * * *

The critics of the Three Gorges Dam project, however, haven't won any of their battles. In the mid-1980s, China's new leaders put the proposal of the Three Gorges Dam project into their agenda. They organized 412 specialists to spend two years studying the feasibility of the dam, especially the fourteen major problems involved in the project. According to the report that these specialists presented to the authorities, the Three Gorges Dam project would have the following four major benefits:

- *Flood control and prevention.* The reservoir of the Three Gorges Dam will be able to contain 22.2 billion cubic metres of water. It promises to bring a measure of flood control to the areas along the Yangtze river.

- *Electric power.* As the world's largest power station, the Three Gorges project promises to produce 84 billion kilowatt-hours of electricity a year – this is ten times of the capability of the Dawan Nuclear Power Station in Guangdong. The dam can greatly ease the shortage of electricity in several provinces in central and Eastern China.

- *Navigation capability.* The dam will inundate 650 kilometre shoals between Shandoupin and Chongqing and as a result, heavily-loaded boats will be able to navigate from Shanghai to Chongqing.

- *Water conservancy.* The dam will be able to improve water supply in a vast area of the country.

All these perspective beneficial results, however, have been challenged by many other scientists. They believe that the flood control function of the Three Gorges Dam will be very limited. It may prevent floods at several branches of the upper reaches of the Yangtze River, but it cannot control floods in the vast area of the lower and middle reaches of the river. It would be more efficient and feasible to build smaller dams in some major branches of the Yangtze.

Critics of the dam project also argue that it would be rational to construct small and medium-sized hydroelectric power stations along the Yangtze River instead of building the big dam in the Three Gorges. The construction of smaller hydroelectric stations will be technically easier and less risky than the Three Gorges Dam project. In addition, local governments will have more incentive to raise money for the construction of hydroelectric power stations in their home land (Shuilijinji, No. 3, 1988, p. 50).

Fund raising is a big problem for the dam project, especially during the first 11 years of the project that are marked as a pure input period. The Chinese government will issue stocks and bonds and make use of foreign investment to collect much-needed funds for the project. But it is still unclear how much money is needed to build this would-be world's largest dam. The Chinese government has claimed that the project requires a total investment of 95.4 billion yuan (\$11.4 billion) (China Daily, Oct. 9, 1993, p. 3). A recent study, however, indicates that the project may cost as much as 285.4 billion yuan (\$33.9 billion) (Wenhui Daily, June 14, 1994, p. 5). An official from the Three Gorges Project Committee recently said that during the first 11 years of the project there will be a shortfall of at least 20.8 billion yuan (3.57 billion) (China Daily, Oct. 30, 1993, p. 1).

No one knows how much money the Three Gorges Dam project will eventually cost. In China today, the real cost of a project can be widely divergent from the cost given in a proposal. The ongoing construction of the Shanghai Subway is a good example. According to the proposal, the first stage of the subway project would cost a total of 1.8 billion yuan. But as an engineer who worked for the construction of the subway told me, by the end of 1993, about 6 billion yuan were already spent though the first stage of the project was not yet completed.

The main reservation of critics of the Three Gorges Dam project, however, is about the potential problem of mud and sand that silt up as a result of the dam project. The mud and sand silted in the area may further increase the water level at the upper reach of the Yangtze River. This can threaten to inundate Chongqing, one of the largest cities in China.

According to critics, large scale landslides that often occur after the construction of the dam may aggravate the situation. In addition, silted mud and sand will change the ecology of the entire Yangtze River and damage vast areas of the farming land and city ports near the lower reaches of the river (Gongdang wenti yanjiu, May 1993, pp. 73-74).

Li Rui, former vice minister of Ministry of Water Conservancy and Electric Power, wrote a letter to top leaders of the Chinese Communist Party in March 1993. In the letter, he listed serious problems that were unsolved and probably unsolvable concerning the project of the Three Gorges Dam. He particularly criticized some officials in the government who deliberately ignored the serious problems concerning the dam project such as silted mud and sand, ecological balance, navigation and migration. Li Rui also collected the names of 81 well-known scientists who opposed, or had serious reservations with, the Three Gorges Dam project (Journal of Dialectics of Nature, No. 3, 1993, pp. 41-43).

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Suggest Hearing a Letter to Opposers Against the
Three Gorges Project Li Rui

关于三峡工程建议听一次反面意见

李锐

编者按：今年3月12日，李锐同志应中央广播电视大学，并谈关于三峡工程听一次反面意见。今借贵报同刊，以便向主席发表上下，供一谈一谈，以及有关我国目前政策、当代科学技术史、社会主义社会学的研究工作者参考。

从报纸上看到，国务院已成立中国长江三峡工程开发总公司，三峡工程已经正式开始了各项施工准备工程。即将出任该公司的负责人表示，将三峡工程的大江建设计划提前一年，使之与香港回归祖国的年度同步，让1997年成为双庆之年。该负责人还说：“我希望现筹建处的同志认真工作，天翻地覆，即便干错了，理所当然我负责。”

去年元旦我曾上书，力陈种种矛盾，三峡工程现在不能上马。人大常委会通过的兴建三峡工程方案的报告说明中，最后有一段话：“在今后的工作中，对可能出现各种困难和问题应有充分的估计和足够的重视。谨此奉告，认真看待，听取各方面的意见，使三峡工程建设更加稳妥可靠。”我希望这决不是说说而已，人大常委会讨论此问题时，许多代表发表了各种有充分理由的反对意见，尤其四川代表切切陈词，担忧特甚。尽管大会之前几个月，全国报纸电台新闻媒介总动员，铺天盖地紧密鼓吹宣传，三峡工程必须上马，即将上马，且中央议案已决，不过交议会例行手续，但通过决议时，竟有三分之一的代表未投赞成票，此乃史所未有，日应更引起其从事者反思三思。

年来，我所接触到的有关意见，最重要的 一是：现在通过的175米方案，必将引起泥沙淤积，影响重庆港，阻碍航运。七十年代讨论葛洲坝问题时，周总理曾明确指出：长江开发，航运第一，并疾言厉色说：如果碍航，就要将坝。我问过负责论证航运的交通部同志，他说三峡175米方案有关船闸建造的具体技术问题，有的并未落实。长江航运关系四川当前改革开放与今后长远发展，至保且巨，这同所谓计划大堤受千年一遇洪水威胁，自不可同日而语。在选定175米方案的论证时，泥沙淤积问题究竟如何解决，并无准确可靠的保证，因此，好多位顾问和专家，如施家场、卓经典、罗西北、张昌龄、李鹤龄、黄元镇、张启舜等，都曾提出不同意见。为保证航运和减少移民，他们主张160米或更低方案，惜未开展讨论。现在，我只看重泥沙淤积势必影响并阻碍航运这一问题，以说明“谨慎从事，认真对待，听取各方面意见”，还为时尚晚。

总之，关于三峡工程，根据多年以来我多次上书确切说明的论点，即防洪作用有限（且以邻为壑嫁祸四川），移民过于艰巨（极不合理近乎荒唐），发电多替代方案（远比三峡效

师。

郑思远，华东勘测设计院总工程师。

益好），航运无此必要（175米方案定用问题），逆世界潮流（各国教训甚多，此类方案多已放弃），更不论泥沙淤积、生态环境都存在不可知数或极大疑问，难以作明确结论（对黄万里的一家之言也不应置之不理），我再次郑重向中央建议：推迟三峡工程上马时间，停止各项施工准备，以安定人心，免遭后患。过去我参加的顾委小组会上，谈到三峡问题，许多

去年中科院一批专家，奉命咨询考察三峡，回来后写了

大过问。

程，由原水电部领导一家控制，并不科学也不民主。

而到点，而是由点到面。如果不是从全流域规划中，经过关的第一期工程；而是预先确定三峡为唯一无可替代方是只有一个候选人的选举，选举只能是徒具形式。我们

为何不照此办呢？

国家计委、科委领导，据说水电部一位主要领导向国家。整个论证组织，从领导小组（正副组长为原水电部专题组（绝大部分正副组长为原水电部司局长），是一小组曾指定和聘请了412位专家，其中，有不同观点的”都排斥在外。这412位专家分居14个专题组，都分别专题的论证报告上签名或不签名；有关综合性论证和总参加，对此有不同意见无法发表，对三峡工程总的可行9的结果通过了175米方案的真象。

的论证，不过是水库正常蓄水位采取哪一个高程（185、论证去而已；从来没有有一个综合的有关防洪、发电、航。一句话归结：孤证而已，一个候选人而已。这能叫科长官意志与一言堂！

一期，上面刊发了毛主席、周总理当年对三峡方案的多10日，王任重为报送林一山关于修建长江三峡大坝的报

这封信上批了8个字：需要二个反面报告。

这个批示并未过时。因此我郑重向中央建议：请中央找，反对三峡工程（或175米方案）现在就上马的专家的意见。请原谅我说句老话：只有兼听则明。

李锐

1993年3月12日

者名单	朱铁铮：水利水电规划设计总院规划处长。
过去参加	高毅工程。朱鹤龄、金永堂：水利水电科学研究院泥沙所。
内人代	王仲奇、朱德文：水电部成都勘测设计院高级。
	正工程师。
	林元强：昆明勘测设计院总工程师、全国人大。
	代表。
	郑思远、安中义：中南勘测设计院高级工程师。

国务院三峡工程审查委员会建设规划组召集人组长傅、组员张津生亦未签名。

（四）虽在报告者专题组签了名，但提出不同意见者：

施家场 张昌龄 李鹤龄 罗西北 张启舜 刘光文 刘善建 柯里升 欧兴华 张文林 武国山 周明锐 马德强等14人。

（五）近年又提出不同意见的专家共11人：李鹤三：中科院院士研究员（五十年代即建在荆江地区分洪）。

金永堂：水利水电科学院高级工程师（最近我荆江地区分洪）。

张 费：国务院发展研究中心副干事。

魏兆麟：原国家科委副主任（最近我收到他的意见书）。

杨纪珂：政协负责人。

陶大镛：民盟负责人、全国人大代表。

钱思潜：原国家计委能源局局长。

宋健说：上海动力工程师。

郭开恩：成都勘测设计院。

刘培树：北京师范大学。

史德明：南京土壤研究所。

（六）全国人大1989年大会时，徐家栋等272代表提案：三峡工程推迟到二十一世纪，内多学专家。

（七）全国人大1992年七届五次会议上，提出

同意见的四川、重庆、山东、浙江等地代表数十

、内多地方负责领导和学者专家，如山东候国本

治黄专家教授。

电力部副部长、中共中央顾问委员会委员，著名的早年与晚年》（贵州人民出版社1995年版）等

（本文责任编辑 王德律）

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A copy of the letter that Li Rui wrote to the top Chinese leaders.

In April 1993, when the People's Congress decided to vote on the Three Gorges Dam project, Huang Shunxing, a Taiwan-born Standing Member of the congress who had long opposed the construction of the dam, requested an opportunity to speak to the congress according to the procedures of the meeting. His request, however, was denied. To lodge a protest, he walked out of the meeting hall. He later told foreign journalists that he was shocked by the carelessness and irresponsibility of the Chinese authorities towards such a titanic project.

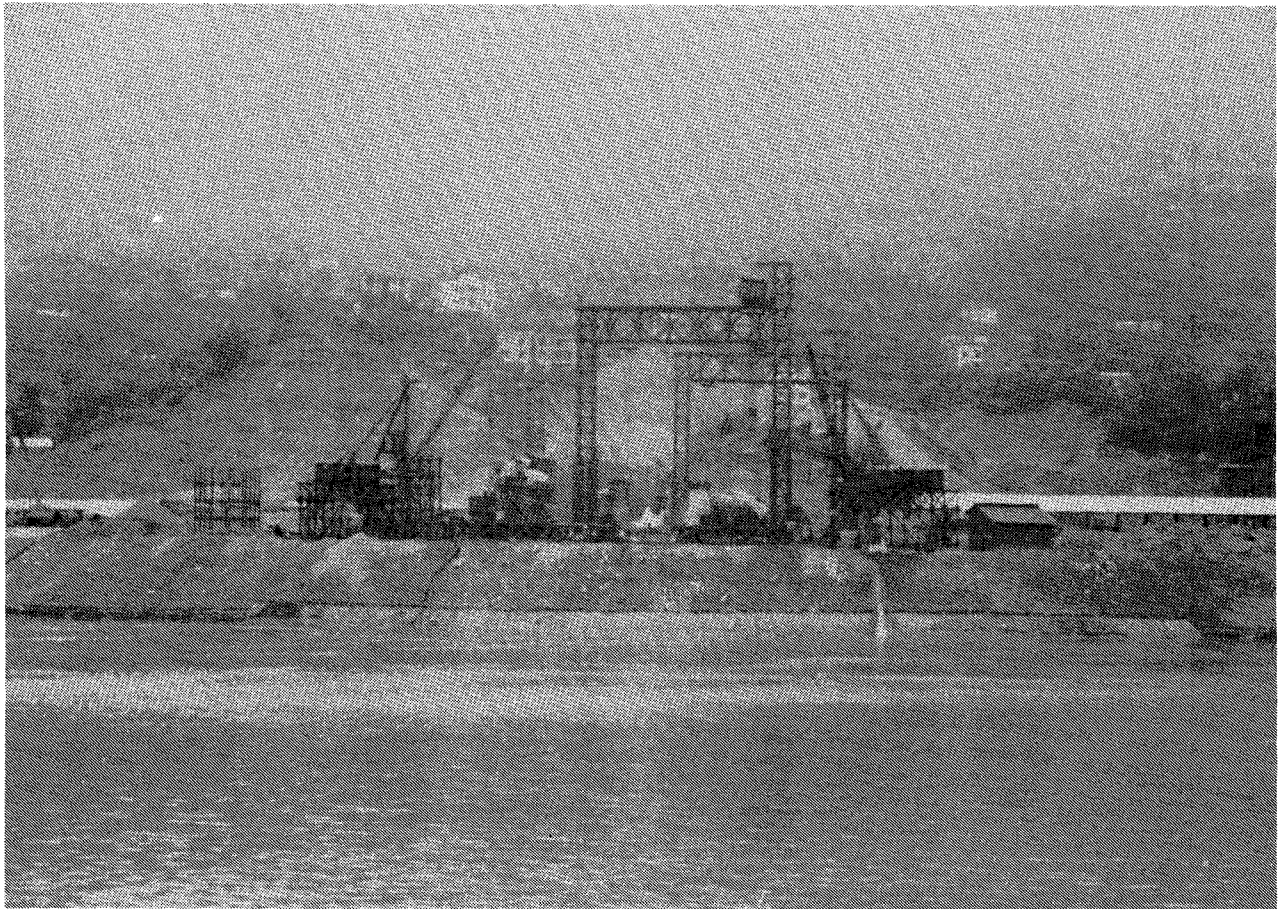
“Damn Dam!” a Chinese journalist who investigated the Three Gorges Dam project in the late 1980s and who late immigrated to the US once used this strong phrase to express his resentment about the project. He believed that the Three Gorges Dam project would be a new Great Leap Forward for China.

“We learn from history that men never learn anything from history,” the Chinese journalist said to me as he quoted George Bernard Shaw.

Critics' views and voices were inundated by the overwhelming praise of the dam project in China's mass media. An official who is in charge of the Three Gorges Dam project recently suggested that construction workers should speed up the project so that they can dam the river by 1997. He said to the public, “This will make the year of 1997 a double-celebrated year (双庆之年, *shuangqing zhinian*).” The other celebration in 1997 that he refers to is of course the return of Hong Kong to China. (Journal of Dialectics of Nature, No. 3, 1993, p. 41).



The Dujiangyan Irrigation System, which is located near Chengdu, was a large scale irrigation project built by the ancient Chinese laboring people. This irrigation system has a long history of more than 2200. The construction of dams and other irrigation works was always a symbol or a demonstration of the feudal power of Chinese rulers. The completion of any project, in return, usually helped consolidate both the national integration and the authoritarian rule in the country.

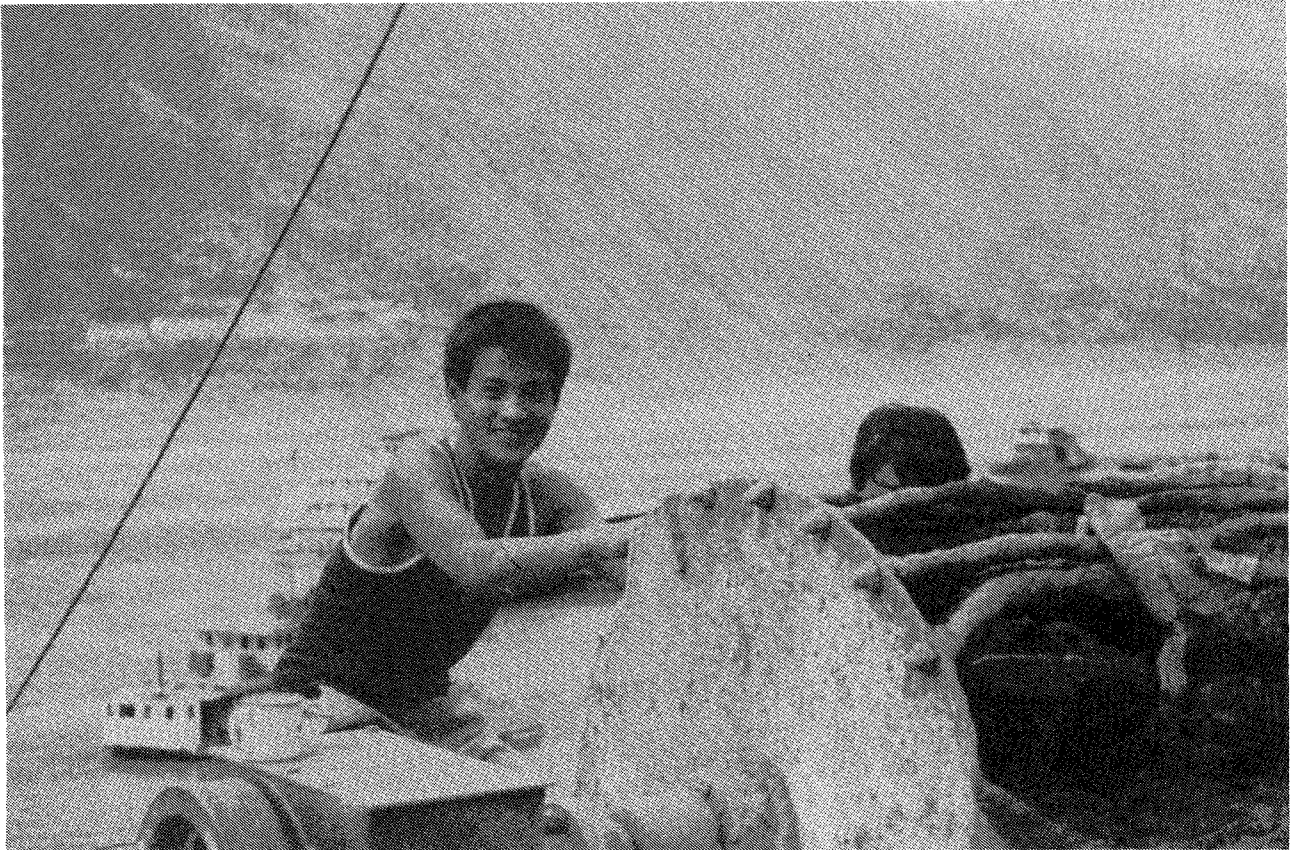


Shandoupin – the construction site of the Three Gorges Dam on which about 8,000 construction workers and 1,300 machines are running day and night.

“Professor Li,” Tony asked me, “I remember that you once introduced us in your lecture to some theories on the correlation between the development of irrigation works in ancient China and the prolonged authoritarian rule of the country.”

“Yes, this is a big topic in studies of Chinese history,” I said.

According to Karl Marx, Max Weber and many other social scientists and historians, the phenomenon that Chinese feudalism and strong authoritarian rule prolonged so long was largely attributed to China’s substantial irrigation projects. The construction of dams and other irrigation works was always a symbol or a demonstration of the feudal power of Chinese rulers. The completion of any project, in return, usually helped consolidate both the national integration and the authoritarian rule in the country.



Two teenagers are running a construction machine in a town near Shandoupin, the construction site of the Three Gorges Dam.

“Does the Three Gorges Dam project also serve this socio-political function in today’s China?” Tony asked.

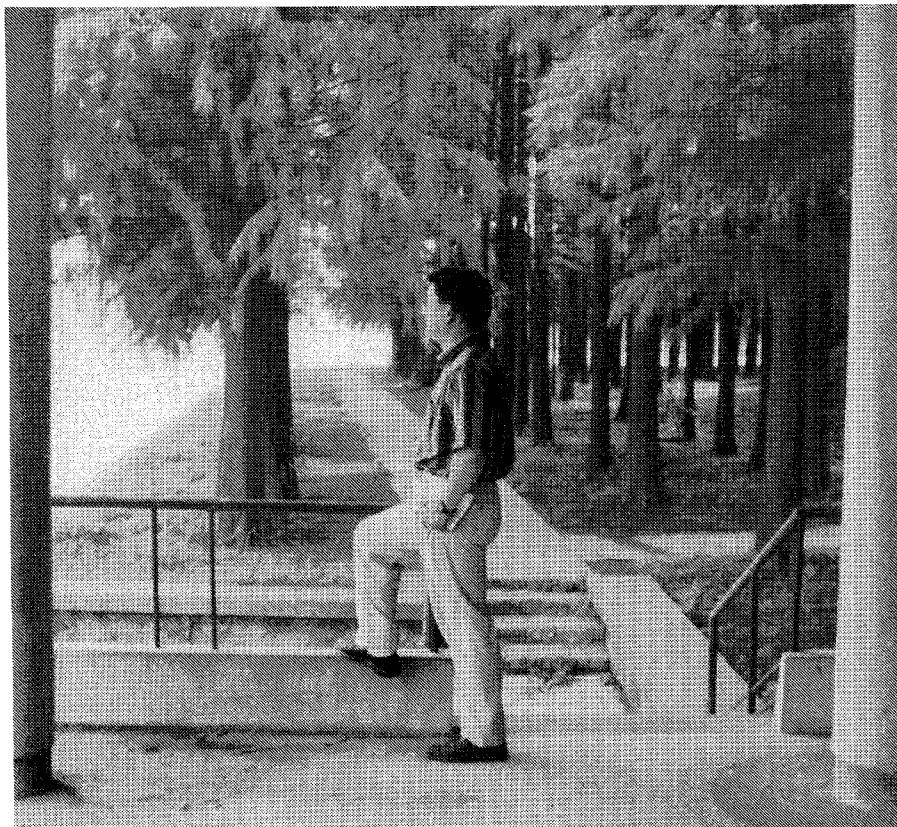
“This can be a question for a dissertation,” I said to Tony. “I hope that you will choose the Three Gorges Dam project as your research project when you continue your education in a graduate school in the future.”

“I hope that the Three Gorges Dam will never be built or completed,” said Tony.

* * * * *

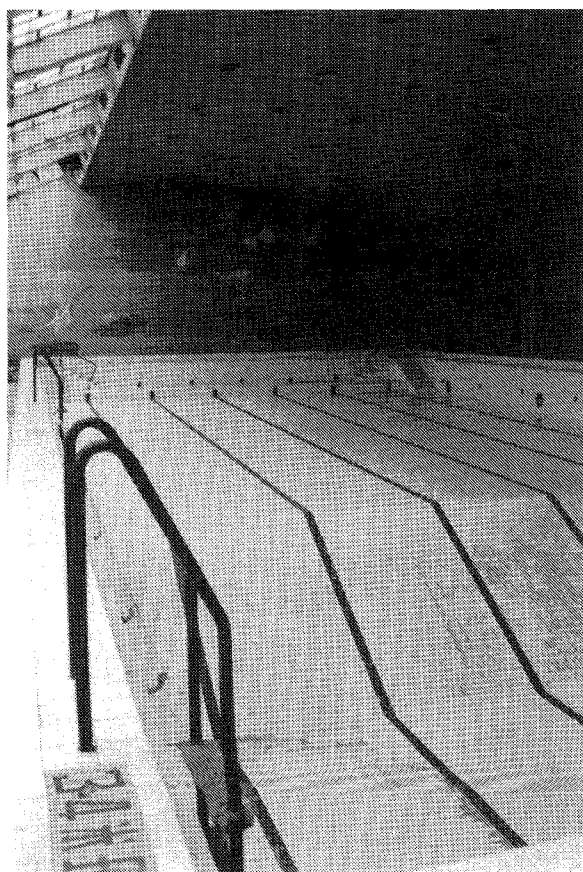
Our cruise on the Yangtze was completed soon after the East Goddess passed through the Gezhou Dam. We got off the cruise boat in Yichang where we took a train to Wuhan. With a population of over three million, Wuhan is a major industrial city in central China. The city was so polluted that both Alex and Steve felt sick as we walked down the street. We had the pleasure, however, of visiting Wang Hongying, a former classmate of mine at Princeton who was doing academic research in Wuhan, her home city.

Hongying suggested that we should see Mao Zedong’s residence in Wuhan, which was recently opened to the public. Mao’s residence, which is called the Meiling Villa, is located on the famous East Lake. The villa was built in 1958, during the Great Leap Forward. Mao always stayed there whenever he came to Wuhan. As tourists, we were only allowed to see part of the villa, which is incredibly large.



At Mao's villa in Wuhan. The villa, which is built on the famous East Lake, has a very big park filled with trees, flowers and grass. It is in sharp contrast to the severely polluted Wuhan city. I walk along the small path, enjoying the beautiful lake on the one side and the nice forest on the other. I wonder whether the late Chairman was aware of the pollution and other problems of Wuhan when he came to stay in this luxurious villa in the city.

The indoor Olympic-size swimming pool at Mao's residence in Wuhan. The pool was specially built for Mao, but the late Chairman swam in the pool only three times.



We saw an indoor Olympic-sized swimming pool, which was specially built for Mao. The tour guide told us that Mao swam in that swimming pool only three times. The villa has a huge park. When we walked along the small path that cut through the forest in the park, Hongying said that she could not imagine that Wuhan had such a nice place – clean, quiet and spacious. We all noticed the sharp contrast between Wuhan city and Mao's villa, although the latter was located right in the center of the former.

I wondered whether the late Chairman was aware of the pollution and other problems of Wuhan when he came to stay in this luxurious villa in the city. If he was, did he really care? Mao must have had a lot of “more important things” to worry about than considering some local problems or environmental issues. He was surely more concerned about grave matters such as the class struggle in the country and a power struggle in the Party, China's position in the world and his position in Chinese history.

A philosopher once wrote, “Nothing is more surprising to those who consider human life as the most valuable thing and human responsibility as the most important human task, than to see the ease with which both human life and human responsibility are neglected.”

During my trip to the Three Gorges, the philosopher's words repeatedly occurred to me. The events and episodes that I witnessed or heard during the journey – for example, the louse service of the Chinese airlines, the neglect of safety concerns by the travel agency and other business institutions and, most importantly, the various losses caused by the ongoing Three Gorges Dam project – all became meaningful as I saw them in the light of the philosopher's above words.

For the same reason, many individuals – the rude woman at the airlines check-in desk, the self-indulged stewardess on the plane, the drunk captain on the cruise boat, the merciless restaurant owner, and the dam project official who wanted to “make the year of 1997 a double-celebrated year” – all became comprehensible.


Fortunately, our world does not consist of people who are all like those mentioned above. The nice people whom I met during the journey left a strong impression on me. I miss Jinjia and Anping, the two oarsmen who so kindly served passengers and so openly told their concerns to strangers. I admire Mary Penry, the China-born American who has been deeply concerned about her Chinese *Ayi* and the “other home land of hers”. Although I did not meet the scientist who fought for the safety of the Gezhou Dam at the risk of his life, his story is really memorable.

To conclude this sketchbook of my Three Gorges adventure, I would like to tell you an anecdote, which did not take place during the cruise, but happened in my earlier career as a medical student in Shanghai over ten years ago. In my third year at the medical school, I was required to work in a hospital as an intern. I worked under a famous physician. He was not only a brilliant doctor, but also a caring person with a strong sense of professional ethics. He once told me that patients and their relatives usually cannot make a judgement about highly specialized medical treatments that we give patients, but they only need to have common sense to know whether their doctors are caring and responsible.

I am neither a scientist nor an engineer by training. I know almost nothing about dam construction or irrigation works. Policy makers might have their rationales when they decided to build the Three Gorges Dam. China has been severely short of electric power. The Chinese leaders and people have been perplexed by the recurrences of major floods at the middle and lower reaches of the Yangtze River in recent years.

Yet, the common sense and many seemingly trivial things that I witnessed or heard of during the journey have made me suspicious and even cynical about the dam project. But what can I do, as a citizen of China, to stop this besides writing this series of newsletters about human life and human responsibility?

Sincerely,



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Titles of *Letters from China* by the author:

- CL-1 LEAVING HOME TO GO HOME
- CL-2 "THE COLOR OF MONEY": SHANGHAI IMPRESSIONS
- CL-3-5 CHINA'S FALSITIES & CHINA'S FUTURE
 - Part I "Calling Things by Their Real Names"
 - Part II "Daxing: A Most Frequently Used Idiom in Shanghai"
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Forthcoming topics

- * Rural industries in coastal China
- * Polarization and privatization of China
- * Transformation of large and medium-size State-owned enterprises
- * Trends and problems of foreign investment in China