

THE TRANSFER OF WESTERN MANAGERIAL KNOWLEDGE TO CHINA

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Report Prepared for the Office of Technology Assessment
Contract No. 633-1670.0
May 1986

The author wishes to acknowledge the assistance in writing this paper that was provided by Joe Alutto, Julie Ann Upton, Richard Holton, Denis F. Simon, and John Bing.

TECHNOLOGY TRANSFER TO CHINA

VOLUME II: WORKING PAPERS

Part I

1. The Role of Technology Transfer for China's Economic Future; Rock Creek Research, Inc.
2. China's Evolving Computer Industry: The Role of Foreign Technology Transfers; Denis Fred Simon.
3. Satellite Telecommunications Technology Transfer to China; China Business Development Group.
4. Railroads of the People's Republic of China; The American Society of Mechanical Engineers.

Part II

5. The Transfer of Western Managerial Knowledge to China; William A. Fischer.
6. National Security Risks of Dual-Use Transfers to China; Science Applications International Corporation.
7. Politics, Policy and China's Future Course; Thomas Fingar.
8. China's Foreign Policy, Beijing's Military Modernization and American Policy Alternatives; Thomas W. Robinson.
9. American Firms and the Transfer of Technology to China: How Business People View the Process; Midwest China Center.

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November, 1987

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Over the past six years, the Chinese interest in developing managerial skills has moved from what might be termed polite interest to something approaching frenzied pursuit. Presumably, the reason for this change has been a recognition that current deficiencies in Chinese management resources represent one of the key constraints on China's ability to achieve the Four Modernizations. It has even been reported by high-level officials in the State Economic Commission that Deng Xiaoping, himself, has singled out management inadequacies as one of the major shortcomings of Chinese economic advance [1]. One result of all of this attention has been a series of economic policies that have made substantial advances in creating an environment in which professional management can evolve and flourish. These policies have provided the manager with increasing amounts of discretion and autonomy and have tied the results of this decision making power to the performance appraisal and reward systems. The new economic policies have also encouraged experimentation with organizational forms which attempt to overcome some of the limitations traditionally associated with Chinese institutions. At the same time, increasing numbers of Chinese managers are being exposed to Western management practices through a number of different transfer processes. This movement of Western management

techniques and know-how represents a fundamental part of the transfer of Western technology to the Chinese. While not as visible as machinery and products, the acquisition of managerial capabilities may, in the long run, prove to be considerably more important. Certainly one could argue that this has been the case with Japan. On the other hand, if the Chinese economic environment is not adequately prepared to receive Western management techniques then the result might be long run failures of the hardware transfers as well. It is the purpose of this paper to examine the process by which the Chinese are acquiring foreign management technology and to speculate on what the likely implications of such practice might be.

An underlying premise of the paper is that Chinese management today is weak. We can see this in a variety of indicators: labor productivity is low [1A], the quality of industrial and consumer products is low and their design outmoded, customer service levels are similarly low, as is worker motivation. In addition, economic planning both at the national level and at the level of the enterprise is unsatisfactory and there has been an inconsistent record of technological modernization throughout industry. Finally, the Chinese enterprise is essentially unable to respond to the sorts of "normal" changes in market demand, product design, and technological innovation, that characterize internationally competitive markets in many high-volume, high product variety, industries. The implications of such inadequacies are significant. Without substantial improvement in these capabilities, it is doubtful that the Chinese economy will be able

to achieve the Four Modernizations on schedule or succeed as a competitor in anything but the commodity ends of international markets (where their low wage levels give them an advantage that is sufficiently strong to resist erosion resulting from managerial deficiencies.).

While it is unreasonable to blame all of the problems listed above on managerial inadequacies, a further underlying premise of this paper is that without improvement of Chinese managerial skills, neither the economic reform movement nor the acquisition of foreign technology is sufficient to achieve Chinese expectations as to satisfactory levels of economic achievement. Specifically, after 37 years of inconsistent attention to the managerial function, it appears necessary for the Chinese to invest in managerial skill development and the professionalization of the managerial function. The questions specifically to be addressed by this paper are: Can Western approaches to management contribute to overcoming the problems identified above? If so, what is the most effective means of transferring this knowledge to China? And, will the outcomes be socially, as well as economically, desirable? In anticipation of the following discussion, my opinion is that Western approaches to management are both responsive to Chinese needs and transferrable enough to the Chinese managerial situation to make a substantial contribution to Chinese economic growth. In order to accomplish such transfers, however, the Chinese must create a receptive environment which stresses the professionalization of the management function. This they appear to be doing. While the ultimate social desirability of any such

transfer remains to be seen. I believe that if Western approaches can be adapted by the Chinese to suit their cultural preferences, the resulting hybrid model of management should be a positive addition to Chinese society.

THE IMPORTANCE OF MANAGEMENT TO ECONOMIC DEVELOPMENT

The contribution of professional management to the achievement of economic well-being has been well recognized in the industrialized countries, at least since the onset of the scientific management revolution launched by Frederick Taylor and his counterparts in the latter part of the last century. The business historian Alfred Chandler has argued quite strongly that the rise of the modern economy in the U.S., Europe, and Japan, required the development of the multiunit business enterprise and the development of the modern multiunit business enterprise, in turn, required the professionalization of management:

... the needs of the new large industrial and marketing enterprises brought a professionalization of management Such professionalization encouraged the rapid spread of new administrative techniques, and helped managers to identify themselves as a distinct economic group. [2; p.456]

* * *

The impact of these professional activities was, of course, gradual. By the mid-twentieth century, however, professionally oriented, salaried career managers were the men who had taken charge of the large multi-unit enterprises dominating the critical sectors of the American economy. [3; p.468]

The contribution of management to economic development in developing countries, while perhaps less obvious and certainly less well chronicled, has recently been gaining some of the

attention that Chandler's observations would suggest it deserves. In 1983, the World Bank devoted a major portion of its World Development Report [4] to the role of management in development. Although the focus was on macroeconomic management, many of the conclusions addressed the need for a strengthening of the management of microeconomic institutions and practices. In particular, the management of state-owned enterprises was singled out for special attention given the relatively disappointing experiences that so many developing countries have had with such organizations. The report concluded that often the management of these activities become over-extended as the needs of the constituencies served by these organizations accelerates beyond their managerial capabilities. It argues strongly that any improvement in the future of such organizations depends on their ability to acquire sophisticated managerial skills and to create an operating environment conducive to the expression of managerial professionalism.

At a more specific level, a number of diverse studies have underscored the contribution of management to economic performance in developing countries through the use of empirical and case analysis. Data comparing productivity in Japanese textile factories in China and Japan, in the nineteen twenties and thirties [5; pp. 155 - 160], for example, found labor in the factories in China to be considerably less productive than their counterparts in Japan. Among the reasons given for this difference, was the lower level of management in the factories in China. Furthermore, in comparing Chinese and Japanese factories operating in China,

the relatively unfavorable situation of the Chinese factories was partly attributable, according to the author, "to improper management [rather] than to inferior technology [6; p. 157]."

Indeed, managerial deficiencies have been seen to be a major weakness in many developing countries. A multicountry study of technology transfer in developing countries in the nineteen seventies, for example, concluded as its major finding that: "... firms of developing countries have a limited capability for diagnosing problems and little understanding of how application of new technologies can be useful and valuable to them [7; p. 4];" clearly, management deficiencies. Similarly, in the case of Tanzania, inadequate levels of trained managers stymied policies of "indigenization" and frustrated the development effort [8; pp. 96-97]. Studies of the NICS (Newly Industrializing Countries), on the other hand, suggest that success in developing managerial skills is a prerequisite for moving beyond small scale, entrepreneurual efforts into institutions that will power a nation's development. In the case of Korea, for example, managerial skills in a variety of areas, ranging from the ability to create institutions that support industrial and governmental interrelationships to playing an active role in the international marketing of Korean products, have had a significant role in the fashioning of the Korean success story [9].

More recently, and more to the issue at hand, an empirical study, by the present author, of the influences of market forces on Chinese industrial innovation at the level of the individual enterprise found after studying the responses of sixty-five

managers that the education of the enterprise's manager is the most important factor in differentiating between those enterprises that perceive market influences as being important and those that don't [10]. The implications of such a finding are significant in appreciating the importance of the transfer of managerial knowledge to the Chinese:

... it is difficult to escape the conclusion that educated managers perceive their operating environment differently from managers who aren't educated. If one acknowledges that one of the major benefits associated with higher education is the ability of the educated individual to confront new situations without a need to rely on traditional knowledge or heuristics, then th[is finding] might be interpreted as indicating that the manager's perception of the role of the market might be more important than the actual level of market influences in a market, and that that perception is best explained by the educated manager's ability to accept challenges and identify opportunities that such challenges bring [11; p. 25].

In a somewhat similar vein, the director of the Council of Industry for Management Education in the U.K. has observed, with reference to Britain:

... our future success depends, more than with any other body of men and women, upon our senior managers in industry. hope for this success must depend to no small extent upon the link between 'management and learning,' upon the the need of management for learning, and upon the successful fulfillment of that need [12; p.viii].

THE TRANSFER OF MANAGERIAL KNOW-HOW

The conclusion to be drawn from the existing body of knowledge is that the potential contribution of professional management to

the process of economic advancement in developing countries can be quite large. Without attention to the development of managers, economic achievement is problematical. It is also evident, however, that the acquisition of sophisticated managerial capabilities is not necessarily something that a developing country can accomplish simply, or on its own. The concept of "modern" management is one that has developed in the advanced industrialized countries of the West and typically is somewhat out of consonance with the traditional approaches to leadership and administration found in the industrial and public sector institutions of the developing world. Consequently, the developing nation wishing to improve its managerial resources and capabilities must engage in a transfer experience that is similar, if not identical, to more hardware oriented technology transfers. In fact, it is this "generic" similarity which exists among varieties of technology transfer that allows us to adopt a conceptual model of hardware transfer to understand the transfer of managerial knowledge, or "software."

One useful way to conceptualize the factors involved in creating a successful transfer of management technology is to adapt a descriptive model employed by Wallender [13] to examine the transfer of management advice and assistance. Wallender suggests three factors as being sufficient to determine the characteristics of a technology transfer. These factors are: the internal characteristics of the firm, the external environment, and the process of consultation. In adapting Wallender's model to the transfer of managerial know-how, the three factors that will

be used to describe the process are: the existing capabilities of Chinese management, the external environment in which Chinese managerial capabilities will develop, and the process of transfer of managerial knowledge that is employed. This scheme is illustrated in Figure 1.

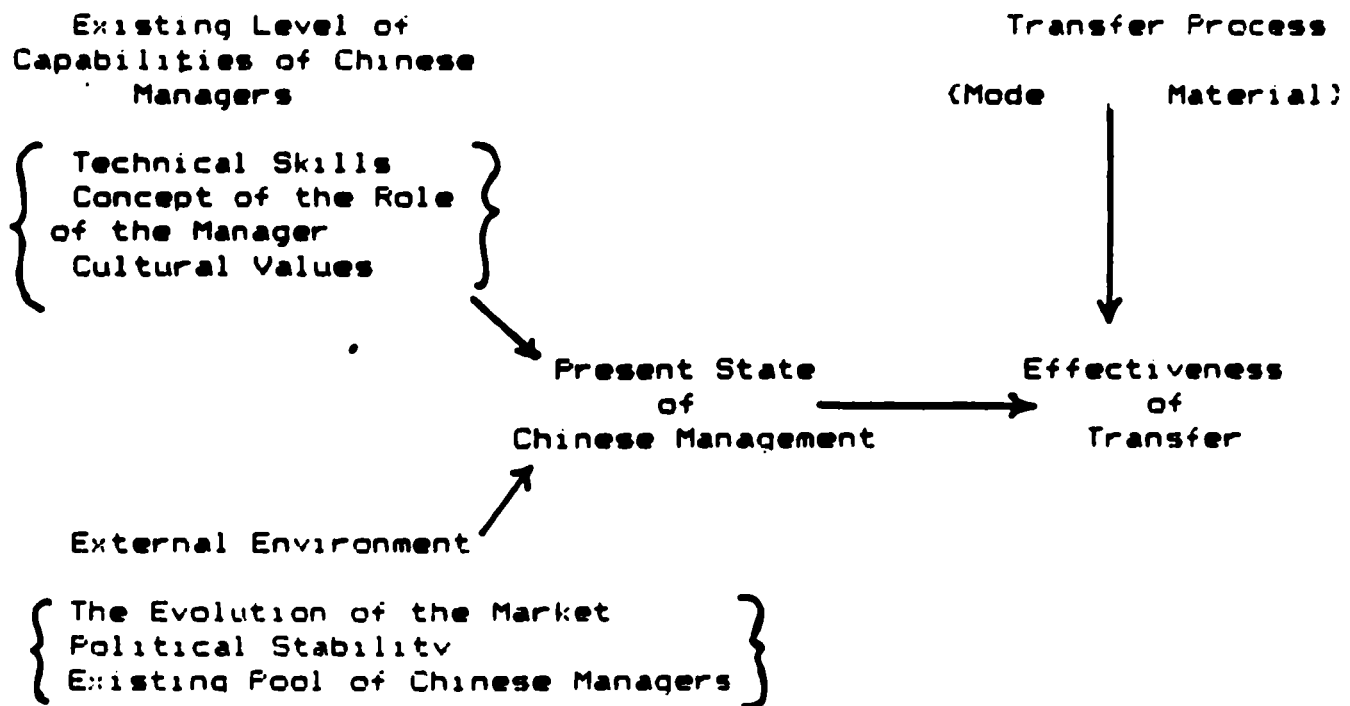
The first of the three factors to be considered in appraising the process of transferring managerial know-how to the Chinese is the existing level of capabilities of Chinese managers. Here, we are primarily talking about two separate but interrelated issues: (1) what is the existing managerial skill inventory among the Chinese managerial corps?, and (2) what is the role of the manager in Chinese society and how does this differ from that of the West? A third consideration, the relationship between Chinese cultural values and Western management will also be briefly discussed.

The description of the external environment in which Chinese managerial capabilities will develop involves three major and interrelated issues: (1) the nature of market evolution in China and the likelihood for its continuation, (2) the nature of political stability within the Chinese economy and society, and (3) the existing pool of Chinese managerial personnel. Combining existing Chinese managerial skills with considerations of the environment that they will operate in should provide us with conclusions regarding the present state of Chinese management.

The third component of the appraisal deals with the transfer process itself. Here we will consider both modes of transfer and content. The discussion will emphasize "fit" (i.e., is the material being transferred appropriate for the Chinese

FIGURE 1

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situation?), and outcome (i.e., given our impressions of the existing state of Chinese management, what is the likely rate and direction of change we can expect on the basis of the modes of transfer being employed?).

THE EXISTING LEVEL OF CAPABILITIES AMONG CHINESE MANAGERS

Technical Skill Inventory

A Concept of Modern Management

With five thousand years of history and more than 400,000 economic units currently operating it would be presumptuous to suggest that there isn't already a significant body of managerial expertise available within the People's Republic. Quantity and longevity, however, do not necessarily provide useful indicators of the level of sophistication of that expertise. During the twentieth century, a general body of knowledge regarding the management function has evolved in the advanced industrialized nations of the world which is now almost universally regarded as "modern" management. The conditions under which modern management practices developed are considerably different from those which have been prized during most of the nearly thirty-seven years of communist rule in China. As a result, the level of sophistication in modern management techniques that have been practiced in China vary considerably from function to function. It is the purpose of this management skills inventory to appraise that level of expertise.

Before beginning an appraisal of managerial capabilities

within the Chinese economy, it is useful to agree on a definition of what is meant by "modern" management techniques. To be useful, any such definition must be able to capture the "essence" of the managerial role and managerial behavior. One approach which captures some of this essence is to contrast what has been called the "rational professional model," which is representative of "modern management" approaches with more "traditional" styles of management [14; pp. 110-111]. In this case, modern management is characterized by a corporate (as opposed to an entrepreneurial) culture; by a systemic and specialized (vs. a more holistic and or fluid) structure; by delegative and/or participative management (as opposed paternalistic or authoritarian); by open, explicit, and dissemination-oriented communications (vs. secretive, implicit communications characterized by information hoarding); by staffing based on markets and skills (vs. a proclivity for nepotism); by meritocratic advancement (as opposed to advancement based on personal loyalty); by capital- (vs. labor- and skill-) intensive operations; and by pro-active (vs. reactive) marketing.

Aside from the central behavior of adopting a professional managerial style, the characteristics of which were enumerated in the preceding paragraph, one must also assume that an essential part of "modern" management is the development of specialized managerial skills in each of the major functional areas of business: operations, marketing, accounting, finance, and human resource management. While for many observers it is just these very skills that define modern management, it is the view of this report that they are necessary but not sufficient accouterments of the

establishment of a modern managerial practice.

The Present-day Chinese Manager

In a cameo portrait of a Chinese manager, Jay and Linda Matthews have characterized Li Guisheng, a director of a workshop at the Beijing Electric Motor Factory as "... a simple, conscientious worker, the sort who keeps economies afloat all over the world [15; p. 62]." In many respects, this description captures perfectly the nature of the a large proportion of Chinese managers, particularly those whose appointment to management occurred prior to the economic reforms of the past few years. These individuals came up through the ranks, in a world that was characterized by almost absolute attention to the operations side of industry. As Walder has observed:

Factory executives -- plant directors, vice directors, and the heads of staff departments -- [were] only rarely trained in science and technology, or in business and financial administration. The people who [were] so trained -- in production design, engineering, finance, metallurgy, mechanics, production planning, and other specialties -- [were] concentrated in ordinary staff positions in technical, production, and finance departments, where they have typically worked, without promotion, throughout their careers. The path to executive positions has generally been through line management -- from among shop directors or those Party branch secretaries who have involved themselves closely with production. This outcome is the result not merely of the decade of the Cultural Revolution, but of most of the two decades after 1957. [16; p. 51]

In a world where the producer and customer rarely met, where product design was uniform across the nation, and where price was controlled by the state, manufacturing skills were the essential

prerequisite for managerial advancement. Marketing, including distribution, was the responsibility of the state. Capital was allocated by the state and assigned for particular reasons. The idea of alternative investments was something considered only at levels above the enterprise and so financial skills were not needed within the enterprise itself. Personnel decisions were often made more on the basis of political considerations than on merit and, given the virtual ownership of the individual by the dan wei [17], there was little in the way of attention being paid to the familiar issues of motivation, evaluation, and reward, that we associate with human resources management in the West. Finally, with the locus of much decision-making and analysis taking part at levels of the economic system above the enterprise, the collection of information and the development of management information practices was never given the opportunity to develop. Furthermore, in the wake of exposes regarding widespread exaggeration in the reporting of economic data to higher level officials during the Great Leap Forward and Cultural Revolution periods, it is unlikely that the operational environment in China during much of the post-1949 period was one conducive to the collection and dissemination of data by which management could be objectively appraised.

The actual level of training and experience of Chinese industrial managers in the late nineteen-seventies is difficult to pin down with any degree of precision. It is clear from a variety of interviews and published sources that most had considerable operational experience and that a fair degree of Soviet-inspired

industrial engineering know-how was possessed by, or available to, them. The level of formal training in management, however, was probably pretty low. In 1966, on the eve of the Cultural Revolution, there were only six departments of Industrial Management in all of China's universities [18; p. 185] and it is estimated that only 6% of all Chinese university graduates between 1948 and 1963 had finance or economics majors [19; p. 182]. Furthermore, the material included in the curricula of such programs was considerably different from that offered in the West.

Formal Education for Chinese Managers, 1940's - 1980: A Digression

In the late nineteen forties, prior to the Communist takeover, business management departments were in operation at a number of universities around China [20]. The curricula in these programs were essentially industrial engineering oriented. After 1952, these types of departments were replaced by a new form of industrial management department that numbered between 20 and 30, nationwide. A typical undergraduate program in industrial management consisted of coursework in three major topic areas: Marxism-Leninism-Mao Zedong thought (25% of total hours); Cultural and Technical background courses (45% of total hours) - foreign languages, mathematics, mechanical drawing, engineering, machine design, etc.; and Economic Management courses (30% of total hours) - industrial economics, business management, statistics, accounting, work standards, etc.. In addition, first year cadre training to upgrade the work level of managers by teaching Marxism-Leninism-Mao Zedong thought and Economic

Management courses were also offered, as were graduate programs to train faculty and researchers, and correspondence courses to assist managers on the job.

In the 1950's Soviet faculty were invited to China to assist in the teaching of management and the course offerings took on a Soviet perspective. At the same time, engineering schools began to offer engineering economy where students took normal engineering courses during the first two years of their education and courses on industrial economics and business management during their final two years. Richman summed-up Chinese managerial education in this period in the following terms:

Little attention is given to operational theory, explanation, prediction, or problem solving in the Chinese management course, and there is virtually no study of underlying principles or concepts. Little emphasis is placed on the managerial functions of staffing, control, or direction - apart from ideological factors - and virtually no attention is given to empirical aspects of organizational or human behavior, organization theory, the behavioral sciences, and various other courses covered in American management courses. In fact, behavioral science education of the Western type is completely absent in Chinese economic programs. The Chinese management course may serve to develop mechanical managerial skills of various types and to introduce the student to some of the managerial functions in a largely descriptive way, but it does little to develop a basic theoretical underpinning or a creative and analytical approach management problems. [21; pp. 188-189]

The outbreak of the Cultural Revolution in 1966 led to the total destruction of industrial management training in China. During this period, such courses were not taught in China and the faculty associated with such courses were generally treated badly.

By 1979, however, thirteen departments of industrial economics had reopened. At that point in time, the coursework tended to center around political economy, with Das Kapital as the principal text. At People's University, in 1980, courses on micro and managerial economics were restricted to economics majors and were not open to management students. Furthermore, long range planning was not taught to management students because "such planning is done for the entire national economy." Consequently, long range planning was the preserve of the Department of National Planning. Organizational Behavior courses were not taught at all. Field study and student projects were emphasized, however, and management students were sent to factories to study conditions there as part of their coursework.

The Rejuvenation of Chinese Management: The 1980's

Today, China is undergoing a transition in which younger, better trained managers are replacing older, more experienced, veterans of industry. These new managers have a higher degree of college education and more technical training. The magnitude of this transition can be seen in a June 1985 survey of managers in 3000 key large and medium sized enterprises, where out of 2900 of these enterprises, 20% of their cadres, numbering 18,000 in all, were 40 or younger, 63% were 41 to 50 years old, and the average age was 45. Furthermore, seventy four percent of the leading group members had university or college educations. Among factory directors surveyed, eighty nine percent had university and college educations, an increase of 40% over

conditions before the readjustment [22].

Yet, despite their more impressive credentials, the newer and older managers continue to share many of the same exposures in terms of their managerial preparation. These similarities lay in the operational/technical backgrounds that both older and newer managers have in common and the lack of formal training in modern managerial methods. This can be seen in Table 1 which traces the career paths of a number of managers who attended the Dalian training program [23] during 1984. While the group reported on in this Table represents a totally opportunistic sample of managers with no suggestion of representativeness to any larger population, in any fashion, there are patterns of commonality in the background of these individuals which are striking. In particular, the strong technical orientation of their pre-managerial experience is very much evident. Also evident is the ladder of administrative positions that the "new" Chinese manager is apparently on in his or her climb to the top. Finally, the absolute absence of any marketing or financial experience both lends credence to earlier characterizations of Chinese management and dramatizes the differences which exist between Western and Chinese managerial careers.

The Managerial Role

Managerial Practices Versus The Practice of Management

Any discussion of the emergence of management in a developing country environment runs the risk of confusing or overlooking the noun/verb character [i.e., "management" - the verb, and the

TABLE 1

CAREER SUMMARIES OF A SAMPLE OF 1984 DALIAN PARTICIPANTS

DEPUTY MANAGER/ENGINEER, PROVINCIAL ELECTRONICS INDUSTRY COMPANY:

University graduate: radio engineering
Administrative work in local machinery bureau
Head of production technology, bureau (electronics and machinery products)
Enterprise manager
Deputy manager, provincial electronics industry company

DEPUTY DIRECTOR/CHIEF ENGINEER, PROVINCIAL ELECTRICAL COMPONENTS FACTORY

1963 University graduate in electronics and physics
One year post graduate work (at another university)
1964-1978 R&D worker at factory
1978-1980 Head of factory technology department
1980-present Deputy director of factory

DEPUTY DIRECTOR, PROVINCIAL FOOD FACTORY

19 University graduate in biology
1970-1973 R&D worker at factory
1973-1977 Head of workshop at factory
1977-1979 Food research institute
1979-1982 Factory planning department
1982-present Deputy director of factory

ASSISTANT TO FACTORY ENGINEER/ASSISTANT ENGINEER, PROVINCIAL TEXTILE MILL

1968 Middle school graduate
1968-1973 Worker at textile mill
1973-1977 Attended textile university
1977-1979 Returned to factory as technician
1981 Head of workshop
1983 Assistant Director of Factory

DEPUTY DIRECTOR, PROVINCIAL TEXTILE MILL

1958 University graduate, textile department
1958-1980 Began as workshop technician in technical department and rose to engineer
1980 Deputy director of factory

WORKSHOP DIRECTOR, PROVINCIAL TEXTILE MILL

1963 University graduate from textile college, major: cotton textiles
1963-1968 Assigned to textile bureau doing technical work
1979-1983 Progressed from factory worker through: group leader, technician, engineer. Was in technical department in mill that was responsible for process innovation.
1983-present Head of workshop

DIVISION DIRECTOR, MINISTRY BUREAU

Graduated as engineer

8 years with Chinese Academy of Science in research work

3 years as engineer in a factory under one of the ministry's bureaus

2 years responsible for technical department in a provincial company

2 years responsible for technical information department in a provincial bureau

6 years at ministry

DEPUTY DIRECTOR, MUNICIPAL TEXTILE FACTORY

Middle school

Worked in factories and attended sparetime school

4 years army

28 years at original factory beginning as worker

Chief of workshop

Deputy director for administration

DEPUTY DIRECTOR, PROVINCIAL TEXTILE COMPANY

Graduate in textile engineering

Technician in factory

Engineer

Head of workshop

Deputy director for production

HEAD OF RESEARCH INSTITUTE, MUNICIPAL DYE FACTORY

Graduate engineer

Worked in factory

Workshop head

Department head

Deputy director of research institute

DIRECTOR, MUNICIPAL AUTOMOTIVE COMPONENTS FACTORY

Graduate engineer

Worked in forklift factory as technician, head of department, deputy director

Deputy director of automotive components factory

Director of factory

DEPUTY DIRECTOR, MUNICIPAL METER FACTORY

Graduate engineer

Technician in new product development

Department head

Deputy director for new product development

DEPUTY DIRECTOR, PROVINCIAL PHARMACEUTICAL COMPANY

Worked in technical department

3 years as head of workshop

1 year as vice chief engineer

Deputy director

NOTE: Each individual represented in this table comes from a separate factory.

"management" - the noun] of the term "management." In the case of China, in particular, we must talk about the development of both managerial skills and the emerging concept of "the manager" (the practice of management). The history of management in the post-1949 Chinese economy appears to indicate that far more attention has been paid to the former while the practice of management has over this same period of time received far less attention, even aggressive attacks [24]. Yet to emulate the success stories that are being written about the contribution of management to economic development in a number of developing countries it becomes imperative to not only acquire managerial skills but to also establish a culture of professional management that serves to both sustain an "attitude" conducive to economic expansion [25] and which supports the local acculturation, harmonization, and utilization of so-called "modern" managerial skills.

Definitions of management practice and the role of the manager almost inevitably fall short of what is desired. The reasons for this are many but most involve the inadequacies of categorization schemes which capture the practice of management and conflicting definitions of what the role of the manager should be. In addition, the clear operational distinctions between functional managers and the general managers can also serve to complicate issues if the discussion fails to separate the practice of management from managerial practices. Accordingly, this paper will focus on the role of the general manager - "executives in generalist or general-management jobs: that is individuals who hold positions with some multifunctional responsibility for a

business [26; p. 21]."

Kotter suggests that the role of the general manager can be described in terms of the following challenges and responsibilities:

- * Setting basic goals, policies, and strategies despite great uncertainties.
- * Achieving a delicate balance in the allocation of scarce resources among a diverse set of functional and business needs. Not allowing short-run concerns to dominate long-run ones, or marketing issues to stifle production needs, etc.
- * Keeping on top of a very large and diverse set of activities. Being able to identify problems that are out of control and to solve them quickly.
- * Getting the information, cooperation, and support needed from the bosses to do the job. Being demanding with superiors without being perceived as uncooperative.
- * Getting corporate staff, other relevant departments or divisions, and important external groups (e.g., big unions or customers or suppliers) to cooperate despite the lack of any formal authority over them; getting things done through them despite resistance, red tape, and the like.
- * Motivating and controlling a large and diverse group of subordinates. Dealing with inadequate performance, interdepartmental conflict, and the like. [27; pp. 12-18]

There is nothing in this set of activities that would appear to make it particularly Western or particularly not Chinese. Of course, some Chinese industries remain under rather tight control from the central planners and in these industries the managers have fewer of the responsibilities listed by Kotter than do managers in industries which have been granted extensive levels of autonomy. On the whole, however, although Chinese enterprise managers may not be anywhere near as responsible

for goal determination and strategic formulation as their Western counterparts, this would be the only major difference between what might be expected between the two sets of managers. In fact, an empirical comparison of Chinese and Western European managers that was conducted in China in 1980 (before the reforms really took effect) concluded that at the top management level, there was relatively little difference in terms of influence in a variety of decisions between the Chinese and European managers [There were, however, some significant differences at the middle management level, particularly with regard to hiring of new workers, organizational redesign, and establishment of work hours] [28].

While the responsibilities might appear to be similar, however, the way in which the manager goes about fulfilling those responsibilities, operationalizing those expectations, and being a manager, might differ considerably between the two cultures, and those differences might have significant implications for the transfer of managerial know-how from the West to the East. Henry Mintzberg's study of managerial work [29; pp. 54-99] suggests that the average manager in the U.S. spends his time acting in a variety of roles. Mintzberg has identified ten of these roles and grouped them into three major groups:

Group I: Roles concerned primarily with interpersonal relationships

1. the manager as figurehead: a symbol of formal authority.
2. the manager as leader: providing guidance and motivation and defining the culture of the organization.
3. the manager as liason: addressing horizontal institutional relationships.

Group II: Roles concerned primarily with information

4. the manager as monitor: acquiring and using information to understand what is happening within the organization and its environment.

5. the manager as disseminator: sending external information into the organization and internal information from one subordinate to another.

6. the manager as spokesman: transmitting information out to the organization's environment.

Group III: Roles concerned primarily with decision-making

7. the manager as entrepreneur: initiating and designing much of the controlled change in the organization.

8. the manager as disturbance handler: dealing with involuntary situations and change that are partially beyond his or her control.

9. the manager as resource allocator: overseeing the system by which the organization's resources are allocated.

10. the manager as negotiator: providing leadership in major, non-routine negotiations with other organizations or individuals.

In 1983, Joseph Alutto examined a sample of Chinese managers' perceptions of the importance of the various Mintzberg roles. Alutto found that, in comparison with a sample of managers from ten countries, the forty two Chinese managers that he tested ranked disturbance handling and resource allocation as less important roles than did their foreign counterparts and information dissemination activities as more important [30]. The importance of information dissemination as a managerial role would support a general cultural stereotype of managerial behavior in Confucian societies [31], while the relatively lower importance of resource allocation role would agree with what we know of the last three decades of Chinese management being extremely limited in the amount of resource allocation discretion that was vested at the enterprise level. Despite such important differences, however, the general conclusion that one

draws from Alutto's data is that, aside from these few major perceptual disagreements, the differences between Chinese managers and their foreign counterparts are not striking as far as the Mintzberg roles go. This may, however, be more of an artifact of ranking as a methodology than an indication of similarity in managerial process.

Changes in the concept of the role of the general manager do, however, appear to be unfolding today in China. In the late nineteen seventies a story by Jiang Zilong entitled "Manager Qiao Assumes Office" appeared in the Chinese press [32]. The story was widely read throughout the country and manager Qiao quickly became identified as a prototype of the "new" manager emerging in the Chinese economy with the return of economic rationality. Qiao represented the reaccension of managers whose qualifications were based primarily on operational experience rather than political connections; the reappearance of merit as the determining factor in managerial selection. According to Walder [33; p. 52]:

These people are by no means incompetent. They know factory operations through long experience; they know how to get needed resources out of the bureaucracy; they know how to meet production quotas year after year. But their orientations and experience are rooted in a system that is being changed by the current reforms. Their line orientation conflicts with the staff orientation needed to operate a profitable enterprise under conditions of 'enterprise autonomy'. Enterprises operate profitably under these conditions when their executives are familiar with product design, with the process of technical improvement and innovation, with financial controls, accounting practices, systems engineering, and quality control systems. The bulk of the managerial corps is finding itself ill-prepared by previous careers that demanded little more than meeting quotas and solving procurement problems.

The result was widespread cautiousness in decision-making and a continued reliance on the sorts of human relations skills that have historically led to the development of mutually beneficial (guanxi) relationships. One is struck, for example, with the degree of tentativeness in decision-making and the attention to calculated human interaction that marks the administrative style of the new manager, Jin Fengchi, in another of Jiang Zilong's stories [34].

In 1983-84, a new "prototype manager," Bu Xinsheng, appeared in the Chinese press and stirred up considerable debate as to the desirability of his managerial approaches. Bu, a real person rather than a literary character, managed a collective apparel factory which was near-bankruptcy into a national success. Bu's qualifications included both the operational experience and sensitivity to human relations that marked Manager Qiao. What set Bu apart, however, and provided him such visibility, was his marketing aggressiveness, his willingness to make decisions (one Chinese manager remarked to me that "the lesson that Bu presents to other Chinese managers is that: 1. he really takes on all responsibility; and 2. he runs the factory as a business manager instead of merely serving as a production clerk."), and his ability to perceive the economy and his factory's role in that economy in systemic terms. Bu has been able to identify supply, distribution, and educational activities, for example, in terms that recognize their linkages with his factory and has worked to strengthen these linkages to his factory's advantage [35]. The

generalizability of Bu as a prototype "modern" Chinese manager is questioned by detractors, however, who argue that it is far easier to do what he's done with a small collective factory than would be the case with a larger, state-run factory, particularly if the end product being produced is of considerably more social importance than are shirts.

While Bu may, in fact, be too extreme in his aggressiveness and behavior for most Chinese managers today, there is some recent data that suggests significant changes in the perceptions of Chinese managers of their roles. Interviews conducted recently by Chinese researchers with more than 20 Chinese managers, found that seventy percent considered themselves fundamentally as representatives of their factory, while only five percent considered themselves as primarily representatives of the state. The remaining twenty five percent saw themselves as representing both the state and the factory, albeit with some ambiguity over the desirability of such an arrangement [36]:

Some factory chiefs said that if the chief "represented the factory," then that factory would have more vitality. For a long time now, whole-people-owned enterprise management could not compare with that of collective enterprises. But in terms of the quality of personnel, the capability of the equipment, and the quality of products, the former were often stronger than the latter. But whole-people-owned enterprises had been tied hand and foot. If whole-people-owned enterprises had the collective enterprises' level of independent management, and responsibility for profits and losses, the factory chief would work as a representative of that factory, everyone would work under a common policy, start the race from the same starting-line, and be measured with the same yardstick, and in this situation whole-people-owned enterprises would not be inferior to collectives. Only by competing under these conditions could the

standard of the factory chief be seen.

Further evidence of changes in the perceptions of Chinese managers regarding their roles is found in some recent empirical evidence by Alutto and Coleman [37], which, on the basis of comparisons of survey responses in 1984 and 1985 concludes that the recent economic reforms have not only altered the way in which Chinese managers regard their jobs but has also affected their expectations regarding job satisfaction. In the latter case, in fact, expectations appear to have grown faster than changes in job responsibilities, resulting in lower job satisfaction.

Interestingly, however, a close examination of the data regarding how Chinese managers perceive their responsibilities reveals striking inconsistencies and contradictions and suggests that considerable ambiguity still remains over what it means to be a general manager in China today.

Chinese Cultural Values and Western Management

Despite evidence that considerable convergence has been taking place across a wide spectrum of nations regarding a variety of managerial responsibilities (the mobilization of productive resources, the organization of production, patterns of work, and patterns of distribution of economic rewards [38]), the particularizing influence of national cultures have contributed to a situation where "the issues of applicability, transferability, and utility of advanced management know-how and practices have remained cloudy, if not controversial [39; p. 16]." As Hofstede has observed [40; p.253]:

... different nations have different cultural heritages which are largely invisible. The invisible part consists of values, collectively held by a majority of the population (but possibly differentiated by social class), and transferred from generation to generation through education and early life experience in family and schools and through socialization in organizations and institutions. These values have thus grown into societal norms which, in their turn, determine to a large extent the political and organizational solutions which are feasible within that particular culture. No political or organizational system can survive long without some degree of member consensus, unless it is continually supported by outside force.

* * *

Organization and management theorists have rarely taken [such] ... wisdom to heart. In the management literature there are numerous unquestioning extrapolations of organizational solutions beyond the border of the country in which they were developed. This is especially true for the exportation of management theories from the United States to the rest of the world, for which the non-U.S. importers are at least as responsible as the U.S. exporters. "Management" itself is very much an American concept, just as earlier the entire discipline of economics was very much an Anglo-Saxon discipline. However, the empirical basis for American management theories is American organizations; and we should not assume without proof that they apply elsewhere.

The question here, then, is: "What effects will Chinese cultural values have on receptivity and possible adoption of Western managerial know-how? While an accurate or satisfactory answer to such a question is probably not possible within the confines of this paper, if at all, it is useful to review a number of impressions of similarity and dissimilarity between American and Chinese management styles that might provide some indication of the role of Chinese culture in accepting or rejecting Western management approaches.

The present author's own research suggests greater degrees of

similarity than dissimilarity among U.S. and Chinese managers. A recent empirical study of innovative culture in Chinese organizations, for example, found the prevailing factors to be strikingly similar to those that would be expected in the west [41]. In fact, the author had earlier expressed surprise that Chinese and American R&D management had much more in common than they did in opposition [42]. Likewise, Barry Richman was also struck by the similarities, noting that, despite some obvious differences, "Management within the Chinese enterprise is in many respects quite similar to management within an American firm, particularly an American factory. The same managerial and productive functions are performed in the many similar ways [43; p.43]." Stephen Graves, reflecting on his experience teaching operations management in Shanghai noted that:

... it is difficult to identify a theme that would differentiate the Shanghai projects from those we conduct in Boston. There are certainly differences in objectives and constraints and in the availability of modern hardware and software technology. Nevertheless, the problems and concerns of an operating enterprise seem essentially the same...[43A]

Even in the highly politicized realm of human resource development, Western observers have been struck by the similarities that exist between the two cultures, leading one pair of scholars to exclaim: "Chinese and American managers may have more in common than is commonly imagined [44; p.13]." The limited amount of empirical data that exists concerning this issue supports these impressions of general similarity. A recent survey of American expatriate and Chinese managers in U.S.-owned companies operating

in Taiwan, has found considerable agreement between the two samples of managers regarding job attitudes, job satisfaction, and expectations [45]. This suggests that intrinsic Confucian values are not necessarily resistant to Western management practices. Alutto and Coleman also cite unpublished empirical evidence regarding linkages between job characteristics and managerial satisfaction that are similar in Confucian (Chinese) and Western cultures [46].

Despite such cross-cultural similarities, there are also obvious indications of differences as well. Characterizations of Chinese reasoning, cognition, perception, design, planning and decision-making [47] as they relate to managerial processes suggest a relatively greater acceptance of hierarchical relationships and universal principles than is found in the West [48]. In addition, there appears to be a strong level of emphasis on the personal investment involved in the social contract between work units and people in the Chinese economic system and an often stronger underlying feeling of social responsibility regarding the relationships between Chinese work units, workers, and society at large. The impact of such differences to the suitability and acceptance of the Western originated concept and practice of "modern management" is problematical. However, in the case of Taiwan, where similar cultural values pertain, one observer has speculated that such cultural factors:

... may perhaps diminish its potential of rapidly converging to the more professional model ...

Thus, although pervasive and significant amounts of effort have been devoted to the development and dissemination of management know-how to Taiwanese firms, effective real progress has been slow in emerging..... Most of the management improvement know-how covers the basic functional areas of marketing, personnel, production, finance and operations research. Because Taiwan is still a highly production-oriented economy, the acquisition of know-how on operational management and control techniques is the most popular with local firms. As a result, improvements in production management and quality control have been rather substantial, as is evident in the cost and quality of exports from Taiwan. Although seminars in marketing and organizational management are also popular, actual improvement in marketing and management effectiveness has not been quite evident, especially on the more strategic level of marketing-concept orientation and managerial professionalism. Therefore, relatively speaking, the transformation process to [modern management] for Taiwanese firms may encounter more constraints than in either Singapore or Hong Kong. [49; p. 116]

The Existing Levels of Capabilities Among Chinese Managers: Summary

The foregoing material suggests that a useful characterization of the typical Chinese manager at this point in time is a technically-trained, operationally experienced individual, whose career and professional skill development have evolved during a period of limited or no market interaction, strict prohibitions against organizational diversification, and limited economic rationality [as we know it in the West] regarding performance evaluation and reward. One of the significant consequences of such a situation is a widespread lack of many of the specific functional management skills that are commonly associated with the concept of "modern management." Table 2 identifies many of these skill deficiencies, based on the author's personal experience and conversations with Western functional

specialists with Chinese experience. In a more general management context, the average manager perceives his or her role as being more of an information conduit from the top of the economic hierarchy to the workers below than as a decision-maker/risk-taker. He or she tends to be cautious in the behavior they exhibit and to rely heavily on the human interrelationships that will facilitate getting things done in a society where such interrelationships are of extreme importance. The average Chinese manager appears to be more willing than his Western counterpart to accept the existence of universal principles and the subordination of all economic units to these principles. This perception appears, however, to be colored by a genuine belief in the social responsibilities of the enterprise and the State. In sum, the average Chinese manager, today, is one who recognizes the need for increased managerial sophistication but who is limited in his ability to access or utilize such information. Part of this limitation is due to the system of which he or she is a part; this will be discussed in the next section. Part of the limitation, however, is due to the dramatic gap between what is suggested by the concept of the "modern" manager and the existing capabilities of China's managerial cadre.

THE EXTERNAL ENVIRONMENT

The Evolution of the Market in China

In a nation that has been repeatedly wracked over the past three and one half decades by dramatic upheavals in political movements, it is no exaggeration to contend that the development of professional management in the nation is dependent upon the

TABLE 2
A NON-COMPREHENSIVE SAMPLE OF
FUNCTIONAL MANAGEMENT KNOWLEDGE THAT APPEARS TO BE LACKING IN THE
CHINESE MANAGEMENT COMMUNITY

MARKETING

Market Research
Advertising
Product Design
Industrial Marketing
Consumer Marketing

MANUFACTURING

Total Quality Control
Managing High Volume/High
Variety Operations
Value Analysis
Inventory Management
Manufacturing Information Systems
Distribution Systems

ETHICS AND COMPARATIVE MANAGEMENT

CONTRACT LAW

HUMAN RESOURCES

Motivation & Incentives
The Concept of Directorship
The Role of the Manager
Executive Compensation
Organizational Design
Leadership Styles

FINANCE

Investment Analysis
Methods of Financing
International Finance

ACCOUNTING

Establishment of Control Systems
Auditing
Public Accounting

MANAGEMENT OF SCIENCE AND
TECHNOLOGY

Anticipating Technological
Change
Managing Innovation and
Creative Groups

nature of social receptivity to development of an ethos of professional management. Today, the policies of economic reform being pursued by the Chinese government appear to be well suited to support the growth of managerial professionalism and to provide Chinese managers with sufficient latitude to be able to contribute, through the practice of their professional skills, to the improvement of the economic condition in the nation [50].

There are, in particular, four major areas of environmental change that appear to be indicative of significant improvements in the establishment of an operating environment supportive of managerial effectiveness: decentralization of managerial authority, institution of managerial accountability, provision of incentives to motivate performance, and flexibility in organizational design.

Since their coming into power in 1949, the Chinese Communist government has initiated, and halted, a number of attempts to decentralize managerial decision-making authority throughout the economy. The present reform policy, which grants a significant degree of autonomy to the enterprise manager, probably goes further than any previous attempt. Under the new, and continuously changing regulations, the typical enterprise manager now finds himself in a quasi-competitive market place where, although prices tend to be relatively fixed, the manager now has considerable influence in issues relating to such competitive issues as product mix and production volumes, vendor relations, customers served, product design, distribution, advertising, and service policies. Under the new reforms, the Chinese manager must

increasingly interact with a variety of capital sources, including equity holders, can meet directly with foreigners in structuring joint venture operations, and must face the enterprises' workers every five years in order to gain reappointment in an election process [51]. The new responsibilities represent a dramatic departure from the past and are exerting a heavy toll on the Chinese manager. As one put it: "As factory directors, we have now to set our eyes on the figures and make mental calculations on our operations all day long. As a factory director in these two years [1981-1982], my work has been much more intense than in the dozens of years in the past [52; p. 6]."

Along with increased autonomy has come increased accountability. Profit has, for all intents and purposes, replaced all of the other so-called "eight great standards" as a single indicator of economic performance. Furthermore, workshops within enterprises are themselves increasingly being treated as responsibility centers. Worker bonuses, funds for worker welfare, innovation, and a variety of other working capital uses are now largely generated out of retained earnings. This emphasis on profit is having a strong effect on the ability of a variety of constituencies to tie enterprise performance in the market to their own well-being and to tie, in turn, managerial performance to their own quality of life. In such situations, the pressure on management to perform becomes all the greater and Chinese management has increasingly sought new approaches to managerial responsibilities. Such behavior helps to support the receptivity of the managerial corps to Western concepts of modern management.

Closely tied to the issue of accountability as defined above is the issue of incentives. The direct link that has been established between enterprise profits and worker bonuses has contributed to the visibility of corporate performance. Piece rate systems are in widespread application throughout China as managers seek to motivate their workforce. At the same time, managers themselves are overcoming their reticence in accepting substantial bonuses as rewards for their part in achieving high enterprise profits. As one manager who had doubled his salary through bonuses put it this past summer: "I say to the workers that managers use their minds and that this is more important than working with hands." This is not, however, a universal response and, in fact, one of the persistent problems constraining Chinese managers is the durability of resentment over differential rewards for managerial performance [53]. A related problem regards significant ambiguity over the relationship between the manager and the Party. The draft law on state-owned industrial enterprises, promulgated at the ninth meeting of the Sixth National People's Congress Standing Committee, reads: "Entrusted by the state, a factory manager exercises unified leadership and assumes full responsibility for directing production and for managing the enterprise." According to Yuan Baohua, this will result in major changes in the role of the party vis-a-vis operational decisions: "the work of the party organization concerning production and management will change from one of exercising unified leadership into one of providing guarantees and supervision [54]." That this topic continues to receive significant attention in the Chinese

press suggests that the operationalization of such directives has not been an easy task at the enterprise level [55].

One of the legacies of the Soviet influence on the Chinese economic system has been the virtual homogeneity in organizational design that has characterized Chinese industrial enterprises. This has served to impede their ability to respond to new situations in their environment. This problem is exacerbated by the strong vertical segmentation of the economic system and the all pervasive influence of the individual's work unit. The consequences of all of this is that, internally, the Chinese enterprise is virtually a captive of its past. It cannot diversify in any strong sense of the term because it is constrained not only by ministerial prerogatives but also by an inability to quickly adjust its human resources to address new issues, new markets, or new technologies. Furthermore, it cannot spin-off, expand, or contract to any great degree because it serves a major source of social amenities (such as housing, medical care, child care, subsidized meals and utilities, transportation, access to cultural, entertainment, and sporting events and the like) for its employees and, thus, to cut them off from the enterprise would be akin to cutting them off from primary determinants of their social welfare and standard of living, while any addition to the workforce involves a significant commitment to overhead. In sum, at the level of the individual enterprise, the Chinese economic system is not well endowed with organizational flexibility and it does not appear that this will change to any significant degree in the foreseeable future. Over the last six years, however, the Chinese have shown remarkable

ingenuity in fashioning a variety of collaborative arrangements among organizations so as to overcome the immutable limitations within them. Examples of such domestic joint ventures can be found in the well-known Jialing motorcycle complex in Chongqing [56], and in the reorganization of the Shanghai television industry [57]. Such interorganizational flexibility is providing some of the organizational adroitness that is necessary if management is to fully take advantage of market opportunities and changes.

The Stability of the Government

In all economic systems it is the unpredictability of government intervention rather than the intervention itself that tends to pose most of the intervention-related problems for managers. China is no exception in this regard and the Chinese have had more than their fair share of unpredictability in government behavior over the last thirty seven years. Even today, in the wake of unprecedented prosperity, there is no certaintude that the present policy of economic reform is durable and will outlast its author, Deng Xiaoping. Despite protestations to the contrary from the Chinese side, non-Chinese observers must weigh the potential for government inspired disruption in the Chinese economy and the implications of such activities for the development of Chinese management. Furthermore, this must all be done from the realm of speculation since no one really knows what the future holds in this regard.

It strikes this observer that there are two indications that suggest that the present economic reforms are durable and will

outlast Deng. First, the observable level of prosperity which exists today in China must be higher than any previous point in recent Chinese history. In addition, the benefits being enjoyed appear to be distributed throughout the economy so that many people, rather than a few, are finding themselves better off than anytime previously. Second, Deng Xiaoping appears to have worked assiduously in seeding his supporters through many layers of the governmental, party, and economic hierarchies, assuring high probability of succession by future generations of Chinese leaders who espouse policies of economic rationality. The recent selection of Wang Zhaoguo, a student in the initial session of the Dalian Management training center, to the Central Committee of the Communist Party, for example, suggests that merit is becoming an important determinant of accension to even the most important positions in the country. Both of these conditions argue that the current economic policies are not only popular among the masses but are also being carefully underpinned by the positioning of ideological supporters who can carry them forward in the future.

Chinese Managerial Resources

One of the major changes that has been taking place in Chinese society as a direct result of the policies of economic reform has been a significant change in the quality of managers that are directing major enterprises. In a speech on "Prospects For Modernization in China," given at the Chinese University of Hong Kong in 1984, Ma Hong, the president of the Chinese

Academy of Social Sciences, said that poor management could partly explain for the bad economic results in China: "According to sample investigation, less than one third of the leading cadres in our country's large and medium-sized enterprises are well versed and know how to run them [58; p. 99]." Today, this situation is being addressed in two ways: 1. the introduction of more youthful and better educated managers and 2. the establishment of national testing of managers.

In an earlier description of the Chinese manager, statistics on the increasing youthfulness and higher educational credentials of the Chinese managerial corps were presented. These numbers suggest that over the past few years major shifts in managerial positions have indeed occurred indicating that the government's desire to increase the sophistication of industrial management has been supported with aggressive personnel policies. The establishment of national examinations on management to "certify" holders of, and aspirants to, managerial positions have also appeared to have a significant impact on the way in which managers look at their jobs and the qualifications necessary to advance in a managerial career. Between August 1984 and December 1985, approximately 80,000 managers and directors of large- and medium-sized enterprises had taken this national examination, though the compliance rate is not 100% [59]. While the performance of Chinese managers on the national examinations has apparently been below the level considered satisfactory by the government [60; p.40], the imposition of such examinations is both providing motivation for managers to pursue further training in management

and contributing towards the establishment of the concept of managerial professionalism.

At present, the level of formal educational efforts in management are quite small for a nation of China's size. At the beginning of this year there were only 22,000 students taking degrees in business and finance in Chinese universities [61]. However, during 1985 it was reported that over 12,000 managers were being trained in 76 institutes established for cadre training. During the prior two years of their existence, these institutes have trained over 10,000 business executives and factory directors. China began to increase the number of such institutes in May 1983, before that there were only five, with some 100 teachers. Enrollment was under 2,000. According to the State Economic Commission all managers and directors and party secretaries of big and medium-sized enterprises will be selected from among the graduates of such institutes and other training centers and institutes of higher learning during the Seventh 5-year plan [62].

Another indication of increasing professionalization of Chinese management, is the creation of the Chinese Enterprise Management Association (CEMA). An arm of the State Economic Commission founded in 1979, CEMA is active in sponsoring workshops and lecture series on management (such as the Xerox-Unison-CEMA lecture series that has been held in a number of cities in China in 1984-1986), and publishes the journal Enterprise Management, which contains reprints from the Harvard Business Review [62A]. At present, CEMA has chapters in 29 provinces, municipalities, and autonomous regions, 80 industrial cities, and 12 ministries and

commissions. In February 1986, CEMA was reported to have 2,300 group members, 4,300 individual members, and 3,000 associated enterprise subscribers [62B].

One remaining concern regarding the state of Chinese managerial resources has to do with the limited professional mobility that continues to exist in China today. Despite the government's obvious impatience with the slow pace of change taking place in freeing individuals from the tyranny of indenture to their work units, and despite indications of some progress being recently made in this regard recently, Chinese professionals still remain, to a large extent, captives of the work units to which they are assigned. We in the West have come to take professional mobility for granted and often fail to recognize just how important such a right is in creating opportunities for professional advancement, providing outlets for professional creativity, and allowing for the benefits of cross-fertilization between organizational cultures. One wonders, for example, what would have become of an Iaccoca if he had had to remain at the Ford Motor Company? At present, China receives none of these benefits as her managers are bound to the work units to which they have been assigned. The likelihood of continued governmental pressure in the future to provide greater degrees of professional mobility, however, is quite high. One can only speculate in this regard, but it appears that the freeing-up of professional mobility among scientific and technical people will become more possible in China in the future and that greater mobility for managers may follow behind.

The External Environment: Summary

It would appear that the changes taking place within the external environment in which management functions in China are almost entirely positive in terms of supporting the evolution of professional management within the economy. Changes in the economy which are encouraging more market influence are working to provide the Chinese manager with both more autonomy and more decisions which he or she has discretion over. In addition, the present regime has worked carefully to establish conditions that will lead to the continued support of the liberalizing economic policies in the period after Deng Xiaoping. Finally, Chinese managers are being led into greater sophistication through the replacement of experienced veteran managers by better trained, younger managers and by the imposition of examinations that measure the manager's level of knowledge. The formation of the Chinese Enterprise Management Association suggests that the institutional structure to support managerial professionalism is also being developed.

THE PRESENT STATE OF CHINESE MANAGEMENT

According to Figure 1, the present state of Chinese management is the product of the existing level of capabilities among Chinese managers and the external environment in which they work. In both instances, the prognosis for improved managerial professionalism in the future is positive, with the external environment having changed more significantly than the characteristics of the individuals holding managerial positions. This should not be

surprising since the environmental elements which have changed the most are those most susceptible to governmental policy interventions. Managerial characteristics, on the other hand, take considerably longer to change. There is nothing in our assessment of Chinese managerial characteristics that would suggest a rejection of the Western concepts of "modern" management, however, it would appear that Chinese attitudes and traditional concepts of the role of the manager will work towards a reduction in the utility of many modern management concepts and, consequently, a slowing down of the spread of such ideas. Counteracting this impedance, on the other hand, has been rather startling changes in the rules governing the responsibilities of the manager in China and these have acted to create a strong need among the managerial corps to become more sophisticated about modern managerial techniques.

THE PROCESS OF TRANSFER

Critical to any technology transfer experience is the process of transfer. Here, we are considering both the mode of transfer that is utilized and material transferred. Although several modes of transfer will be discussed, the major focus of this discussion will be on the establishment of management training centers in China.

Modes of Transfer

There are a variety of ways in which a "soft" technology, such as management might be transferred between two parties. Among the possible modes of transfer are: books, direct personal

interaction through consultants or joint ventures, and collaborative training programs. Each of these will be examined as to applicability to the Chinese situation.

Access to Western managerial theories through the acquisition of textbooks is among the simplest means of transferring managerial know-how, although it is probably also among the most unsatisfactory methods as well. While textbooks represent an "efficient" packaging of ideas in an easily obtainable format, the lack of interaction that accompanies pure textbook learning and the need to place the textbook discussion into the appropriate cultural context, makes pure textbook learning a dangerous proposition. In the Chinese case, these problems are exacerbated by the often low level of translation that are available for many of the textbooks, leading occasionally to major misinterpretations of the lessons being offered.

It is difficult to appraise the usage of Western management textbooks in China today as a primary learning tool. Certainly, such books are available, and one hears repeatedly of particularly well-known books being reproduced and translated redundantly at a variety of Chinese institutions. Since the translation of such books represents a means for faculty members to augment their regular salary, the transfer of Western managerial knowledge through textbook translation will likely continue to be enthusiastically supported for a long time. At the same time, one cannot help but be struck at the influence that Western management books appear to be having on the Chinese press. In particular, the number and variety of business management books

reported in China Daily's Business Weekly are an indication of the popularity of Western-type business literature. A case in point would appear to be the In Search of Excellence [63] "spirit" found in a new book entitled The Experience of Rural Businessmen:

The book traces the characteristics of a new generation of Chinese farmers. Among the profiles are Cao Yinxiang, a chicken farmer, Jiang Yuanchen, the "Garment King," Chen Xiugong, who turned a lackluster village into a centre of fibreglass production, and Huo Zhouyi who parlayed his carpetmaking into world markets. [64]

Consultants overcome some of the most critical limitations of textbooks by allowing the possibility of interaction between the supplier of the technology and the recipient. It would appear, however, that except for a few limited exceptions, most of the foreign consultant activity taking place in China today is directed in assisting Western firms hoping to enter the Chinese market. One of the more dramatic cases of transferring managerial know-how to the Chinese through a consultant was the case of Werner Gerich, a retired West German engineer, who was director of the State-owned Wuhan Diesel Engine Factory for more than a year [65]. Although Gerich became a celebrity in China for the success he had in improving the situation of the Wuhan factory, he apparently left out of frustration with the difficulties of working in the Chinese system. Gerich's parting comments suggest some of the shortcomings of contemporary Chinese managerial practice:

1. Give more authority to factories' quality control departments.
2. Make full use of all available equipment.

3. Give factories a bright new look.
4. Remember: Time means money.
5. Reward workers for good suggestions.
6. Set up training centres for young workers.
7. Consider local weather conditions before introducing foreign equipment.
8. Keep workers' difficulties in mind. [66]

Domestically-originated consulting through the services of "old capitalists" is also appearing as a means for the introduction of Western management practices into the Chinese economy. The China Democratic National Construction Association and the All-China Federation of Industry and Commerce, both comprised of old capitalists, are offering economic consultancy services and training talented industrial and commercial workers in order to invigorate enterprises. At the end of 1984, the association and federation had helped the government run about 700 collective enterprises, and sent 1,000 members to offer economic consultancy services in 600 programs in minority areas of 18 provinces and autonomous regions. In 1984 they had set up 23 schools and 585 training classes with 110,000 trainees. Furthermore, according to the Chinese press, their proposals for reforming the administrative systems in the tea and traditional Chinese medicine industries have been well received by the State Council. The choice of these two industries, however, suggests something less than complete acceptance for this particular consulting effort, if not for managerial consulting in general [67].

Given the increasing presence of foreign partners in joint ventures in China, it would be difficult to avoid commenting on the role of private Western firms in transferring managerial knowledge to the Chinese. Clearly, these firms are involved in the

transfer of management know-how as part of their everyday activities, as well as being contractually bound to provide some training. In the case of the Parker Hannifin joint venture, for example, the American side was obligated to take the general manager, among others, to the U.S. for training [68; p.29]. In the case of 3M's one hundred percent owned Chinese subsidiary, the American side also committed to the training of Chinese managers and cited know-how pertaining to "basic information on organizing and inventory system, minimizing waste, controlling pollution and improving productivity [69;p. 26]," as being part of the benefits accruing to the Chinese by virtue of 3M's presence in the country. The twenty top Chinese managers at Foxboro's joint venture in Shanghai were brought to the United States for a basic training program on managerial procedures that began with a two week session devoted to the basics of intraorganizational communications, followed by instruction in sales and financial management [69A]. There is plenty of evidence, in fact, that the Chinese see such joint ventures as "windows on management," and hope to secure managerial knowledge in areas such as:

- * the concept of serving the user
- * the notion of economic results
- * highly efficient and responsibility-oriented management systems
- * strict, serious and meticulous workstyles
- * better distribution methods
- * market forecasting
- * order control systems
- * centralized procurement and inventory control
- * one-stop service [70].

In general, however, such transfer of managerial knowledge has

tended to be limited in scope and audience size and often is determined more by the particular mix of participant personalities than anything else. In discussing managerial training programs for Chinese managers with their American counterparts, one is struck by how little the American corporations know about where their trainees are coming from, how they are selected, and where they will go following their return to China. Furthermore, there are instances of Western joint venture partners being frustrated by the Chinese "system" in their efforts to acquire and train Chinese managers. According to one experienced Western manager, who is trying to develop a cadre of Chinese managers for a joint venture: "We can identify the best and the brightest people coming out of the universities but, despite the promises of the Mayor and other officials, the military and the universities themselves get them first." As a result of all of this, although corporate transfers will undoubtedly continue to grow in importance, one suspects that they will remain difficult to depend on as a reliable vehicle for managerial training and they will vary with the parties involved. Furthermore, with the possibility of individual mobility increasing in the future and some semblance of a managerial labor market developing, it is quite probable that Chinese managers trained under such auspices will circulate in the international joint-venture community rather than diffuse their skills into the domestic Chinese market, as has been the case in so many other developing countries [71].

Perhaps the most promising of all modes of transferring Western managerial knowledge to the Chinese are the collaborative

training centers. The oldest of these is the National Center for Industrial Science and Technology Management Development at Dalian, which is sponsored by the U.S. Department of Commerce and the Chinese State Economic Commission, the State Science and Technology Commission, and the Ministry of Education [72]. This center, which was established in 1980, employs American and Chinese business school faculty to train Chinese managers and government officials in Western management approaches. The Dalian "base" program is currently complemented by an executive program and an M.B.A. program administered by S.U.N.Y. Buffalo. Similar centers exist in Tianjin (Japan), Chengdu (Canada), Shanghai (West Germany), and the European Economic Community (Beijing).

In all cases, the purpose of these collaborative training centers are to expose Chinese managers to foreign concepts of modern management. From a technology transfer perspective several items are relevant to understanding the likely effectiveness of such centers. First and foremost, is the intimacy of teacher-student relations at such centers and the opportunities for direct interaction that exist. At Dalian, for example, American faculty have in past remained in residence for up to five and one-half months. This was a sufficiently long period to allow the development of close ties between students and faculty. Such ties improve the prospects for successful transfer and appear to be relatively durable following the completion of training. Secondly, in almost all cases the participants ("students") at such centers are experienced managers who are capable of judging the attractiveness and feasibility of material being offered them

and can begin the long process of assimilating such lessons into the Chinese cultural context. In the case of Dalian, the Chinese side explicitly requested only the inclusion of American faculty who were functional and not China specialists. The reason for this, according to them, was their desire to see how we manage in the U.S. and not to be told how they should manage in China. The latter, they argued, would be worked out on their own by the participants in the Chinese economic system. A further advantage of the collaborative training programs has been the conscious effort on the part of the foreign faculties to train Chinese successors who will ultimately take on the training process and make it a Chinese effort. In the case of Dalian, American faculty participation has decreased from 100% of an 18 week effort [in 1980] to the present staffing of one three week session, while the Chinese staff teaches two five week sessions. In addition, American business representatives provide lectures during a final three week session.

Given the relatively short life of most of the collaborative training centers, it is difficult, if not impossible, to judge their effectiveness at this point in time. Nonetheless, in the case of Dalian there does appear to be sufficient anecdotal evidence to suggest some level of success. This can be seen in several ways. One of the most visible indicators of performance has been the relatively large number of Dalian alumni who have been promoted into positions of high responsibility. Although this might very well be the result of outstanding people being chosen to attend Dalian and, as a result, being preordained as "success stories," the Dalian connection is apparently enhancing their

career prospects.

A second measure of performance involves the number of alumni who report trying to implement managerial techniques learned at Dalian. Again, while such data is anecdotal, the quantity of reports suggests that the participants in the program are picking up useful material. In the case of Wang Zhaoguo, a participant in the 1980 Dalian program, who was recently been named director-general of the Central Office of the Chinese Communist Party and a member of the Central Committee, his rise is ascribed to the reforms he initiated as a manager in the Second Automotive Factory in Hubei. "He instituted product design innovations, sent out a sales force, and organized a comprehensive maintenance system for the plant. In a short time, plant revenue doubled [73]." In the case of Zhang Changsong, also a participant in the initial 1980 session and now president of the Board of Directors of the Sino-American International Engineering Company, computer know-how and financial management skills were most important [74]. Yang Jiayuan, deputy director of the management office of the Ministry of Railways and another Dalian graduate, reorganized the Ministry's factory's marketing strategies. "As a result, they landed a big contract to supply concrete posts to Shanghai's Baoshan Steel Works, and were soon earning enough to wipe out the deficits and fulfill their obligations to the state." Another Dalian graduate, who is deputy director of the Shanghai Electrical Appliance Corporation credited the Dalian program with providing him with insights into depreciation, predictions of service life cycles, and management accounting, which are useful

in deciding the types of foreign technology to acquire [75]. Similar stories have been found by the Sichuan Province Economic Planning Commissions review of the Canadian program at Chengdu [76]. In the case of a paper mill manager, it was the ability to apply Management By Objectives, break-even analysis, value analysis, market forecasting, and an understanding of domestic joint-ventures, that have been particularly valuable. The manager of a water pump factory reported on employing marketing surveys and utilizing an economic order quantity order system to free up working capital.

Lessons learned at Dalian and, presumably, the other international collaborative centers tend to be diffused by the participants returning to their work units who are frequently expected to share the materials learned with their counterparts who did not attend. In such a fashion, the material from these centers is multiplied and amplified throughout the country. This helps to address one of the major short-comings of such centers: the relatively small number of managers who can attend. A 1982 survey of 1980 and 1981 graduates of the Dalian program indicated that 135 out of the 172 respondents (79%) gave talks about their experiences and learning at the National Center following their return to their work unit. The amount of time spent in these sessions ranged from 1 hour to 150 hours and the audience size ranged from 10 to 1500 people [77]. The lessons taught at the Dalian program are also experiencing a multiplier effect at Nanjing University where the chairman of the economics department is a 1981 Dalian program graduate who states that his

participation in that program was directly responsible for the nature of coursework on operations management, management information systems, science policy, and organizational behavior, being offered at his school. The author's own interviewing of Dalian alumni indicates that the ties among many of them remain strong after completion of the program and that study groups and support networks have been established which lead to the continued reinforcement of managerial development and personal growth and could, perhaps, be the foundation for a new set of quanxi relationships.

Material Transferred

It is common in American business schools to categorize the knowledge being created and transferred by its appropriate functional area. Consequently, one can talk about management studies as consisting of: operations (production), finance, accounting, marketing, and organizational behavior. Most of the collaborative training centers offer coursework in all of these areas, the major exception being the Japanese center at Tianjin which appears to emphasize production skills (see Table 3 for a summary of the programs offered by the various international collaborative training centers). If any functional area appears to be slighted it is the human resources management function. The reason for this is most likely the recognition that while production techniques can be implemented almost immediately, personnel issues may very well require a complete overhaul of organizational structure and value system [78].

TABLE 3

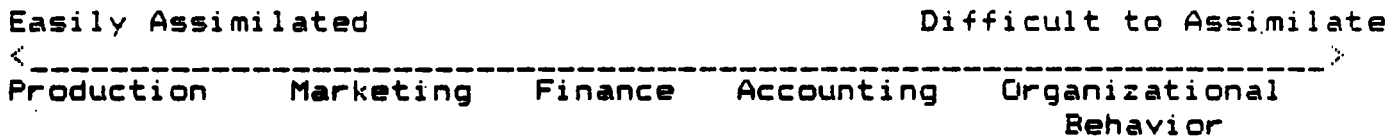
A COMPARISON OF INTERNATIONAL COLLABORATIVE MANAGEMENT TRAINING
CENTERS IN THE PEOPLE'S REPUBLIC OF CHINA

CENTER	INITIATION DATE	FOREIGN SPONSOR	FACULTY	DURATION	PROGRAM FOCUS
DALIAN Liaoning	8/80	U.S. Dept of Commerce	U.S. Business Schools	6 months	Base Program Special Programs Senior Executives M.B.A.
CHENGDU Sichuan	10/84	Canadian International Development Agency	Canadian Business Schools	6 months	Diploma program Short courses
TIANJIN (Japanese Productivity Center is the contractor)	1984	Japanese International Cooperation Agency	Primarily Industrial	3 years (for trainers)	Development of training programs Ultimately: consulting expert training short courses Japanese language
BEIJING	3/85	EEC (coordinated by Manchester Business School)	European Business Schools	2 years + 1/2 yr. English	M.B.A.
SHANGHAI	1986	West Germany		4 month	

TABLE 3 Continued

CENTER	PEDAGOGICAL APPROACHES	CONTENT FOCUS	STUDENT BODY	STUDENT SIZE
DALIAN	Lectures Cases Applications paper	Broad-based First yr. MBA	Top and Mid-level managers from large and mid-size enterprises across nation	180
CHENGDU	Lectures Field Studies	Broad-based	Junior managers from small and medium enterprises in Sichuan	300
TIANJIN	Intensive Specialty Training	Production, QC, Finance, Marketing, MIS, Economics	Top and mid-level managers from large and medium enterprises 1/3 nationally, 2/3 Tianjin	25 at present 300 eventually
BEIJING	Group Project 50% of work	Includes 4-6 month internships in EEC firms. Two sessions are to be run between 1984 & 1989, then program will be turned over to private supervision.		
SHANGHAI		Broad range of narrow courses	Top & Mid-level managers from Shanghai	

It is possible on the basis of interviews with American and foreign faculty, in fact, to suggest the following continuum to represent the degree of "take" that the materials offered at such centers have had to date:



The 1982 survey of the alumni of the 1980 and 1981 programs at Dalian, that was cited earlier, provides some empirical support for this assessment (Table 4). It indicated that courses in production management, marketing, and financial management were perceived as being particularly useful to these alumni. Whereas Organizational Behavior and Systems Information were perceived as being less useful (Systems Information was, however, seen as likely to be useful in the future).

Despite such assessments, organizational behavior lessons are apparently being employed in Chinese activities. According to Alutto: "Organizational behavior hasn't taken in the sense that you can find large scale examples of particular issues. There are, however, plenty of examples of bits and pieces being used. Issues are being identified as amenable to organizational behavior approaches [79]." One of the reasons for this is that Organizational Behavior issues were formerly the province of the Party and there apparently remains considerable reluctance on the part of enterprise managers to tackle the Party's prerogatives so directly.

TABLE 4
EVALUATION OF THE COURSES TAUGHT AT THE NATIONAL CENTER FOR
INDUSTRIAL SCIENCE AND TECHNOLOGY MANAGEMENT DEVELOPMENT
at DALIAN
by Alumni of the 1980 and 1981 Sessions

COURSE	VERY USEFUL	SOMEWHAT USEFUL	NO USE	USEFUL IN THE FUTURE, NOT NOW
Managerial Economics	37	106	5	25
Production Management	94	76	0	3
Organizational Behavior	43	94	10	18
Managerial Accounting	51	94	9	16
Science & Technology Management	48	93	11	18
Marketing	87	69	3	12
Financial Management	83	76	0	11
Applied Statistics	62	57	1	19
Systems Information	23	58	2	90

SOURCE: The National Center for Industrial Science and Technology Management Development at Dalian, "Statistical Results From Survey of 1980 & 1981 National Center Grads," September 4, 1982.

CONCLUSIONS

The conclusions of this paper begin with the observation that the external environment in which Chinese managers work is probably more receptive to the introduction of Western management techniques than are the managers themselves. This is largely due to the government's policies of economic reform which are creating a situation which is quite hospitable towards the practice of modern management know-how. At the same time, it appears that much of what is considered the managerial role in the West is similar to management in the P.R.C. and as a result, there is good reason to anticipate relatively good transferability of modern management techniques to the Chinese. Given the observation that the most significant impediment to successful transfer of managerial knowledge is the Chinese manager, himself, it would appear that reliance on a personal yet structured, intimate transfer approach, such as collaborative training centers appears to be the best choice among several different transfer modes. This is because human agents possess the flexibility and interactive properties that are of most value in transferring information in ambiguous situations where there is considerable pressure to achieve a satisfactory solution quickly [80]. The training center approach also appears to be a supportive and yet abstract enough situation to allow the Chinese manager to consider new management practices without intimidation. Despite this conclusion, however, the effectiveness of such transfers are currently difficult to measure. One must defend these activities by arguing for the

conceptual appropriateness rather than being able to empirically defend the effort being expended.

One way of considering the likely performance of transfers of Western managerial knowledge to the Chinese is to define what what we, the suppliers of such knowledge, are looking for in a Chinese partner and to assess how likely the present transfer approaches are to yield such a result. Recent research on a large number of joint ventures in the PRC, by Roy Grow, suggests that successful joint ventures are characterized by the following attributes:

1. Impetus to change: a crisis, a returned expert, etc.
2. Enterprises that have good group relationships within the enterprise itself.
3. Very strong managers: possessing education, negotiating skills, and who can act as a catalyst.
4. Very strong relationships between the manager and the chief engineer: organizational and technical synergy.
5. A high degree of autonomy: the ability to maneuver; bargaining room.
6. Managers who could play with multiple points of access in the Chinese economic system and who recognize that multiple points of access also mean the potential for multiple points of control [81].

It seems to this observer that Western management approaches can make a strong contribution to attributes number: 3 - through the development of a philosophy of modern management, as well as with specific functional skill development, that strengthens managerial capability and provides the new perspectives that allow the manager to reduce his reliance on traditional modes of response to new situations; 5 & 6 - through the development of specific functional skills which allow the full expression of managerial autonomy; 2 & 3 - through the sorts of organizational behavior

insights that allow for appropriate forms of group design and equitable evaluation and reward schemes. At any event, it seems clear that the combination of recent government policy regarding economic reforms and the technical experience of the new generation of Chinese managers, are not, by themselves, sufficient to produce enterprises characterized by the attributes that Grow has identified. What is missing is the formal training needed to provide the Chinese manager with the skills needed to take full advantage of the evolving situation in the Chinese economy. As players in this drama, it seemingly behooves us to provide as much of that missing ingredient as we can, and to do it in as efficient and effective manner as is possible.

Among the transfer mechanisms considered earlier in this paper, while books, consultancy, and joint-ventures promise to provide some of Grow's attributes, only collaborative training centers appear to possess almost all of the material needed to prepare Chinese managers for the role that he must play. In particular, only collaborative training centers provide the means of satisfying attribute 1 - the return of an expert. Given the very low cost of most of the foreign participation in these collaborative centers (the budget of the U.S. involvement at Dalian is approximately \$160,000 per year, the Japanese involvement in Tianjin is approximately \$597,000 per year, the Canadian involvement in Chengdu is approximately \$582,000 per year, the West German involvement in Shanghai is approximately \$630,000 per year, and the EEC involvement in Beijing is approximately \$600,000 per year [82]), it would appear that such

centers offer a reasonably cost-effective means of pursuing this transfer. While, to date, it is hard to point to any particular commercial event as being precipitated as the direct result of participation in a collaborative training center, it presumably is to all of our [i.e., Western nations] advantage to be able to deal with Chinese managers who are cosmopolitan and sophisticated. It does not seem unreasonable to assume that the attitudes and perceptions that are transferred along with the functional skills at such centers will help reinforce the recent movement toward increased market influences in economic planning and support for individual achievement and opportunity. Since our economic systems are built on these philosophies, it would appear desirable to support their spread into the Chinese economy as well.

The major limitation of the collaborative training centers is the small number of Chinese managers that will ever come directly in contact with the teacher of Western management practices. The number of industrial managers enrolled in the Dalian base program in any year is probably between seventy and one hundred and thirty. The EEC program will train perhaps eighty-five managers over the next five years. The Japanese center will offer a series of focused courses for approximately forty students each, while the German program envision similar focused courses of 25 to 30 students each. The Canadian program has been teaching a general management program of 120 participants [83]. All in all, to even suggest that such numbers represent a "drop in the bucket" is to magnify these numbers beyond the realm of reliability. In the face of China's huge managerial needs, the

major drawback to collaborative centers is that they cannot reach enough Chinese managers. Despite this limitation, however, the centers probably play a much greater role than the participation figures would suggest. They serve as a sign of growing managerial professionalism and as such they support the general field of management development. The Dalian and Tianjin centers publish management journals (in the case of the Tianjin center, the publication run is 70,000 - 80,000 copies per issue) which reach a large number of people. The centers provide libraries and consulting services and ultimately they may provide the hubs in the growing community of academic teaching and research on management. Furthermore, by training the Chinese faculty members who will ultimately train the next generation of Chinese industrial leaders, the international collaborative centers are creating a mechanism that will maintain the transfer of their message for a long time to come.

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