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***Corporate Transformation and Organizational Learning:
The People's Republic of China***

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Corporate Transformation and Organizational Learning -

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**Paper prepared for the Workshop on Organizational Change in Transition Economies
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1. TRANSITION ECONOMIES: DIFFERENT TYPES OF
TRANSFORMATION, DIFFERENT PROBLEMS*
BY M. DIERKES & X. ZHANG, MARCH 1998

The Central and Eastern European countries, the Baltic States, the countries of the former Soviet Union, and several East Asian countries, among them the People's Republic of China (PRC) have been experiencing a process of major transformations. Some of them are undergoing a complete transformation in every sector of their societies, whereas others, like the PRC, are currently focusing predominantly on the transformation of their economic system. Transformation is a specific type of large-scale social change. The transformation of systems is a process determined by intentional action and conscious change of system structures (Reissig, 1993, p. 1). Some basic dimensions of this process are similar and unprecedented in all these societies: the transition they are making from socialist to market economies. Despite a long history of societies in transformation, there is no role model to follow when trying to cope with the problems and challenges presently confronting these societies. Goals of transformation processes may be articulated, but the specific actors, strategies, and concepts for change remain mostly unknown, leaving the final outcome of the process uncertain (Reissig, 1993, p. 6). According to some theories of transformation, a democratic society with institutions as established in most western countries should result from this process with a simultaneous transformation of economic and social institutions. But several societies already have found that the path of transformation can take unexpected turns and that social and economic transformation are not necessarily simultaneous.

There are also remarkable differences between the types of transformation these countries have been experiencing. Albach (1990, p. 31) has identified two basic types: transformation through revolution and transformation through reform.

The revolutionary form of transition also referred to as „big bang“ or „shock therapy,“ is based on the assumption that only the profound shock of instantly introducing a market economy can break up the ineffective institutions of the old system freeing up entrepreneurial talent for a new economic structure and the emergence of a strong and competitive business sector. Perhaps the most extreme example of revolutionary transformation is East Germany,

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where an “instant transition” (World Development Report, 1996) took place through „incorporation“ (Reissig, 1993, p. 12) of East Germany into the West German sociopolitical and economic system.

Basically, transformation through reform, also known as gradualism, spreads the shock over time. Advocates of this strategy see the advantage mainly in a less disruptive process of change, which gives existing economic entities the time necessary to adjust themselves to a new social, economic and political environment. The emphasis here is more on adapting existing institutions, whereas shock therapy wipes out most of existing institutions in an attempt to prepare the ground for new, market-oriented organizations. The PRC is widely discussed as an example of transformation through reform with the transitional process beginning in the late 1970s. The Communist party apparently reformed itself and its ideology to the point that it was possible at the end of 1993 to announce the official beginning of the “socialist market economy.” Transformation in the PRC also means the transition of a mostly agrarian society to an industrial society. At present, reform in the PRC focuses on the economic sector. It is a gradual, top-down process, with government setting the rules, guidelines, and pace of reform. According to Li (1995, p. 57) there have been three phases of transformation. Theoretical critique of the system (phase 1) and the destruction of the old system (phase 2) were achieved during the 1980s. The establishment of a new society (phase 3) has only just begun. The reform process has frequently been described as a “dual-track system,” referring to “the coexistence of a traditional plan and a market channel for the allocation of a given good” (Naughton, 1994, p. 52).

Both strategies have strongly argued advantages but also entail significant risks and disadvantages. Shock therapy may fail to foster new and stronger institutions, only bringing about deindustrialization and leaving an economy moribund. Transformation through reform, on the other hand, may fail to provide enough stimulus for change, leaving the objective only partially (and unsatisfactorily) achieved.

Over the past decade in Central- and Eastern-European countries, neither “revolution” nor “reform” has existed as a clear-cut model in practice. Instead, there are various mixes of the two. The Russian experience, for example, started as a reform process and then moved to the revolutionary type of transition. The reform process launched under the label of *perestroika* ended with the systematic destruction of most major institutions of the Soviet society (Ionin, 1994, p. 11). The society went through a nearly total economic and cultural collapse, leading to disorientation and an individual and collective loss of identity. The Baltic

States and the countries of Eastern and Central Europe also went through shock therapy, but only in economic terms for the most part. They were able to inherit the legacy of democracy and adopt a market system that had existed in the presocialist era.

2. AN ECONOMY IN TRANSITION: MAJOR CHANGES IN BUSINESS'S SOCIOPOLITICAL ENVIRONMENT IN THE PEOPLES' REPUBLIC OF CHINA

The PRC is now undertaking a profound and unprecedented reform of its economic system—the transformation from a planned to a market economy. The main tasks of this transformation are the fundamental reform of the enterprise system, especially the ownership structure, the basic relationship between government and companies, the operational mechanism, and the overall institutional framework of the economic system. This transformational process is that of adapting the business sector to a socialist market economy, which is to be understood to be a means of economic operation and control and a state of economic activities, in which the market mechanisms are applied under socialist institutional conditions. In effect, accepted practices of western market economies are combined with socialist institutional characteristics that feature in public ownership as the predominant type of ownership of the means of production, the socialist principle of distribution, and state control of economic activities. This historical endeavor has made the Chinese economy a transition economy and has brought about tremendous changes in the sociopolitical environment of business in the PRC since 1978 (Knell, 1992; G. Liu, J. Li, 1991).

After the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China (CPC) in 1978, there began a process in which reform was steadily deepened through a gradual process of experimentation and adjustment. Step by step, the PRC's economic system moved toward a market economy. Key to this process was a series of changes in party ideology that made it gradually possible to reconcile the dictates of socialism with the idea of a market economy. The 14th National Congress of the CPC in 1992 was historic in its call for the establishment of a socialist market economy and in a series of concrete policies and measures designed to achieve it (Reynolds, 1988).

Mostly as a result of government action and leadership, the Chinese economy has been through a process in which the scope of the market has been enlarged and the functions of the market strengthened. This process is widely known as gradualist, but it has also been quite radical (Dong & Tang, 1993).

Since the 14th Congress of the CPC, the establishment of a “socialist market economy” has brought about reform in four key areas: (a) transforming the modes of operation of state-owned enterprises, especially large and medium-sized firms, with the emphasis on the reform of ownership structure; (b) quickening the emergence and expanding the scope of a unified, open, competitive, and orderly market system; (c) deepening the reform of the distribution system and the social security system; and (d) accelerating the transformation of the government’s role and function in the domestic economy (Ma, Sun & Liu, 1993).

The steps outlined above embody the Chinese strategy of reform or transition in which aspects of evolution and accumulation figure rather prominently. The transition to the market economy is a hard and winding process for the PRC. In order to support and guide this historic shift, to move steadily forward, and to maintain social stability and economic growth while reforming the system of ownership, the PRC is trying a strategy quite different from other countries in a similar situation. This strategy features in the combination of overall evolution and dramatic breakthrough, which passed through three major stages on a micro-economic level: (a) the expansion of business autonomy starting in 1979, (b) the transformation of operational mechanisms initiated after the 3rd Plenary Session of the 12th Central Committee of CPC in 1984, and (c) the currently running reform to establish a market-oriented and entrepreneurial system with special emphasis on the reform of ownership structure and operational mechanisms of state enterprises.

These developments demonstrate that the business environment of Chinese firms has been undergoing steady and significant changes. This process has several major implications for the Chinese business community. The first and perhaps most general one is that firms are being forced to become sensitive to the realities of supply and demand in the marketplace. A failure to adapt to changing market conditions will threaten the survival of the firm in a competitive environment. The marketplace is the center around which firms must organize their production, from the kinds of material and components they buy to the kinds of products and services they sell. Second, firms should perform predominantly as real and pure economic entities and strengthen their functions of manufacturing and marketing, gradually shifting other social functions and their traditional involvement in social security, social and community services to the market, the government, or other social institutions. The previous internal social functions will have to be dismantled and new ones firmly established in accordance with the overall market orientation. Third, firms are being encouraged to transform their internal structures and cultures. The quality of management has grown in importance in an era of a rapidly changing

business environment. Labor practices must be adjusted to reward performance and maximize company flexibility. Fourth, firms are being encouraged to adopt long-range thinking, anticipate market conditions, and develop new product lines that meet medium and long-term market demand. Finally, firms are being forced to think about the challenges and opportunities created by the PRC's increasing growing integration into the international economy. This means preparing for possible export opportunities abroad; it also means defending one's domestic base from the challenges of foreign imports.

Of course, one should not go too far in speaking of the emergence of a perfect Chinese market economy. The transition is still under way, and there are areas where the vestiges of the old planned system are plainly visible. The economic environment in which Chinese firms are operating should not be mistaken for the kind of market economy that exists in western industrialized countries. For existing enterprises and businesses, the current transition can be seen as a period of both substantial challenge as well as substantial opportunity. A key to the success of Chinese plans for the socialist market economy will be the extent to which its many future enterprises will be able to perform vigorously and efficiently. Therefore, business need to have the capacity to learn and adapt to changes (J. Liu, 1993).

3. TRANSFORMATION THROUGH ORGANIZATIONAL LEARNING: A CHALLENGE FOR COMPANIES IN THE PEOPLE'S REPUBLIC OF CHINA

Although it is generally true that changes in the Chinese economy have given greater autonomy to Chinese business enterprises since 1978, and although it is also generally true that these enterprises have thereby been forced to learn and adapt as organizations located in a more fluid and competitive environment, there still remains the question of how specific enterprises have responded to specific environmental conditions. Looking at this question from a microperspective, we have cooperated in the last few years on a major in-depth empirical study, some of whose important findings are documented in this contribution.

3.1 ORGANIZATIONAL LEARNING: THE BASIC CONCEPT

Organizations in societies undergoing gradual transformation must prepare for a fairly lengthy period of profound change during which their *raison d'être* will be fundamentally questioned. In such a transformation process, learning is a major problem for organizations in three ways. First, learning acquires an existential meaning for organizations because their survival depends largely on the degree to which they are characterized by a willingness and ability to learn (Berthoin Antal & Merckens, 1992, pp. 201-202; Dierkes, 1996, pp. 17-19). Second, organizational learning is extremely difficult, and sometimes even impossible, especially in times of severe crisis (Dierkes, 1992, p. 29; Dierkes, 1994; Schein, 1993, p. 85). Third, it is often the case that little or no attention is paid to organizational learning in times of transformation, for the members of the organization simply try to "muddle through" (Canzler & Marz, 1997, pp. 360-368; Dierkes, 1997b).

This three-dimensional problem leads to a basic question. If organizational learning plays such an important role but cannot be presumed to come naturally or automatically when the very existence of the organization is threatened in times of transition, then what are the crucial factors that will prompt organizations to treat their learning as a basic prerequisite for successful transformation and therefore make it pivotal to their strategies?

At first glance it seems as if an answer to this all-important question should not be difficult to find. Though research on organizational learning is nowhere near as advanced as the study of individual and group learning or the analysis of organizations themselves (Dierkes & Hähner, 1994, pp. 252-260; Krebsbach-Gnath, 1996, pp. 27-30; Nachreiner, 1992, pp. 57-59), the subject area boasts many conceptual works, some of which are empirically grounded. Individual studies of organizational learning have attracted keen attention from the early 1960s to the mid-1970s (Argyris, 1964; Cyert & March, 1963; Kappler, 1972; March & Olson, 1976), and since that period the field has become the focus of research on a larger scale (Pawłowsky, 1994, pp. 267-268).

However, some of the results must be scrutinized when it comes to distilling the factors that determine organizational learning in times of social transformation. Many of the authors have examined organizational learning not only in phases of social stability and

prosperity but also have questioned whether and how learning takes place in organizations¹ undergoing a crisis, however, most of the crises were limited to the organizations under study and to the specific environment of each. Fundamental processes of transformation affecting society as a whole have not been considered. One cannot simply take it for granted that organizational learning theories relating to limited crises can be applied to learning in fundamental processes of transformation. Comparative historical analyses would be needed in order to establish the degree to which such transfer is possible, if at all (Dierkes, 1996, pp. 20-21; Marz & Dierkes, 1997, pp. 42-43).

Second, the terminological and conceptual divergence between available studies on organizational learning is considerable and in some cases even diametrical. Such disagreement marks, for example, the treatment of the relation between individual, collective, and institutional learning. It does not stem so much from the contexts and differences between these three levels of learning (for a variety of conceptual perspectives, see Argyris, 1964, 1990; Berthoin Antal, 1992; Duncan & Weiss, 1979; Hedberg, 1981; Morgan, 1986; Müller-Stewens & Pautzke, 1991; Nonaka, 1992; Senge, 1990; Shrivastava & Mitroff, 1983; and Weick, 1991). Instead, disagreement stems more from questions of a far more basic nature, for they touch on the very existence of these learning levels. Some researchers have suggested that a direct analogy be drawn between institutions and individual learning and hence that a learning organization be thought of as a learning person. Others express reservations about this view (Pawlowsky, 1994, p. 264) and even refute it outright (Dierkes, 1994). Still others point out that collective learning is all but absent in the top management of organizations and similar areas relevant to decision-making (Katzenbach & Smith, 1994), whereas some not only emphasize the existence and key role of collective learning at precisely that level (Argyris, 1990; Shrivastava & Mitroff, 1983; Weick, 1991) but declare group learning the fundamental and only form of organizational learning (Senge, 1990).

3.2 STUDYING MANAGERS' IMPLICIT THEORIES: A METHODOLOGY TO RECONSTRUCT PROCESSES OF ORGANIZATIONAL LEARNING

¹In a way, crises in the sense of more or less serious changes in the environment figure as the conceptual center of many organizational learning theories. Cyert & March (1963) and Kappler (1972) are early examples of such treatment. See also Pawlowsky (1995, pp. 291-292) and Krebsbach-Gnath, 1996, pp. 27-28).

Given the conceptually and empirically contradictory stances in this field of research, it would be more than foolhardy to rely only on available work when trying to specify the factors that determine organizational learning in societies undergoing transformation. Original research on the behavior of companies in transformation processes is necessary. Such research, however, is confronted by a range of methodological and practical problems. Longitudinal studies relying on participative observation would be the ideal approach, but the need for prolonged research access to a corporate environment and adequate financial resources poses an almost insurmountable hurdle. In theory, content analysis of company archive material could provide a similar set of longitudinal data on actual learning processes, putting less demand on the target organization and requiring significantly less funding. As similar research has shown, though, most key factors of organizational learning processes have not been sufficiently documented, if at all (Dierkes, Haehner, Berthoin Antal, 1997, pp. 34-39). One productive contribution to solving this problem has come from a new and still largely unknown concept from political science, that of implicit theories (Hofmann, 1993, 1997a, 1997b). Though it was developed outside the discourse on organizational learning, it has afforded the discussion several promising theoretical, methodological, and empirical linkages. At its core is the idea of strictly "refraining from drawing an ontological boundary between naive and academic processes of theory-building" (Hofmann, 1993, p. 243; our translation). Dispensing with such a boundary has several elemental consequences, one of them being that academic knowledge has "no monopoly on interpreting reality and building theory" (p. 23). The different patterns of common-sense perception, interpretation, thinking, and decision-making held by managers represent their implicit theories, which can be understood as "theoretical frameworks" (pp. 240, 242).

Equating scientific and naive theories in this way may seem unusual at first, for scientific knowledge still has an aura of exclusiveness in the eyes of many people, often appearing to be more valuable and higher ranking than their own common-sense and practical knowledge. However, the traditional demarcations between naive and scientific knowledge have been called into question in numerous tracts, particularly in the last ten years (Bourdieu, 1988; Dierkes, 1997a; Engler, 1992; Heintz, 1993; Mehtens, 1990; Wagner, 1996). These works have shown that there is no reason to grant scientific knowledge special status. Patterns of human common-sense perception, interpretation, thinking, and decision-making have in fact been given the status of theory in a number of studies (Blume, 1973; Friese,

1996; Majone, 1980; Offe, 1984, pp. 321-323; Pressman & Wildavsky, 1973; Rein & Schon, 1991).

Drawing on this concept of implicit theories, our empirical investigations in the PRC rested on three assumptions about patterns of common-sense perception that members of an organization, especially managers, develop with regard to organizational learning in their companies.

1. The company's managers are always both practitioners and theoreticians of organizational learning. They use organizational learning theories that they have not imported and adopted from academia. Instead, these theories have been constructed by the managers largely on the basis of their own daily experience. The theories of organizational learning on which the managers rely in their day-to-day operations are essentially implicit. They are embedded in the specific contexts of action and transformation from which they were derived and for which they have been developed. Generally, neither their creators nor other groups and scientific observers explicitly perceive and treat them as theories.
2. Because each implicit theory of organizational learning is closely tied to its specific contexts of action and transformation, there is no such thing as the implicit theory of organizational learning but rather many different and sometimes opposed and mutually contradictory theoretical frameworks.
3. Identifying and reconstructing implicit theories of organizational learning is productive and helpful for building scientific theory because a comparison between implicit and scientific theories of organizational learning facilitates and compels a self-critical and self-reflective attitude toward academic research. This benefit is felt particularly when implicit theories of organizational learning call attention to factors and contexts that surface only at the margins of mainstream scientific thought, if at all.

Our empirical investigation in Chinese companies were conducted with these basic assumptions in mind. The study focused on two main points. First, the intention was to reconstruct the key learning processes that have taken place in the companies in recent years. These questions were designed to stimulate the interviewed managers in order to reconstruct their perceptions of what triggers learning processes; what the processes themselves involve; who their initiators, supporters, and opponents are; and what the mechanisms promoting or obstructing the learning processes seem to be. The second main objective of the studies was

to take general experiences that contributed to the implicit theories of the subjects and examine them with two questions in mind:

1. Are there identical or similar factors promoting or obstructing organizational learning in the individual organizations?
2. Are there patterns that explain the different learning processes?

3.3 THE EMPIRICAL STUDY OF IMPLICIT THEORIES: RESEARCH DESIGN AND DATA BASE

Based on two years of methodological and conceptual preparation, including intensive efforts to develop an interview guideline that probes into business behavior in different countries, the role of catalysts, and the validity of various devices to strengthen organizational sensitivity, extensive expert interviews were conducted in 1994 in 110 Chinese companies. The empirical data from interviews with senior management of these companies have enabled us to identify some of the important features that seem to have marked organizational learning and adaptation by Chinese firms since about 1985.

The major endeavor of this study was a series of in-depth, free-response, theoretically grounded interviews conducted under the condition of anonymity by trained interviewers. Each of the 110 firms selected for the study employed anywhere from around 1,000 to 20,000, with several enterprises employing more than 30,000. This size group was chosen because the organizational dimension of the learning process can be more clearly seen and differentiated from individual and group learning within organizations where a larger number of individuals and groups are involved. To reflect the overall economic profile of the PRC, the emphasis was on industrial activities.

Regarding the regional dimension the research covered companies operating in the northeast and northwest of China; South China, with Guanzhou as the center; provinces along the Yangtze River, including Sichuan; the province of Xian Xi; open areas around Shanghai; and the minority provinces of Xinjiang and Inner Mongolia. The ownership structure of the Chinese economy was also taken into account. Companies under study included the various different kinds of ownership. Table 1 shows the distribution of the companies studied by industrial sectors and Table 2 provides an overview of the ownership structure.

Table 1

Distribution of companies under study by Sector

Sector	Number of companies
Textiles and general light industry	40
Machine-building	30
Electrical and electronics industry	20
Chemicals	20

Table 2

Ownership Structure of the Companies Studied

Ownership	Number of companies
Public	93
Private	6
TVE (collective)	6
foreign funded	5

Once the companies had been identified and selected, they were approached and contacted either through personal channels, official connections, or to some degree through assistance from governmental agencies. For initial contact each firm received an official letter specifying the purpose and requirements of the research. The company was asked to provide information on who would be participating, what the preferred time for interviews was, and who the contact person in the company would be. The respective interviews took place on company premises throughout 1994. Four full-time Chinese researchers were involved in the whole process. In ten cases, the interviews were conducted by the team leader and three associates as a group; in other cases, with three or four interviewers. In a few cases, only two researchers conducted the interview. The project leader from Germany also participated in ten interviews. The latter ten interviews were conducted jointly in order to better understand the data as a basis for comparative analysis.

Senior management participated in in-depth interviews and discussions, often involving the president; vice-president; general manager; party secretary; and the chief economist, strategic planner, or other heads of important functional departments. All the interview partners were prepared to comprehensively describe a self-selected set of changes, adaptation, or learning experiences from the perspective of either a close observer or a key actor. Many of the interviews were carried out as group discussions with senior managers, who openly revealed and argued about differences in perceptions and experiences, thereby making parts of their implicit theories of organizational learning explicit. Each interview usually ranged between 2 and 4 hours and was sometimes supplemented by visits to nearby factories, an arrangement that allowed for more explanation and illustration of the points made earlier by the interviewees and thus enriched the data collected. All interviews were taped and transcribed for analysis.

The members of the Chinese research team analyzed and interpreted the data in groups of two or more. The data were usually first analyzed by one set of researchers in the team and then reviewed by another. English summaries of interviews were also sent to Germany for cross-checking. The main method of data analysis was the identification of similar patterns in the mostly qualitative data describing a wide range of learning experiences among the companies under study. A key aspect of the process was a constant check for potential biases in the recognition and interpretation of the patterns emerging from the data.

4. THE FUTURE BUSINESS ENVIRONMENT: PERCEPTIONS OF THE MANAGERS INTERVIEWED

Organizational learning begins with the capacity to perceive or, even better, to anticipate changes in the business environment. Of the enterprises we investigated, most managers felt that they had recognized the changes taking place in the business environment. Their perceptions led them to emphasize the following observations regarding the future challenges, opportunities and risks ahead for their companies

1. The biggest change is the shift from planned to market economy. Under the planned economy, the most important environmental factors for firms are the government plans, administrative directives, and direct intervention that pertained to them. For state-owned large and medium-sized firms, production is determined, raw materials is allocated, and prices and wages are set. The government issues orders but also offers protection and security, so the most favored firms are also the least likely to try innovative or risky changes. By contrast, in the market-oriented environment now coming into place, the conditions of

the market increasingly determine the quality, quantity, and kind of production; the allocation of raw materials; employee wages; and product prices. Without the protection formerly offered by government, firms must work to constantly meet market demand in a competitive and profitable way. Under these conditions firms have more to lose than they used to, for the survival of the firm is ultimately in question. But they also have more to gain because they are free to profit more from successful innovation.

2. The shift from a planned economy to a market economy coincides with what the interviewed managers generally agreed was a larger worldwide trend toward freer, more open, and more competitive markets. The general presumption among these managers was that the market in the PRC and abroad was likely to become more rather than less competitive in the future. According to the managers of some state-owned enterprises, domestic competition would come mainly from township enterprises, private enterprises, and foreign-funded enterprises that would show up on various markets. In industries with a particularly large market potential to be exploited, executives are especially aware that there are likely to be many entrants into the market and severe competition. Looking abroad, most managers also expected a situation in which more rather than fewer competitors would be fighting for market shares. The resumption of the PRC's status as a signatory state to the GATT (WTO) was generally seen to augur a lowering of Chinese trade barriers. The Chinese economy would then be open to foreign goods hitherto kept out by high tariffs and licensing requirements. Foreign takeovers of Chinese firms were also anticipated to become a part of business life in the future. The general expectation was that competition among Chinese firms and between Chinese and foreign firms was likely to intensify.
3. Executives' chances of success in the more competitive environment to come will ultimately depend on what actions the government took or did not take. Competitive success is closely linked to what government does to help and hinder business in areas such as finance, taxation, foreign trade, investment, and banking. Many firms have felt added pressures stemming from a lack of funds, raw materials, and energy resources and from problems related to debt and increased taxes. Without government measures to deal with these issues, competition against foreign entrants to the market will become more and more difficult.
4. The demands of the market are rapidly changing. With a more market-oriented economy producing more goods of greater quality, the demand for goods is changing accordingly. Firms are constantly having to adjust to the demand for both new and qualitatively superior kinds of goods. Among the managers we interviewed, particularly those of firms producing

consumer goods, the dynamic, quality of market demand was perceived to be a central feature of the changing business environment.

5. The composition of the labor force is changing. Under the planned economy enterprises were limited in their freedom to choose their employees, and individuals were limited in their freedom to apply for jobs of their choice. With the development of a labor market, it is recognized that failure to acquire technical and managerial skill could threaten the competitiveness of the firm. Moreover, the educational level is rising among the urban labor force (particularly younger employees), making it difficult for the managers of some labor-intensive firms (such as those involved in shipbuilding and textiles) to recruit enough unskilled workers. These firms being thus forced to bring in peasants from distant rural sectors as temporary workers. The new employees require training and such assistance as housing, child education, and child care.
6. Conflict between the interests of labor and capital is looming. A few executives we interviewed foresaw the likelihood that conflicts between workers and owners of capital will emerge in full as ownership mechanisms move toward modes of stock ownership familiar in the West and thus increase the proportion of ownership among a firm's executives and outside shareholders. This rise in tensions is already being felt in some Sino-foreign joint ventures and private firms. It marks a new challenge for Chinese firms of the future.

Whereas some of the executives we interviewed were pessimistic and stressed the burdens and negative aspects of the above changes in the business environment, most were optimistic in stressing the new opportunities that were emerging. According to their understanding, Chinese firms are beginning not just to perceive important changes in the environment but to adapt in ways that ensure their survival and enhance their development. One of our interviewees summarized this view quite well:

In the days when the firm depended on the state, it was safe, but difficult, to develop. Now we are under more pressure, but this may be the motivating force that pushes us forward (ALL TRANSLATIONS OF QUOTATIONS FROM THE INTERVIEWS ARE BY US).

As another manager stated it:

It is as if the state has constructed the stage for you to perform. It is up to you how well you perform on it. Now the key issue is how the firm makes use of its freedom to develop and implement its own strategies for market, product, and company development.

5. DIFFERENT FORMS OF LEARNING: MAPPING THE MANAGERS' IMPLICIT THEORIES

Most of the companies studied adapt and learn by following the general trend of the reform and the strategy of development in the PRC. It is this megatrend that has determined the behavioral pattern of all the companies studied. It was possible to identify two major macrofactors from the data that shape—according to the managers interviewed—the learning strategy and behavior of Chinese business.

First, the learning process of most businesses is initiated by the government and is often subject to the strategy of economic reform. In this process, the specifics of government–company relations determine the organizational learning behavior and patterns. Though the general trend has been toward the increased autonomy of the firm, companies vary in the degree of freedom and autonomy that they are granted, depending in part on their distinctive roles in the national economy. The degree of freedom and autonomy that firms are granted appears to be a decisive factor in determining the extent to which firms, based on their managers' experience, are willing and able to learn and change. The degree of autonomy possessed by different firms, however, is the consequence not just of government decisions but also to an important extent of the willingness of firms themselves to push for and establish greater autonomy. Some firms are inclined mainly to follow governmental guidance, whereas other firms act more proactively to create their own possibilities and ultimately force governmental authorities to facilitate and even grant the autonomy needed for innovation. As one central governmental official involved in economic reform put it, "Experience has shown that the bold firm gets more right, the timid firm gets less right, and the one awaiting in expectation gets nothing." Therefore, a firm's autonomy is a function of both governmental authority and the entrepreneurial will of the firm itself. How and to what extent the firm engages in a process of organizational learning depends in large measure on the particular relation it has established with the government. Organizational learning in the PRC is taking place within the framework of specific government–company links, links that vary in scope and nature across the Chinese economy.

Second, in undertaking economic reform, the government's basic strategy has been to experiment with tentative measures first and only then publicize and incrementally popularize them. Thus firms vary in terms of how long they have had enjoyed their autonomy, with obvious implications for the extent to which they have engaged according to their managers in processes of organizational learning. There are thus significant differences within regions and

industries as well as across regions and industries. Moreover, firms that were chosen as “pilot projects” by the government do not necessarily have more autonomy. Often, the status as a pilot project may mean more rather than less governmental monitoring and control. It may inhibit and retard rather than foster the capacity to learn and adapt to the new external conditions. By the same token, firms that followed in the wake of these pilot projects and were therefore not so heavily subjected to government monitoring and control have often achieved more in terms of innovating and creatively responding to market forces. On the other hand, because firms that come a little later to a more autonomous mode of operation are more numerous, they lack creative individuality and are more inclined to follow the examples of other firms in similar situations. This response could have an inhibiting effect on innovation and learning. Generally speaking, the growing marketization of the Chinese economy has resulted in increasing incentives for creativity and learning behavior, so more and more firms are finding distinctive paths to innovation.

As revealed by the data from these interviews of Chinese managers, the above coordinate of government–company relationship (i.e., control–autonomy) and the responses of the firms to their changing business environment permits a division of the managers’ implicit theories of organizational learning roughly into two patterns, guided learning and self-generative learning.

5.1 GUIDED LEARNING

Firms belonging to the guided-learning pattern were primarily large and medium-sized state-owned enterprises, which constituted about 40% of the 110 companies studied. Their indispensable part in the economic restructuring of the PRC made them especially influenced by the traditional planned economy system, which is susceptible to strict government control (Nolan, 1996). As a result, their internal learning mechanisms were generally somewhat stagnant or rudimentary. Their transition into a market economy was basically consistent with the ebb and flow of the state’s macroadjustment. As one senior manager said,

Our factory has a fairly big peculiarity. We are strictly governed by the same policies and directives. When the Central Government withdraws the policies we stop the existing practices right away and when it releases them we resume the accepted practices as provided by the policies at once.

This statement is representative for many large state-owned enterprises studied in this project. Together with many other statements made by our interview partners, it reveals that these firms have been able to perceive and seize new opportunities offered by reform in the past ten years and to take periodic steps to alter their own direction while still restricted by the government's policies of economic evolution and subjected to the gradual probing of further economic reform. Within this framework the autonomy granted by authorities was therefore limited, and the firms did not strive to expand their rights.

Some of the guided-learning firms had three particular features of interest in this context.

1. They were able to perceive environmental changes in time but stressed the negative side of these changes. "Seeing" more difficulties than challenges, they passively responded to the environment. A small number of them have even failed to become receptive to the changes in their environments.
2. The learning behavior of these firms was typically one of "waiting, relying on, and depending." They waited for the government to indicate definite directions, reform programs, and steps. Fearing disorder and instability, these companies passively followed others. They showed immense inertia, and actual learning as perceived by their managers was generally incremental.
3. In general, these firms lacked risk-taking spirit, and their sense of innovation was comparatively weak. In the learning process, they firms focused on trying to figure out how to solve current problems instead of on identifying and defining long-term prospects.

Of course, some of these guided-learning firms did give free rein to initiative and did see opportunities in the changes taking place in the business environment. For instance, a certain factory realized that external changes can be either advantageous or disadvantageous. By making full and sound use of the advantageous changes, transforming disadvantageous ones into opportunities and, coming to terms with the changed environment, the enterprise has managed to survive and grow. The executives we interviewed expected the firm to be able to brave the uncertain changes and take an active, vigorous lead in the industry as the shift to market economy progresses.

5.2 SELF-GENERATIVE LEARNING

Most of the firms characteristic of the self-generative learning pattern were state-owned enterprises of noncrucial industries or nonstate-owned firms (collectively owned urban firms,

private firms, and a small number of township enterprises), which together constituted another 40% of the 110 companies we studied. The former are loosely controlled by the government mainly because they are not seen as essential industries in the national economy. These firms are big tax payers and generally closely linked to the market. For these firms, the learning processes started with strong internal motivation in addition to governmental guidance and encouragement. As explained explicitly by one of the company leaders,

Facing the market competition and an uncontrollable external environment, what do we need to do to survive and grow? The immortals and emperors can not save us and we can only rely on ourselves and fix our eyes on our internal elements. That is, we can only create proper conditions within the firm and make use of its capacity and advantages to develop. Concretely speaking, it means analyzing two types of situations, one being the state's principle and policies, the other being the study of the competing partners and situation of the market. We must correctly analyze the situation, identify the main contradiction, and formulate correct principle and policy. It is a practice of seeking opportunities, paths, and corresponding tactics from the internal and external surroundings.

As increasingly autonomous entities, the self-generative learning firms displayed three behavioral patterns:

1. They were able to "see" in the environmental changes not only risks but also opportunities and were able to turn pressure into motivational power and challenge into chances. This attitude was proactive and optimistic. The managers of self-generative learning firms were generally highly optimistic and hopeful about the changes in the business environment.
2. Some of these self-generative learning enterprises immediately started a learning process when perceiving a new opportunity. Losing no time and taking advantage of all opportunities offered by in the process of economic transformation, they made full use of the reform by actively trying to abolish a great deal of governmental control and shedding the traditional system, thereby starting the process of innovation.
3. The majority of self-generative learning firms had already built up a fairly solid market position mainly by adjusting their range of products. However, in a changing environment, they also know that they need to foresee trends and the direction of change. They also see the need to develop detailed medium- and long-term strategies.

6. DIFFERENCES AND SIMILARITIES BETWEEN THE DIFFERENT FORMS OF ORGANIZATIONAL LEARNING

These two forms of learning display the organizational learning strategies of the majority of Chinese companies studied as revealed in the experiences of their senior managers. An important question in this context is why some firms follow the path of guided learning whereas others are self-generative learners even though they are all experiencing the same business environment. This question points to a more deeply rooted issue. Besides government control, the most basic reason for this difference in organizational learning patterns is the firms' inherent traits and qualities, which are manifested in their organizational cultures, organizational structures, basic philosophies of human resources, and modes of information and communication. Our empirical study has provided ample evidence with which to show the differences between patterns of organizational learning and to illustrate the relation of those differences to these company-specific characteristics (see Tables 3 and 4).

Table 3

Characteristics of Guided Learning Firms

<p>Culture</p>	<p>Leader's value orientation: external responsibilities (government, party) Core values (loyalty, unity, striving, general risk aversion, short-term thinking)</p>
<p>Basic philosophy of human resources</p>	<p>Paternalistic Authoritarian Relatively oblivious of employee cohesiveness and potential capability of staff Utilitarian (employee = resource)</p>
<p>Principles of organizational structure</p>	<p>Attention and decision-making centralized at the top, with strong orientation to senior leaders and government Elaborate bureaucratic system of distinct hierarchical levels Gatekeepers between the decision-making level and the operational level</p>
<p>Information and communication</p>	<p>Top management interest: detailed and specific market- and product-information, not overall strategic information Extensive written communication Little or no informal communication with employees Meetings not for hearing opinions but for passing on information</p>

Table 4

Characteristics of Self-Generative Learning Firms

<p>Culture</p>	<p>Forward-looking spirit Flexibility, innovativeness, entrepreneurship, competition, ambition Pragmatism Focus on concrete and practical work rather than on the formalism of a planned economy</p>
<p>Basic philosophy of human resources</p>	<p>Partnership rather than a feeling of “them” and “us” Willingness of top management to relinquish control, greater faith in employees potential Increased investment in self-enrichment Sentimentality and familial relationship</p>
<p>Principles of organizational structure</p>	<p>Weakening hierarchical structure Fewer levels; Delegation of authority and responsibility</p>
<p>Information and communication</p>	<p>Interest in relatively information Development of ideas within the organization (discussions with employees as source of information, informal means and channels of communication)</p>

6.1 ORGANIZATIONAL CULTURE

The senior managers we interviewed often used terms like *value*, *tradition*, and *company spirit* when talking about organizational culture. As expressions of company value and spirit, the words most frequently used by managers in firms with guided-learning behavior were *loyalty*, *unity*, *striving*, *risk aversion* and *short-term thinking*. Many of the managers were full of pride and passion when referring to these features, which continue to be their basis for learning. Such values play an important role in their guided-learning pattern. As one manager stated,

Our firms in the construction corps have a specific background, and our workers are used to hardship. Their material desires are modest, and they strive to give their best under arduous conditions. At present, firms with difficulties like ours especially need a spirit of hard struggle and progressive exploration.

By contrast, managers of self-generative learning firms use such expressions as *seeking innovation*, *flexibility*, and *progress*. These concepts clearly reflect attitudes consistent with their generative nature and learning pattern. For example, people in many such firms take “dealing with concrete and practical work” as an important value, stating that “talking ruins the state while doing strengthens the nation.” A number of other firms confirmed a positive relation between flexibility and learning ability: “Flexibility and learning ability are mutually related. For today’s firms, ability does not mean going by the book but rather adapting to conditions as they are.”

6.2 BASIC HUMAN RESOURCE PHILOSOPHY

In the planned economy that existed for decades, an individual’s role always depended on ideological mobilization and orientation. Today, in light of reform and the opening of the market, the issue of the individual’s role in businesses has acquired new dimensions. Firms adopting different learning patterns differ from one another in their practices and directions.

In guided-learning firms, values are often a direct reflection of the values of top-level managers. They care more about the final result of their firm’s activities than about the decision-making process and operational processes, and they care more about the completion tasks and the staff’s tangible production than about the employees as people. The staff’s

welfare and needs are noted in general but often lack long-term arrangements and strategic consideration. Human-centered motivation is rarely recognized, and potential capability is often neglected. During the interviews for our study, these managers focused more on how to bring the staff's enthusiasm to bear on finishing the tasks. Distinguishing between the leaders and the led, they described their relation to the employees as paternalistic.

The managers of self-generative learning firms set their value orientation on the employees' responsibility to the firm and its shareholders. With long-term growth and remarkable progress in mind, they stressed deep-level mobilization and potential capability and sought to establish a partnership or familial relation. They are better able to perceive the value of their employees for the development of the company than traditional state-controlled businesses are:

I think that going along with popular sentiment is the key to enterprise success. If 40% of your staff members take the firm as their family, it will develop well.

I consider the human-centered idea especially important to organizational learning. We have studied this subject. If you do it well, you will have a very nice effect. To unite as one is to increase economic benefit and profit on a large scale.

Despite these general differences between the two types of learning firms, there are a number of common practices designed to cultivate and encourage the staff's participation, sense of belonging, and honor in both types of firm. Various means are employed to praise and award exceptional behavior or work. Some firms recognize the top ten good deeds every month by conferring a letter of commendation written on company letterhead to the responsible individuals and by sending congratulatory telegrams to the families. Some firms praise the top ten employees on the local news. Some hold discussions on such topics as "What shall I do when the firm is in difficulty?" and encouraging the staff to take part in transformation. Many firms provide employees with housing as a way of increasing their sense of belonging. The managers of one of the companies in the study are highly committed to developing an interpersonal relation with their employees, sending personally signed New Year's cards to the staff. A monthly party is held to celebrate the birthdays of the employees born in that month. Such activities serve to strengthen the feeling of community in the firm. To enable staff members to enrich their lives, achieve a measure of self-realization, and

thereby enhance the overall learning ability of the organization, some firms hold cultural activities at which the employees can show their talent and ability.

6.3 ORGANIZATIONAL STRUCTURE

Most of the guided-learning firms are bureaucratic systems with a hierarchical structure. Besides top level management with departments operating beneath, there is usually a large staff system composed of many service sections. They often function as a buffer between the decision-making level and the operating level. Over time, the hierarchy of these companies swelled upon creation of many new positions devoted to carrying out activities related to the reform of the past decade, but organizational reform has meanwhile eliminated some of these functions. Even so, the hierarchical structure of guided-learning companies company is still strong. Additionally, guided-learning firms always have a complete system of nonproduction-related organizational units (e.g., party, administration, trade union, youth league, and a woman's federation), whose leaders have the same status as managing personnel. These persons are nominated by upper-level management and are required to express their ideas in the decision-making process, an arrangement that increases the centralized nature of decision-making in the firms. Because their basic viewpoint of value and orientation reflects their responsibility to the upper levels, there is an inherent structural distance between the majority of employees and the complicated and protracted process of decision-making.

According to information from the interviews, the guided-learning firms have the following features:

1. In most cases, decisions are made with the participation of party and administrative leaders. In some cases, heads of service sections are included. Although there is a chief executive, there must be consensus at the top level. It depends on the character, capability, and reputation of the executive in charge of the deal who determines everything in the deal and other times turns to others for opinions.
2. In general, the main ideas and plans for decision-making are put forward and determined by the president or general manager. However, staff members also help a great deal. The top management initiates the planning process and brings the concrete plan into collective discussion. After deliberation, the plan is refined and perfected by the staff. The staff can thereby play an important consultative role in some cases.

3. The decision-making system has strong hierarchical features. In some firms, there are several categories and levels in the top stratum, all having various assignments. After a decision is made on the top level, meetings are usually held at different levels to mobilize the staff members (who are sometimes asked their opinions).
4. Generally, employees do not take part in strategic decision-making. Some firms even discourage their participation. Of course, some top managers are very open, listening to opinions through direct or indirect internal channels of information, but ultimately they want quite unified strategic orientation to facilitate implementation.

Compared with the guided-learning firms, self-generative learning firms are weaker in hierarchical structure. A few medium-sized firms that have around five hundred employees have almost no hierarchical structure at all. Even state-owned enterprises have fewer bureaucratic levels, and the relation between the managerial and operational levels is quite direct. The management and implementation structure of the nonstate-owned firms is even simpler and more direct. Although some of the firms still have many internal bureaucratic structures, the relation between all levels is more open and fluid and the interaction among units is more dispersed than in guided-learning firms. The distance between the top and the bottom is shorter, the decision-making procedure simpler, and an individual's innovative ideas more apparent to top-level management and influential on the perception of the decision-makers. This feature ultimately gives the firm vitality and creativeness.

Important decision-making processes in self-generative learning firms can be characterized as follows:

1. Top managers usually discover the necessity to make decisions and determine the type of process. Other members of the senior management group also voice opinions, but in most firms they generally only help perfect the plan. Collective decision-making is often the procedure involved, and it usually helps improve the result while building consensus.
2. Internal staff organs and other relevant personnel take part in the decision-making process, but their role in many cases is only to collect information, investigate issues, and perfect plans. In many firms, this process requires listening to the majority of employees in order to collect ideas and, more important, to lay the groundwork for future implementation.
3. In most firms, in the process of decision-making, the information and views held by top management largely come from contact with staff members at various levels. Some firms adopt the method of "all-member decision-making." That is, employees participate in preparing plans to be selected by the managers.

4. Consensus is not required for the decision-making process and actions. Without consensus, the chief executive often decides and then tries to reach agreement with others who implement the decisions. This discretion requires the executive to have sound judgment and the courage to take risks. The interviewed managers cited many examples proving that decisions made in this way succeeded and earned broad support.
5. In general, the senior managers of generative learning firms remain in close contact with employees by directly communicating with them and integrating their ideas and concepts. For example, the general manager informs the staff of important issues involving the interests of the firm. In this way, the needs of the company are directly, quickly, and fully communicated to every member of the organization, a practice that helps gain their understanding and support.

6.4 INFORMATION AND COMMUNICATION

Though there were numerous similarities between styles of information management among firms that engage in guided learning and those that engage in self-generative learning, there were also important differences. First, there are differences in the kind of information considered necessary. Managers of guided-learning firms put a premium on information about products and markets. Though they were not necessarily uninterested in information about government policy and the macroeconomic picture, their greater dependence on government initiative and guidance had the paradoxical effect of freeing them to think more fully about products and markets. Because much of their decision-making is done for them by the government, managers of these firms exercised much of their autonomy and occupied much of their time on the markets that were being targeted and on the products that they had to develop and sell.

By contrast, managers of self-generative learning firms seemed more interested in information of a broader kind and encompassing not just immediate matters of product and market but larger kinds of macroeconomic information. These firms were trying to be as broadly strategic as possible in their decision-making processes—a greater necessity for self-generative learning firms that did not have the luxury (or burden) of close government oversight and that had to survive on the market by relying predominantly on their own knowledge and resources.

Second, differences appeared in the kinds of information sources relied on by these two types of firms. Guided-learning firms primarily tapped sources outside the firm for economic information generally and for product and market information specifically. These sources were primarily the appropriate leaders in the government administration, professional associations and media, and information from the companies' customers themselves. Inside these firms, staff was assigned the responsibility of sorting, studying, and disseminating this external information. As decision-making was largely confined to specific questions of product and market, and because the stress on innovation was not so great, the tendency was not to put a premium on thinking actively and generating fresh ideas within the organization.

Self-generative learning firms, on the other hand, also relied on external sources of information but put a premium on the development of ideas within the organization. The opinions of subordinates were more likely to be actively solicited and considered. As one executive put it, "*The best source of information is our discussions with subordinates.*" Of course, this approach requires an organizational structure and culture that gives free reign to the enthusiasm and creativity of staff members.

Finally, methods and channels of information tended to differ according to whether the firm was engaged in guided learning or in self-generative learning. Guided learning tended to rely more heavily on written forms of information and a relatively formalized pattern of organizational meetings. Self-generative learning firms tended to use comparatively informal means and channels of communication, paying less attention to corporate hierarchy and the necessity of following the chain of command. In this regard, guided-learning firms tended to have more people performing the role of gatekeeper, that is, someone who conveys, filters, and controls the flow of information to superiors. These are generalities, of course, and in our research we found that most firms adopted hybrid mechanisms for channeling and disseminating information.

7. FACTORS PROMOTING AND HINDERING ORGANIZATIONAL LEARNING

7.1 STIMULI FOR ORGANIZATIONAL LEARNING

Organizational learning is a complex and continuous process, which can be triggered by both internal and external stimuli and started and maintained by some driving forces and factors. Drawing on our interviews, we have identified some important stimulating factors for

organizational learning and have found that the two types of learning behavior can also be differentiated by these forces and factors.

External and Internal Driving Forces

The interviews indicate that one can distinguish between two kinds of forces driving organizational learning: those that are external and those that are internal to the firm concerned. External factors include central and local governmental orders, guidance, and influence; the pressures of the market; governmental actions in reforming the economy; and the advice and recommendations of outside research analysts and consultants. Internal kinds of driving forces pertain mainly to internal staff, particularly those concerned with matters of strategic planning and development.

According to our interview partners, guided-learning firms often start their learning process under the "external" initiative of government agencies, outside consulting and research organizations, and other institutions that perceive the change of business environment or purposely initiate learning and transforming processes in of the firms. The following two statements made by our interview partners suffice to show the importance of external force:

The state's movement toward reform and opening up has effectively influenced organizational learning. We will succeed if our actions are consistent with the thrust and spirit of the actions of the central authority. Otherwise, we will probably fail.

The driving force of the learning process comes from the reforms of both mechanism and system, and many aspects of these reforms are determined by the upper-level governmental organs.

Besides changes in the national political climate, change in the market, and the effects of specific policies, the list of external driving forces cited by some of the executives we interviewed included the pressure created by the introduction of foreign technology and know-how into the PRC. They often stressed that they have been driven to change by the input of advisors, researchers, and experts outside the firm itself. Some firms have invited government research institutes as well as independent researchers and consulting organizations to offer their ideas, suggest innovations, and give strategic advice. With the objective of eliciting new ideas, proposals, and plans, other firms have established partnerships with universities and scientific research institutes. Still other firms engage government officials and scientific researchers as in-house advisors to the firm.

Because guided-learning firms were mostly state-owned enterprises with fairly complex organizational structures and substantial human resources, they were able without great difficulty over the past dozen years of reform to adjust internal decision-making and form new auxiliary organs to assist in gathering and processing information. Thus one of the driving forces for change became ideas generated and information disseminated by staff members within the organization itself. We call these organs the internal "bodies of knowledge." For some of these firms, the development of new ideas, proposals, and plans inside the organization proved to be the key driving force for change.

Thus, it might be said that guided-learning firms tended on the whole to rely not just on the perceptive capacities of the chief executive to detect and anticipate environmental changes, but on an "organ of perception" within or connected to the firm. The idea was for this group or set of groups to sense out changes in the environment and convey this information to the top or senior management. Staff associated with these tasks were often involved in the development of learning strategies and plans, and structures were often put in place for repeated interaction between this staff and leading executives of the firm. Completed strategic plans were thereafter usually implemented throughout the organization. From the initial perception of environmental change, the solving of problems, and the shaping of learning strategies to final implementation, the "guided" character of these firms was evident, so that actions tended to be fairly unified without a great deal of internal conflict or contradiction and tended to move from top to bottom rather than the reverse. The result was comparatively steady, gradual learning behavior that perhaps lacked a great deal of innovation.

By sharp contrast, the chief executive played an especially important role in self-generative learning firms and was usually the first to perceive environmental change and the first to put a premium on changing habits and developing strategies of adaptation. Though some of these firms also had staff members concerned with collecting and analyzing information and developing an internal base of knowledge, they seldom played a chief executive's prominent role as an organ of perception and tended to perform in an auxiliary and advisory function. Talking with senior executives of these firms or their assistants, we often heard statements such as "The driving force is basically with the firm's leadership, headed by the general manager" and "I'm the one who first recognizes environmental changes, tries to develop an outlook of learning, and then promotes and implements that kind of outlook throughout the factory."

It appeared to us that the education, capability, and personality of the chief executive was an important determinant of the willingness of self-generative learning firms to embark on

the road to learning and of the manner in which they did so. The enterprising and exploratory spirit of the chief executive was central in this regard. Another characteristic of chief executives who tended to be successful in advancing the fortunes of their self-generative learning companies was a predisposition to look into the future.

Because the leaders of self-generative learning firms generally have the outlooks and personality characteristics described above, and because the culture and communication structures of these firms have unique characteristics (see the previous section), these leaders are crucial not just for the perception of environmental change but for processes of decision-making and implementation that follow. Although there is often collective leadership, the will and determination of the chief executive is commonly a powerful driving force. Employees and staff members are forced to adjust to this situation, and they themselves gradually change from being passive actors to being active and cooperative agents in the learning process. As they begin to take more initiative, the firm becomes a more lively and vigorous place, but it is also more prone to the conflicts and pains that come with collective learning.

Catalysts for Organizational Learning

According to the interviewees' statements the learning process may result from planned actions, spontaneous behavior, and sometimes even unconscious moves. In many cases, the most clearly visible actions that facilitate learning are produced only by the existence of certain factors and conditions. They include crisis, replacement of leadership, accidental factors, and mistakes.

The existence of a crisis and the sense and perception of such a crisis are the most essential catalysts for organizational learning, as stated by our interview partners. By crisis we mean a failure or serious difficulty or dilemma confronting firms that do not respond with sufficient speed and effectiveness to changes in the environment. Such a suboptimal response may result from a failure to perceive the environment appropriately or a failure to implement changes successfully in light of new perceptions of the environment. There are myriad factors that can contribute to such failures, factors that may be internal, external, or both, but they all impede the emergence and pursuit of organizational learning. In the face of the resulting crisis, some firms will gain new clarity and begin making the kinds of changes necessary for the transformation and rebirth of the enterprise. For these firms, crisis serves as a kind of catalyst for learning.

There was no lack of such cases among the Chinese firms we investigated. For example, a certain wireless factory was long a major beneficiary of the planned economy system. Its products were regularly among the most famous Chinese brands. But with the changing business environment and the emergence of new technology, the firm plunged into a severe crisis. It had failed to seize chances to improve products and innovate technology. With no money to pay the workers and to pay back debts, the firm was taken to court by the creditors. The public was shocked.

In the new environment, we went from being a famous and excellent firm to a burden on the state. The moment we were on the verge of extreme poverty no help came to us, so we felt a very strong sense of crisis. . . . At the most pivotal and difficult moment, we held a company-wide meeting to clarify the situation to the whole firm. There was an uncommon solemnity and tension in the atmosphere. Everyone was facing something entirely new. In the face of this new situation, we could only fight to win or die.

Out of this predicament came some ideas and plans that had been discussed for two years but never implemented.

A "sense" or "perception" of crisis can be thought of as a kind of psychological defense that helps point the way out of crisis. It is thus a kind of foresight, an element of a forward-looking mentality. A majority of the executives we interviewed listed this sense of crisis as the most important factor driving them toward learning behavior.

Notably, most of the managers we interviewed had a strong sense of crisis not simply because there has been a continuing crisis. Rather, they appeared to have adopted this sense of crisis as a healthy psychology as encouragement to seek and overcome challenges. The most successful companies according to the managers interviewed were trying to preserve something like this sense of crisis despite past and present business success. To prevent today's successful strategies from becoming tomorrow's liabilities, they were striving to maintain the enterprising spirit, dedication, and sense of mission that brought them success in the first place. In addition, a few business of the corporate leaders emphasized that the sense of loyalty to the organization and the resulting compounded sense of pressure for success were important catalysts for organizational learning.

At least half of the companies we interviewed pointed to a quite important phenomenon: Having replaced old leadership, firms shed previous patterns of thought and behavior and

embarked on a process of perceiving change and learning to change. The following examples illustrate the point:

Our factory had a bright history. But bearing the burden of the state's mandatory product plans for a long time, it lost opportunities for technical transformation and other advantages. . . . The old leaders failed to recognize environmental changes in time. Even if they had done so, they did not have the courage to grasp opportunities. . . . The new director came and anticipated the need to adapt to the business environment as well as grasped opportunities in time."

In some firms the replacement of leaders worked as a catalyst precisely because the new generation of leaders brought with them a new outlook and new ways of thinking:

Having worked in an office for several years, I have a deeper understanding of macro issues. I was transferred to the factory in 1991. Above all, I saw the changes from the angle of an outsider without being influenced by micro issues. So I was quite free to work and the internal mechanism shifted quickly. A year later, the factory took on a new look.

Accidental incidents can also initiate new learning processes and may be significant in unexpected and indirect ways:

In November 1978, when China's economic reform had just started, the prospects for pottery and porcelain products in Stone Bay were not clear. From an import and export company, we received a few Italian color-glazed bricks that can be used in the decoration of walls and floors. We successfully experimented on our equipment. The products sold well on the market and were able to satisfy the heavy demand. We therefore decided to orient our firm toward the production of building pottery and porcelain.

7.2 IMPEDIMENTS TO ORGANIZATIONAL LEARNING

Perceiving and responding to environmental changes paves the way for the survival and development of all individuals and organizations. However, because of the complexity of the environment and the specific conditions of individuals and organizations, both the act of perception and the translation of perception into meaningful action is fraught with difficulties and potential obstacles. In particular, it is common to find that even if some individuals or groups within the firm have already sensed environmental changes and produced innovative

ideas, they nonetheless have difficulties establishing a common organizational understanding and find it hard to forge the will for collective action. One might say that the learning process has been blocked. The factors that block the learning process may be internal. They also may be external. Our interviewees rarely mentioned internal factors that block organizational learning. Presumably external factors were believed to be playing a more important role. These external blocking factors included the sociopolitical climate, institutional impediments, administrative intervention, and regional differences.

The Sociopolitical Climate

Many senior managers stressed that they and their firms had detected upcoming changes and potential threats in the environment but that the general sociopolitical climate nevertheless kept them from responding appropriately:

In the firm there were some people who perceived change and put forward measures and policies on basic things, such as improving product quality. There was also a series of attempts to research and develop new products. But it was not responded to within the firm, mainly because there appeared no understanding and action on the part of investors. So it stayed as a concept rather than resulting in behavior supported by funds. Moreover, management was backward and passive, as were the frameworks and conceptions of personnel.

Since the late 1980s and early 1990s, we have been aware of changes in the business environment and have sensed the crisis, but our firm was unable to control the situation. In 1989 the market was short of raw materials, and we could not get materials although we had the money. After 1990, there was a sufficient supply of materials on the market, but the firm had no money to buy. In 1986 we cooperated with a certain province only to find that they were taking our market and that we could not do anything about it. . . . The dominant force was in the country's macroeconomic situation, and our factory rose and fell with the changing conditions of the country.

Institutional Impediments

Many institutional features and flaws of the old system have not yet been abolished. Though these remnants may well diminish as economic reform continues, they do pose

obstacles to organizational learning. Some executives we interviewed were well aware of the hurdles they faced.

Our overall business environment is OK, but unhealthy and unpredictable domestic policies, laws, and legal regulations have caused firms lots of misgivings. For example, some influential economic factors such as exchange rates and bank loan interest rates gave us pause and made us worried about violent fluctuations in the fortunes of the firm.

With the gradual erection of a market economy, there is an unprecedented situation involving the dynamics of major reform, wide readjustments of interest, and other new troubles. Some major reforms in the systems of taxation, banking, foreign trade, and investment exacerbated the shortage of funds. The shift from the old system to the new makes the contradictions between the two stand out all the more. Market competition has not been introduced, and relevant laws and legal regulations need to be formulated and perfected."

Administrative Intervention and Constraints

Administrative intervention and constraints have served as obstacles to the autonomy of Chinese enterprises. With the gradual establishment of a market economy, this problem will begin to diminish, though it can ultimately be solved only through a long historical process during which new forms of state intervention will undoubtedly appear. Business leaders listed state intervention as an important obstacle to organizational learning.

As a state-owned firm, we are constantly interfered with by government actions. This is reflected in two respects, one of which is price. The state is loosening price-controls, but not on our products. Today, our detergent powder is priced as it was in July 1990 even though in the years since the prices of raw materials have doubled. The authority neither cares for our purchase price nor gives us subsidies. So our production and operation have been in trouble. The other respect is that the autonomy given to us is not adequate. For example, when the market is running short of supplies, local government does not allow us to sell beyond the provincial boundaries.

Influence of Policies

As recognized by the executives we interviewed, particularly those from self-generative learning firms, policies are another factor that thwarts learning among Chinese firms.

I personally think that China's business environment differs from the international one in that China's is made up of both natural and artificial factors. Natural factors are those that are changing in a market economy. Foreign firms only need study these factors before taking steps, whereas we face lots of artificial factors, including unstable policies and complicated social and interpersonal relationships.

China's business environment is rather complicated mainly because of handicaps that artificial factors impose upon firms. One thing is the difficulty of getting money back on bad debts, a problem that actually reflects artificial factors. Another obstacle is unfair competition. . . . The third is fake brands.

Factors of Regional Differences

Vast in territory and unbalanced in economic development, the PRC has quite big and sometimes fundamental regional differences in dimensions such as policy, economic capacity, technical capability, and talent. These differences sometimes impede enterprises from turning an individual's innovative ideas into organizational learning behavior.

The central government's policy toward Xinjiang put stability as the first priority. Favoring stability hindered Xinjiang's growth rate and conceptual innovation and kept good firms from rising farther. Sharp disparity among firms was not permitted, for unequal distribution was thought to be bad for stability. Besides, Xinjiang is far from the coastal areas and isolated in terms of communication and information, [a situation that] also has an impact on the learning ability of the enterprise.

8. CONCLUSIONS

Several conclusions can be drawn from the analysis of the empirical data on managers' implicit theories of organizational learning collected in the 110 Chinese companies.

1. Government has been crucial in catalyzing, encouraging, pressuring, and guiding Chinese enterprises to engage in processes of learning. The centrality of the government-firm relationship is perhaps what is most distinct about organizational learning among contemporary Chinese business enterprises. On the positive side, government has actively

promoted, encouraged, and guided certain firms to set out on innovative and creative paths of their own choosing. But government can also be restrictive when its attempt to control and guide prevents firms from engaging in learning behavior and innovative adaptation. As noted above, many Chinese executives find that governmental intervention and administrative interference are more obstructive than constructive when it comes to processes of learning and adaptation. These tensions are surely due in part to the Chinese government's interest in ensuring that social change takes place within a framework of stability and order. Excessive government interference, however, will only stifle the creativity of enterprises and, ultimately, of economic development. The problem therefore remains one of discerning how much government control and guidance is appropriate, in a well-functioning socialistic market economy.

2. Confronted by a business environment that is rapidly becoming more and more competitive, the interviewed managers of Chinese firms are preoccupied mostly with the practical and objective concerns basic to the survival and development of their firms. They did not appear to be greatly worried about factors such as organizational culture (the spirit, values, conceptions, and behavioral patterns within the organization itself) which are seen by managers in other cultures as being central to organizational learning (Dierkes, Hähner, Berthoin Antal, 1997). Though some successful firms have long cultivated a particular culture and sense of tradition, they have not usually spelled out what these values and norms are. Nor have they gone on to develop and specify new values and norms that would enable the organization to manage change more flexibly and effectively than it does now. It therefore seems that the task of fostering and developing a learning culture is a pressing matter for many Chinese firms.
3. The learning process can essentially be thought of as a process of collecting, processing, and communicating knowledge as a basis for strategic decisions. The method and pattern of knowledge management within the firm helps determine its learning ability and style. Viewed from this perspective, the sources that provide information about both the firm's external environment and internal operations are precious assets inspiring and fostering innovative thinking. Although the company executives we interviewed showed a certain awareness of this perspective, on the whole they did not satisfactorily appreciate how important information management is to the learning process of a firm.

Firms that exhibited patterns of guided learning did differ in terms of information management from firms that exhibited patterns of self-generative learning, but managers in both kinds of

firms tended to devote inadequate attention to issues of knowledge management and were not fully aware of the intimate connection that these issues have to processes of learning and strategic adaptation. This area should be targeted by Chinese firms interested in increasing their competitiveness.

4. There are two main factors driving the learning of firms: (a) changes in the external landscape in the direction of market competition, and (b) perceptual changes on the part of firms and the learning behavior this generates. The first factor serves as the general backdrop; the second helps determine more specifically which firms are committed to learning and changing and how they actually do learn and change. For both, the views and values of senior management are central to the company's learning and ultimate success. Thus, in many companies, changes in leadership have helped generate a new cycle of learning. What is more enlightening is that in some innovative firms the key leaders are not appointed by the upper administrative bodies according to rigid appointment procedure, but elected by the employees out of the process of learning to change. It therefore can be tentatively deduced that the willingness and capacity of an organization to change is closely connected to the practice of enlisting and selecting the CEO. One of the most critical tasks in store for Chinese firms is to reform the policies and mechanisms providing for the education and recruitment of leaders and to create a social and cultural environment conducive to their development.

5. Differences in the structural character of government-firm relations and in firms' responses to these structures appear to have produced two general patterns of learning: guided learning and self-generative learning. Examples of the former included most of the key large and medium-sized state-owned enterprises which were influenced strongly by the strict government controls and rigid internal mechanisms characteristic of economic life in the old planned economy. During the past ten years or so of reform, these firms were able to make subtle adaptations in pace with the gradual process of economic reform in the PRC. Examples of self-generative learning, on the other hand, included the majority of nonkey large and medium-sized state-owned industrial enterprises and a number of nonstate-owned enterprises. Government controls have been looser for them.. As a result, the reform of the larger economic landscape in the PRC has encouraged these firms to stake out their autonomy more boldly and to engage in innovative behavior more quickly than guided-learning firms. These two patterns of learning had corresponding differences in company culture, organizational structure, and information management. Whereas self-generative

patterns of learning were marked by a stronger commitment to innovation, those firms that had engaged in patterns of guided learning were also successful at intelligently and rationally adapting to external and internal conditions. As organizational reform continues in the PRC, it is likely to find expression in learning that resembles, modifies, or supplements one or both of these two patterns of learning in one way or another.

All these conclusions must be understood and framed in terms of the larger social transformation that is taking place in the PRC. As mentioned at the outset, several other countries making a similar transition from planned to market economy have opted for a kind of shock treatment, an attempt to transform and overhaul the previous social and economic system completely. Not surprisingly, this strategy has entailed considerable social disorder and economic pain. The PRC, by contrast, has preferred a more gradualist approach. It is trying to develop a socialist market economy through an incremental process that emphasizes reform and organizational learning. If Chinese firms can continue the processes of learning and adaptation that many managers have embarked on, the Chinese economy may in time serve as an example for other countries attempting similar processes of social transformation.

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