The following is a general outline of a talk on the problems of industrial development given by Teng Hsiao-ping on August 18, 1975:

The enterprise should be rectified. There are quite a few problems to be tackled with. The equipment in our enterprises is generally poor, particularly in heavy industry; things may be slightly better in light industry and transport. Enterprise management definitely needs an overhaul. We should think about concentrating on bringing order to enterprise management and reinforcing equipment maintenance this November and December in preparation for next year. As for the equipment which has been neglected, it should be overhauled, even though production might be slightly affected. It is useless to be over hasty, the more one wants to speed ahead, the longer it'll take to achieve anything. Enterprise management is a matter of major importance which I will discuss below.

1. Stress should be laid on the concept of taking agriculture as the base. The main task of industry is to give impetus to the modernization of agriculture. The industrial cities and zones should promote the development of neighbouring villages, strengthen the worker-peasant alliance and help develop small-scale industries as part of their overall plans. Modernization of agriculture is not just a question of mechanization, it also requires the development of science and technology. The peasants should set up some mechanized chicken farms which would bring in additional income and also keep the cities in supply. There are many inland factories dispersed in the rural areas which could help the neighbouring villages to improve production. Each large factory should aid the modernization of its surrounding area. I wrote to the comrades in Szechwan telling them that the more industry develops, the more important it is to give priority to agriculture. Without meat and vegetables how can the cities survive?

2. Use new technology. This involves export policies. We should export in exchange for the most advanced and modern foreign equipment. Dismantle any imported product and you'll find that many of its

Translated in *The Case of the Gang of Four* (Cosmos Books, Hong Kong, 1977), by Chi Hsin.
parts are from yet other countries. Raw materials which we lack for the
time being should be imported, and more have to be imported. Take for
example raw materials needed for the chemical industry, you can have a
synthetic fibre plant but without caustic soda and dye you can’t pro-
duce, so what then? First, we must fully develop the oil industry and ex-
port as much as possible, it is our most reliable export. Don’t just stick
to Japan, seek outlets in Western Europe. Sales to West Germany and
France can bring in a variety of quality goods; West Germany has some
fine technical equipment.

Petro-chemical products should be considered for export. Everything
should be done to export arts and crafts, including traditional products.
There’s also coal, keep in mind the policy of ten million tons of coal be-
ing equal to five million tons of oil—a value of nearly one billion U.S.
dollars. Consider bringing in foreign technology for coal-mining, in
long-term contracts we can use coal as payment. This is not a case of
having a foreign debt. This is an important policy decision that will
have to be first approved by the Central Committee before being put in-
to effect. Its merits are three-fold—facilitates export, spurs on coal-
mining technology and absorbs labor. Productivity in coal-mining is
too low (some say the daily output per person in 0.8 tons), we reached
the ton mark before and even that was too low. Export in exchange for
sophisticated goods in order to accelerate industrial technological im-
provement and increase labor productivity. I hear that our geological
prospecting techniques can only locate the poorer mines, in other coun-
tries they use integrated technology to locate rich mines. Why can’t we
import some of this type of equipment?

3. Increase scientific research. The more industry develops the
greater the number and proportion of personnel engaged in scientific
research are required. Large factories should have their own research
facilities. Small factories should come under the city’s programmes or
set up collective facilities themselves. There are some intellectuals who
are not doing what they were trained to do. This problem should be
resolved. This accords with the principle of more, faster, better and
more economical socialist development. Scientific experimentation is
one of the three great revolutions. Never mind anything else, packaging
alone requires research. The logistics department of the General Com-
mand wanted to make lighter weight raincoats, but it couldn’t do it
alone even though it had its own research centre for army equipment. It
was finally done through the combined efforts of several research cen-
tres.

4. “Quality first” is an important policy which includes variety, ex-
act specifications and quality. The higher the quality of the product, the
easier and more economical it is to find new export outlets.
5. The key to any system of rules and regulations is to have a system of personal responsibility. The problem we now face is one of lack of responsibility. This has to be singled out. The pendulum always swings from one extreme to another. Without swinging a little further to the other extreme the problem won’t be resolved. We have to be firm in the beginning. Chairman Mao has always advocated the need for rules and regulations. In agriculture there are sixty points, in industry there are also regulations. Chairman Mao has always spoken of revising existing systems and regulations and not just the simple negation of everything. It is by having rules and regulations that we can give expression to the Party’s guidelines, policies and methods. A veteran worker in the defence industry has spoken on the necessity of a strict system of rules and regulations. Material on this will be issued for your study.

COMMENTS BY TENG HSIAO-PING ON THE PRESENTATION OF Hu YAO-BANG'S REPORT

Teng: It’s been a long time since we held a meeting of this nature. You can first give a summary and then explain the main points.

(Hu Yao-bang reported on the revision of the draft of the “Outline Report” and its component parts. The first part contains four basic points.) (When he spoke of great differences,)

Teng: Better be more modest on this point.

(Hu Yao-bang then reported on the arrangement of the three tasks, giving priority to production and putting the new fields in second place.) (When he mentioned that he knew very little about them,)

Teng: Ask for the help of some experts. I’m completely an outsider with those strange terms and new peculiar words.

(Hu reported that the third aspect was basic science.) (When asked what the three primary sciences were, someone answered that they were the study of elementary particles, the evolution of the universe and the genesis of life.)

Teng: I’d say archaeology. Any piece of stone you happen to pick up is archaic. All rocks date back to ancient times.

(Hu continued: the second part is on political line. When he got to the fifth question, which concerned being “red and expert,” and did not dare mention “red
Appendix 4

41.9

expertise")

Teng: Actually it's the word "expertise" which is being suppressed. Please clarify.

(On the organization of discussions according to the policy of letting a hundred flowers blossom and a hundred schools contend)

Teng: Mobilize their enthusiasm.

(Hu went on to the third part, the question of rectification. He mentioned that only four and a half days out of the week were spent on vocational work. Hu Chiao-mu added that people also saw films during working hours.)

Teng: Isn't that terrific! It's all part of culture and recreation.

(Hu: Everyone's dissatisfied.)

Teng: How could they be otherwise? The four half-days are properly spent, but the other eight half-days aren't, not doing any work or doing very little.

(When discussing the living conditions of the science and technology personnel)

Teng: This is not a minor matter. The houses of high level people have been taken over, we have to build them others.

(When discussing the implementation of policies)

Teng: If the leadership of the research institutes and offices isn't reshuffled, the implementation of policies will be in the hands of others. Who's going to implement policies if the leadership of a county or factory is in a mess? You can implement them but other people will undo all of your work. The crux of the matter is the problem of leadership.

(When Hu mentioned that there were many pigtails, i.e. politically vulnerable points)

Teng: That is true. There are some pigtails. I once said that I am like a Uighur girl with many pigtails. The way to tackle this is through mass campaigns and mass discussions. Those people are not afraid of the Chairman, or the Central Committee, let alone the State Council, you don't even count. They are afraid of the masses. The Chairman has always emphasized this fact.

(After Hu had finished his report, Li Chang reported on a few other matters: 1. A request for the Central Committee to reassign some cadres; 2. to consider the setting up of an institute of science and technology, and recruiting high school students on the basis of part-time work and part-time study so as to strengthen the study of basic natural sciences and foreign languages; 3. the setting up of advanced courses to further train those with outstanding ability in the various fields of research;
4. the publishing of a periodical for the propagation of
dialectical materialism.)

Teng: Those who are not happy with you people are in the minority. You can be sure that 95% of the people want a change in the present state of affairs. In the end it'll be over 99% of the people.
(When Li Chang raised the question of an institute of science and technology,)

Teng: What kind of information can you hope to get if you don’t know foreign languages? What can you do in the natural sciences if you are a high school or university graduate only in name but in fact have no knowledge of mathematics, physics or chemistry? This is a question directed at the Ministry of Education. Not only must one know foreign languages, but one must also have a basic knowledge of other things. Otherwise, we won’t be able to translate foreign publications.
(Li Chang raised the question of putting out a periodical in dialectical materialism,)

Teng: Why just one? The Chairman has even commented on “Fossils.” How many periodicals were there before, and now? Quantity is not the only thing though, we must print things of quality too.
(After Li Chang had finished,)

Teng: This is an important matter which should be thoroughly discussed. We have to put scientific research to the fore. At the Conference to Learn from Tachai in Agriculture we said that agriculture is holding back industry. Well, scientific research is holding everything back. You can give applied science the priority, but applied science in turn is based on theory.

Theoretical research has been weakened considerably, leaving a gap. We have to count on the old people, as well as young ones. The young people are flexible and have good memories. At twenty-five they graduated from university, now, ten years later, they are thirty-five. They're just at the age when they should really be able to achieve something. Lately, they've done next to nothing, except for going to the movies and engaging in factional fighting. There is a small number of people working secretly, as though it were a crime. xxx is one of these people. Some of them really do accomplish something. Are they to be regarded as red or white experts? If China had a thousand of them it would really be something. The one who has been commended by the Centre is a mathematician of international standard. Even if he is a bit of a white expert, so what? He should be encouraged and looked after even if he is a little white! Isn’t he representative?

You have a veteran scientist by the name of xx, in the field of semiconductors. Peking University told him to change his field and teach something else, he couldn’t. Chou Jung-hsin, you should look in-
to it. The paper he wrote for the Semiconductor Research Institute was very well received. He said that it was done in his spare time. There's a lot of these people around, not working in their own fields; they should be given a chance to do something with their knowledge. Otherwise, it'll be a great loss to the country. That such an eminent man should be in this situation! This man's a committee member of the Study Bureau and all members of the Study Bureau are reputable, so why not let him work in his own field? If Peking University can't use him, make him head of the Semiconductor Research Institute in the Academy of Science. Assign a Party secretary and other back-up personnel.

Veteran scientists are generally very knowledgeable. Take for example the news I heard three days ago. I've told comrade xx about it. That person was teaching some course but had to change his field.

Teng: Mao Tsetung thought is theory, Marxism-Leninism is theory, can the study of these be called "blowing the theory wind"? There's a need to make theory respectable again.

Teng: The number of scientists and technicians at the Anshan Steel Plant is proportionately less and not more.

Teng: Leadership is the crux of ideological rectification. The Chairman's line on scientific research should be genuinely implemented. The vast majority of science personnel are sincere about wanting to do research! Only a minority are engaged in factional fighting. These aren't the ones who will change over and do organizational and ideological rectification.

First, they are ignorant in their own field, second, they are not interested in their work, and third, they form factions. Why keep them on? Why can't the science workers who are up to standard be appointed as heads of research institutes? Those in their forties have over ten years of experience behind them; the bulk of the work depends on them now. The better ones can take care of Party and logistics work. Logistics is very important. It must create conditions for research. Material, data, instruments and machines have to be kept in good order. Only dedicated people can do this work well. This is also part of the political side of research work. Party, research and logistics are the three composite parts. Without logistics, research can't be carried out. You can't expect themselves to run the errands. Reorganization of the leadership should include these three types of people. They too should have scientific knowledge, without which they can't do their work well. Select those with good Party standing and good organizational ability to do logistics. Book-worms won't do. However, among researchers, book-worms are permitted.

The leadership should have three sets of persons. Be sure to select promising people to the leadership. Those engaged in logistics should
also take an interest in research and do their work with honesty and sincerity. I suggest that science and technology personnel should be kept on file, noting the better and promising people. If we have one thousand of them out of ten thousand, that'll be good. If among these there are a few scores who can accomplish something, that would be excellent. Help them create the conditions and improve the conditions for research.

Never mind seniority. When I was in the Soviet Union in 1957, Yugin said that their atomic-bomb was created by three unknown and unaccomplished scientists in their thirties and forties, not famous scientists at all. Don't we have such people? We must create conditions, look after them and show political concern for them; this includes those with queer temperaments and those who have many faults. As for the "white experts," as long as they work for the interest of the People's Republic of China, they are superior to those who just lie idle, cause factional fighting and hold up everything. The factories should also pay attention to bettering conditions. First, the problem of housing has to be solved. Promote them to positions of leadership. Those with family difficulties should be helped, such as those whose children can't get into nurseries or those married couples who are working in different cities.

We must have people to carry on scientific work in the future. The crux of the matter is education. What kind of role, after all, should the universities play? What kind of people should they produce? The Iron and Steel Institute has only the standard of a middle level technical school, why have universities? The Shanghai Machine Tool Plant has its own July 21 University. This is one form and it should be developed, but it can't replace other forms of university. The Science Committee of the Ministry of Defense should run science and technology institutes well. It should recruit students from among those high school graduates who are outstanding in physics and chemistry. Don't cater to the children of cadres. If this is wrong, I'll be the first to bear the responsibility.

What level can you achieve without any knowledge of foreign languages or mathematics, physics and chemistry? You can't even achieve mediocre results and even less than mediocre results might prove difficult. You are right in working on middle-level technology. The Ministry of Education should help, try it out! Mistakes can be corrected. We are on the brink of a crisis which might erupt in the Ministry of Education. It will hold down the level of modernization in general. This is not restoration of the old! The status of teachers is a problem. They're always being scolded, several million of them, how can you give scope to their enthusiasm? Didn't the Chairman say that negative factors should be turned into positive ones? Vacuum metallurgy was devised by seven people who had been undergoing labour reform in Chinchou, that was in the sixties. Just
imagine what could be done by those not in labour camps. Of the x millions, how many are in labour camps?

Positive factors should be put into play in education as well. If we are to raise the level of automation in our factories, we must have more scientists and technicians, better quality and quantity. Greater automation means less labor. Whatever the system, all advanced countries have developed in this way. Are these people working people? If they are productive forces, then they are labourers!

(When Chou Jung-hsin said that the Academy of Science had three branches and five factions and made a self-criticism,)

_Teng:_ Give a separate explanation in accord with the spirit of the documents, starting from document number nine. State clearly the relation between philosophy and natural science.

Clarify on the different contingents. Besides the Academy, this should include the whole country as well as defense. As for national defense, make a revision and add some concrete facts. Send it to the Chairman first. Issue it to the Politburo. Ask for the Chairman’s advice, he is very concerned about this matter. The Chairman has even concerned himself with “Fossils.” That is all for today.

_Teng:_ Let them deal with these problems first, we’ll see about the next step later. Concentrate on rectification so that everybody can get to work.