

## SYSTEMS THINKING AND THE NEW MANAGEMENT STYLE

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## I. INTRODUCTION

In the winter of 1984 a small group of senior executives began a series of meetings with members of the System Dynamics Group from MIT to share insights into fundamental new practices in management. The participants, most of whom are chief executives, come from diverse organizations. Some are from high technology rapid growth companies, some are from traditional businesses, some represent the not-for-profit sector. What they share in common is a deep commitment to advancing fundamental new ideas in management philosophy and organizational design. In particular, they believe that

- o traditional hierarchical organizations realize only a small fraction of their potential,
- o it is possible to create, even within a large organization, a community of common purpose in which each individual, by being true to themselves, operates to the maximum benefit of the organization,
- o organizations can be most successful and creative when management control, decisionmaking, and leadership are localized to the fullest extent possible.

These and similar ideas appear to underlie a fundamental transformation now in process in American management. The purpose of

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the New Management Style Project is to help focus and accelerate this transformation, using the participating organizations as laboratories for clarifying principles and demonstrating elements of successful practice. The first phase of the project, which concludes in June 1984, has two specific objectives: to develop an effective "learning community" of practitioners and to begin identifying "generic structures" embodying key management principles. A central premise of the project is that the true "experts" in the new management style are not in universities, but in organizations that have succeeded in developing this style. By drawing together successful practitioners to share experiences in different organizations and industries, the project offers a unique opportunity to begin distilling generic insights. This paper summarizes the purpose, design, and initial results of the New Management Style Project.

## II. WHAT IS THE NEW MANAGEMENT STYLE AND WHY IS IT EMERGING NOW?

In the past several years there has been a renaissance of interest in management. Books on new management concepts, Japanese management, and organizational excellence have become national bestsellers. In a society which formerly left such deliberations to the ivory towers of premiere business schools and the corporate boardroom, the keys to successful management has become a topic of public concern.

This awakening public interest stems in part from the growing awareness that perhaps the knowledge of the experts is lacking, that perhaps American industry has been in decline because of, not despite,

our management expertise. It also reflects a recognition that traditional business practices, especially as embodied in large hierarchical corporations, thwart the innovation and entrepreneurial spirit needed to revitalize the economy. At a deeper level, it appears also to reflect new views of human potential and the conditions under which work can be truly meaningful and challenging for each individual. Whereas financial security was once the prime motivator for work, a host of "higher order needs" now appear to motivate a more educated, informed, and financially secure work force.

New values in the work place have been developing over the past 20 years or more. What makes the present time unique is the simultaneous economic pressures causing the decline of many traditional industries, the gradual emergence of new industries, and an overall business environment of uncertainty and turbulence. In such times of radically changing markets and technologies, large "top-heavy" traditional organizations may be the least well-suited to adapt. Smaller, more innovative organizations have unique advantages not enjoyed in times when change is more predictable. Many companies, successful in the 1950s and 1960s, began to founder in the 1970s and now find themselves facing major changes in management philosophy and practice in order to remain competitive.

In response to these economic and social forces a small but growing number of organizations are pioneering significant innovations in corporate design, management control, and organizational philosophy. At their heart, these organizations are characterized by

an exceptional clarity of vision and alignment of individuals around a common sense of purpose. They emphasize freedom of local decisionmaking and leadership. Integration is achieved, not through extensive management controls, but through common values for personal and business conduct, shared responsibility for performance, and trust. Last, these organizations have highly decentralized organizational structures that vest within relatively small groups significant business responsibilities. These groups may be profit centers, cost centers, or other forms of relatively autonomous business units. What is significant is the extent to which key business decisions are made locally and people at all levels in the organization are exposed to risks and rewards of the marketplace.

### III. THE ROLE OF SYSTEMS THINKING

New technologies invariably require and give rise to the development of new human skills. In the transition from the horse and buggy, to the automobile, to the jet aircraft, the skills required of the "pilot" expanded dramatically. The reflexes and reactions of the horse-and-buggy driver could prove disastrous in a high-speed automobile. The pilot of the jet aircraft not only needs to assimilate a complex array of information but needs a theoretical knowledge of aerodynamics that was non-existent a hundred years ago.

Analogously, the evolution of more decentralized organizations with distributed decisionmaking and leadership requires wholly new skills and understandings. The skills of an effective president of a traditional hierarchical organization will almost surely prove

inadequate for leading a vision-oriented, value-driven organization. In particular, in the traditional organization key strategic decisions are made by a very small number of people. Only they need to understand how the organization functions as a whole and how it interacts with its environment. Moreover, this understanding can be highly experiential and intuitive, since it does not have to be explained broadly. By contrast, the number of critical decisionmakers in a new management style organization may number in the hundreds. The effectiveness of a distributed decisionmaking hinges on the extent to which systemic understanding of the organization is shared broadly.

Organizations developing the new management style operate as institutions of practical education. They embody what proponents of democracy have asserted from the beginning--namely, that an enlightened and educated citizenry is essential to effective democratic decisionmaking.

As the new management style evolves, the role of leadership is likewise evolving. Whereas senior executives were primarily viewed as decisionmakers in traditional organizations, their role is more and more evolving towards that of designer and educator: designer in the sense of formulating key policies and organization structure, educators in the sense of continually teaching about the basic purpose and values of the organization, as well as how the organization operates and interacts with its environment. Both functions require a deep understanding of the organization as a complex system and an ability to explain this understanding to others.

However, in almost all instances, this systemic viewpoint has developed only partially. Deep understanding of organizational dynamics still tends to reside with only a small number of senior managers. Moreover, these few generally lack the conceptual skills for communicating this understanding. This limits its spread within the organization and between generations of management, and creates the risk that today's insight will become tomorrow's dogma.

#### IV. TASKS AND DESIGN OF THE PROJECT

The project is oriented around three interrelated tasks:

- 1) Developing a joint assessment of the current state of the new management style
- 2) Identifying management principles and related "generic structures"
- 3) Advancing systemic thinking within the participating organizations

An initial output of the project is a joint statement synthesizing from the diverse experiences of the project participants the common elements of vision and practice. In particular, the statement addresses the commitments of a new management style organization, the lessons that have been learned to date, and the major issues yet to be resolved. This statement should contribute to building momentum in organizations already committed to developing the new management style and in encouraging others seriously considering such ideas. A summary of this statement appears below.

The participants in this project possess a unique depth of insight into organizational dynamics and management principles. In some instances, this understanding has been developed over 10 years or more of concerted effort in developing new management practices. These understandings have been expressed in unique organizational designs and management practices. However, transplanting the specific methods and style of one organization into another rarely produces the same results. Each organization is unique in its mix of circumstances and personnel. The key to effectively transferring what is being learned in the most advanced practitioners of the new management style appears to lie in distilling the general principles and insights into organizational dynamics that allow for particular innovations in design and practice to be effective.

In the New Management Style Project, a particular method is being used to distill these principles and insights. This involves identifying "generic structures"--particular interrelationships that influence change in a wide variety of circumstances. For example, an important principle that seems to operate in new management style organizations involves sustaining vision when performance is below standard. Intuitively, people recognize that eroding goals can undermine the long term vitality and success of any enterprise. But the generic dynamics that can cause organizations to stagnate because of goal erosion are rarely understood clearly. These dynamics can be expressed in the form of a relatively simple computer model, which can be explained to people unfamiliar with computers or system modeling in about one to 1-1/2 hours. In fact the model has been successfully

taught to managers in several of the companies participating in the New Management Style Project.

The difference between simply stating a management principle, such as the importance of not allowing goals to erode in times of poor performance, and understanding the underlying dynamics that make the principle a principle can be profound. In one case, people simply have a rule to live by. In another, they share an understanding of organizational dynamics. This difference can be critical in determining the extent to which an abstract principle is translated into practice.

Developing shared understanding within an organization of generic structures and dynamics is part of a larger process of developing systemic thinking. This appears to be the essential cognitive skill necessary to operationalize the philosophy of the new management style. Leaders in the participating organizations continually emphasize the importance of not blaming particular individuals or external events for organizational problems, and of understanding structure and improving organizational design. Yet they work against a lifelong history of non-systemic education. One of the greatest limitations of public education in general, and management education in particular, is the extent to which it fails to prepare a manager for the challenge of synthesizing diverse information and integrating alternative perspectives to develop shared understandings of how an organization operates as a whole.

There are substantial opportunities to accelerate the development of systems thinking within the participating organizations. For example, in one of the participating organizations a division president has been teaching the rudiments of systems thinking to all the managers in his division over the past year. He is now working with his management team to develop their own system models for key policy issues. Each of the participating organizations in the New Management Style Project has the opportunity to design their own developmental plan for furthering systems thinking within the organization. This plan can include specific modeling activities, general management education, and advanced training in system dynamics modeling skills for specific managers and internal consultants.

#### V. THE EMERGING VISION

In assessing the current state of development of the new management style, we have begun by considering the question, "To what basic goals and values would our ideal organization commit itself?"

##### A Community of Common Purpose

Fundamental to the new management style is the opportunity to pursue challenging objectives with a group of like-minded people, to be part of a team striving for goals that are meaningful, personally and collectively. The essence of the organization is a compact based on a common purpose. The organization derives its fundamental energy, commitment, and direction from the sense of common purpose.

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The objectives of the organization must be lofty ones. Only a lofty vision will catalyze the energy and alignment that is possible. Only when people are truly challenged will the pettiness and politics that retard most organizations be set aside. Only the highest standards of performance will call forth the personal commitment of talented individuals. But the organization is more than a mere collection of talented individuals pursuing meaningful personal objectives. It is a team, a family. The organization creates unique opportunities for synergy and collective creativity. It makes it possible for people to operate in an environment where, in the words of one of the participating organization's mission statement, "a spirit of freedom, equality, mutual trust, respect and even love prevails."

##### Personal Growth

In the new management style organization, we believe the intrinsic worth of each individual is paramount and that organizational growth in the absence of personal growth is not sustainable. In our view, personal satisfaction and security depend on self-knowledge, self-reliance, self-direction, and the pursuit of lofty vision. We view people as fundamentally generative beings, whose satisfaction ultimately depends on the extent to which one is true to one's own unique personal purpose and standards. While the fruits of personal success, be they esteem of one's peers or financial reward, are important, we believe that the desire to make a contribution, to express oneself, and to serve are primary.

Organizations have unique potential as institutions for personal growth and development. However, in attempting to provide for people's needs many organizations fall into the trap of encouraging a sense of entitlement rather than responsibility. In fact, many of the most successful traditional hierarchical organizations have emphasized commitment to high pay standards, exceptional employee benefits, and job security. While benevolent dictatorships have much to recommend them over despotic dictatorships, they are dictatorships nonetheless. The conditions for personal growth which we hold to be central to the new management style involve risk, responsibility, and learning more than a secure environment and guarantees of being well taken care of.

Creating an environment conducive to personal growth requires clarity of purpose and goals, shared consistent values, equality of opportunity and a commitment to continually seek the truth. People need to have an "honest game to play," where the goals are explicit, the rules clear, and the risks and potential rewards known by all. The "game" needs to be structured so that individuals can understand the consequences of their efforts. People in large organizations often fail to learn primarily because they simply have no way to judge for themselves how their actions interact with thousands of others' to determine overall performance. There needs to be freedom of mobility within the organization so that people can join those undertakings in which they really want to be involved. Last, the game has to be about what it appears to be about. Often people appear to be working to accomplish certain goals, but in fact, hidden agendas and organizational politics prevail. Nothing undermines alignment and

personal responsibility more quickly than for people to discover that the rules of the game have been changed by an outside authority.

#### Personal Integrity

An environment conducive to personal integrity starts with the alignment of personal and organizational goals. Above all else, it is critical that each individual in the organization be true to themselves, that participating in the organization in no way compromises an individual's values or personal vision. Only when organizational and personal goals are aligned can an individual truly be committed and can an organization reap the full benefit of that commitment. Specifically, this means that individuals should never be required to do something they do not believe in, and that personal honesty and openness are always valued. In most organizations, "bad news" travels slowly up the hierarchy and most people would rather "get by" following procedures than err through innovation.

If personal responsibility and creativity are the objectives, we believe that individuals must be encouraged to take risks and to learn from their mistakes. The costs of failure should be the objective consequences of the failure rather than the subjective evaluation of "one's superiors." This ideal is best accomplished by making individuals and small groups directly accountable to markets, whether they be external or internal to the organization. Individual rewards should be related to individual and group performance by explicit criteria and objective measures. To the fullest extent possible, an

individual's fate should never be determined by the subjective judgment of another.

While these goals may seem difficult to attain, we believe that they are essential to be free from the arbitrariness and internal politics that dominates so many organizations. Moreover, we believe that they can be achieved.

#### VI. WHAT HAVE WE LEARNED?

The second major question we have considered in assessing the development of the new management style is, "What have we collectively learned regarding how our ideal organization can be developed and sustained?"

##### Personal Commitment

Many organizations are experimenting with elements of the new management style in order to solve particular problems, for example, declining productivity or falling competitiveness. Although organizations that effectively adopt the new management style do invariably realize large increases in productivity and business effectiveness (often remarkably large), adopting these ideas in order to solve organization problems is unlikely to succeed. This apparent paradox stems from the depth of personal and organizational commitment required to transform a traditional authoritarian organization into a new management style organization. The business literature is replete with examples of organizations that attempt to decentralize then pull

back to more centralized management control after the experiment with decentralization fails to produce the expected benefits.

Several of the participants in the New Management Style Project have succeeded in firmly establishing new management style precepts and practices in an entire organization. Typically, this has involved 10 or more years of concerted effort. But the interesting fact is the basic similarity of the process in all cases. In every case the process began with one, two, or at most three, key leaders "taking a stand"--making a personal choice to have the organization operate in the way they truly wanted, or get fired in the process of trying. It may well be that the heart of the new management style is a particular type of passion, a personal stand eventually taken by all members of an organization. Those who would lead an organization through such a change must lead by example. The commitment of those who follow rarely exceeds that of those who lead.

##### "Walking the Talk"

Many who espouse new management precepts find it difficult to integrate these standards into their own behavior. Yet, failure to live by the ideals one espouses not only undercuts the impact of those ideals, but also sows the seeds for cynicism and further separation of management and workers. Our experience suggests that the behavior of leaders as role models is even more important than the values and vision expressed publicly by those leaders. Articulating a lofty vision establishes standards by which those who articulate the vision will be judged. Failure to live up to the rising expectations

engendered by initiating new management style concepts may in some cases be worse than no change at all.

A particular problem for people in senior positions, especially chief executives, is the absence of regular feedback on the congruence of one's actions, image, and expressed values. One of the most important assets for someone intent on leading an organization in developing a new management style is a partner who the leader can count on to consistently provide the sometimes unpleasant but always essential feedback regarding how one is perceived by others in the organization. Interestingly, in almost every case where a successful sustained transition to the new management style has occurred, such a partnership has existed. Yet we know that this is quite rare in most organizations. In most organizations the person at top is isolated and receives information that is highly biased by others' expectations of what the person wants to hear and by the limits of relationships that are more professional than personal.

Effective leaders in a new management style organization are servant leaders. They know that their authority derives ultimately from the respect of those they lead not from the status of their position. They have a deep sense of personal security and low needs for the ego gratification most seek in aspiring to positions of authority. This spirit is well expressed in the management motto of one of the participating organizations, "Each day we stand for election." Such leadership creates an environment where

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decisionmaking is shared naturally and the ultimate standard of success is a leader's ability to develop other leaders.

#### Trusting People

Traditional organizations transmit a host of signals that communicate management's distrust of employees. Developing the new management style requires a meticulous rethinking of many operating practices that may contradict intended organizational changes. In organizations participating in the project some of the most significant changes have been removing time clocks, having only salaried positions (ie., eliminating all hourly positions), and eliminating allotted sick leaves and giving individuals and small teams responsibility for managing their own time in working to accomplish their objectives.

Another important way in which signals of trust or distrust is communicated involves the types of information that flow between business units and levels of management. Organizations often make the mistake of attempting to "decentralize decisionmaking," yet maintain extensive flows of information between lower and upper levels of management. This communicates very clearly to people at lower levels that, while they are being asked to make more decisions, they are not really being trusted to do so. We believe that it is very important for business units in which significant decisionmaking responsibility is vested be in fact allowed to make decisions. Typically, this is best supported by senior management asking only for information



pertinent to assessing how the overall business unit is performing, not the basis for management decisions.

#### No Information Monopolies

Within business units, conversely, it is very important that there be extremely free flow of information. To the maximum extent possible, we believe in the completely free flow of information within business units. In traditional organizations, selective access to information becomes a strategy for reinforcing the hierarchical mentality. People feel special by virtue of having certain information. We believe that such practices are generally antithetical to developing the spirit of commonality and trust essential to the new management style. In many of the participating companies in the project, virtually all information regarding the business operation is public, including data regarding internal operations, new product developments, and even employee and management salaries.

#### Balancing Internal and External Orientations

The ethic of service needs to be extended to the organizations' customers as well as to those within the organization. It is important for all people within an organization to keep in mind that the enterprise exists only because it represents an effective organization of economic resources for the purpose of "adding value" to society. People need to know how their collective efforts are contributing. We believe that this spirit of service to the customer can be developed within any organization, provided (1) the products or

268 services generated by the organization are truly perceived as contributing value and (2) there is a commitment to excellence and quality.

#### Performance Measures

If an organization is committed to serving its customers or providing the highest possible quality or innovation, it must have ways of monitoring its performance relative to these basic goals. In particular, it cannot allow itself to be overly limited by narrow financial measures of short-term performance. While profitability, for example, is important, higher profits in the short term can almost always be accomplished by taking actions that will jeopardize the long-term potentials of the organization. It is critical to strike a balance between that which is easily measurable (and hence provides unambiguous feedback) with that which is essential.

Although measuring intangibles is never easy, we believe there are always ways to improve the quality of information available to monitor performance. If innovation is an objective, a variety of types of information can be provided. These include budget information, status reports on key projects, tracking average development times, and turnover of key creative personnel. Providing effective feedback regarding intangible performance measures involves also how the information that is collected is made public. In an organization truly committed to customer service the criticisms of a single unhappy customer can reverberate throughout the organization. Commitment to these objectives can also be integrated into rewards

systems. For many years, IBM not only compensated effective salesmen with bonuses for new customers, but deducted "negative bonuses" for every customer who defected to a competitor.

#### Small is Beautiful

Sustaining the new management style can become increasingly difficult as business units increase in size. Intimacy, trust, and shared understanding of all critical aspects of the business become increasingly difficult as business units grow. Consequently, most of the participating organizations have found ways to break up the larger organization into relatively small highly autonomous business units. These units keep all members of the organization "close to the customer" and in touch with new developments important for the evolution of the organization.

It is important that these business units control their own resources and make all key decisions pertaining to their operation. It is especially important to avoid situations where the success of one group appears to come at the expense of another. While many organizations divide into various forms of "strategic business units," frequently these are little more than a means for organizing the strategic plan and do not represent significant loci of decisionmaking autonomy. We believe the ideal is much more a network of small "organizations within the larger organization."

Some of the participating organizations in the New Management Style Project have pioneered significant innovations in organizational

design to allow growth to continue without diminishing innovativeness and shared responsibility. For example, one manufacturing organization keeps operating divisions small by continually dividing divisions as they grow. Each division is run as virtually free-standing business. Within each division itself may be a large number of highly autonomous profit centers, each with profit and loss responsibility and control of their own marketing, manufacturing, and product development. These profit centers are the seeds for future divisions.

Other organizations attempt to attain the benefits of smallness through alternative structures more appropriate to their circumstances. What is important to all is localizing both operational and strategic decisions to the fullest extent possible, and creating an environment where as many individuals as possible can truly feel like they have a direct influence on and are directly rewarded from the success of "their business."

#### Breaking Down the Barriers Between Managers and Workers

In all organizations there is a formal and informal structure. The formal structure is conveyed by organization charts and official lines of authority. But, it is the informal structure through which things get done. Characteristic of the new management style organization is dissolving the separation between the formal and informal organizational structure. In some cases, this might be done by abandoning formal organizational structures altogether. For example, one highly successful high technology company has abandoned

all titles--all members of the organization simply have the title "associate." Others attempt to establish formal structures which are more consistent with the informal structures.

As the distinction between formal and informal structures breaks down so does much of the distinction between "managers" and "workers." People become distinguished by their natural competencies and the roles that they choose to play, rather than based on their "level" or position in the hierarchy. Autocracy gives way to meritocracy. Compensation becomes based on one's unique contribution and on the overall success of the enterprise, not on formal position.

#### Consensual Management

Arriving at important decisions through consensus can be a powerful means of developing shared responsibility. However, the capacity of groups to function effectively in this manner is generally developed only over time. To simply bring key decisions to a vote is more likely to polarize than align. The key to effective consensual decisionmaking appears to be a variety of subtle learnings in a group as a whole.

First, it requires a deeply established norm of being on the level. Studies of group dynamics have repeatedly shown how individuals compromise their own identity and integrity in favor of "groupthink." By contrast, effective consensual decisionmaking requires an environment where each individual can honestly and openly express their views with no fear of censure. This in turn requires a

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high level of personal maturity, in particular the ability of the individual to distinguish objective from subjective input. Both can be important, but they need to be clearly distinguished.

Last is the ability of the group as a group to recognize when convergence is truly occurring. We believe that there is something analogous to a group mind that begins to operate in highly aligned groups. It is never necessary to take a vote. The group can sense when convergence is occurring. In the words of one of the project participants, in discussing the operation of his senior management team, "We just keep talking until we know we are seeing things in the same way. When this occurs the mutual understanding we arrive tends to propagate with remarkable speed throughout the organization."

#### Resistance to Change

Even though the environment generated by the new management style may be highly appealing to people within an organization, people at many levels of the organization can resist the change process. For senior managers the threat of giving up control, while rarely explicitly recognized, conjures up fears of no longer being needed. Conversely, workers may resist the freedom to make their own decisions, especially if they suspect the basic motives and commitment of management, which is likely is the organization has a long history of hierarchical operation.

Middle managers often get caught in the cross fire between senior management's proclamations of support for greater autonomy and

worker's suspicions. Often, the middle management appears to be the slowest group to begin to trust the new style. Their basic fear is generally that of beginning to take greater initiative and responsibility only to have senior management then pull back control. They are disoriented by a new game in which they don't know the rules, by a professional history of succeeding in an authoritarian environment, and by overall uncertainty of the implications for their professional development.

Despite these substantial impediments, it is our uniform experience that once the new management style ideas become established, the overall work environment becomes so fundamentally more satisfying that people eventually find it inconceivable to return to a traditional authoritarian environment. Often, they will go elsewhere if they find the freedom and personal responsibility that they have come to expect is no longer present. Not only are they motivated to do so, but they are generally more capable, as a consequence of working in an environment that continually encourages them to develop their own personal vision, creativity, and management skills.

#### Sustaining and Enhancing the New Management Style

Many participants in the project are concerned that it may take much less time to tear down a new management style than was required to establish it initially. While none of us have experienced a retreat once these concepts have been established firmly, it is clear that sustaining and enhancing the new management style requires a

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continual effort. Leaders need to continually "preach the gospel"--promulgating the vision, values, and basic style of the business to all employees. Likewise, continual assessment and rethinking of organizational design appears to be necessary.

Sustaining the new management style requires ongoing education of all members of the organization. This education needs to be personal, continually challenging people to deepen their own vision and commitment. The education needs to be substantive, continually expanding the shared base of understanding of how the organization operates and interacts with its environment. And, the education needs to aligning, continually deepening the trust and communication shared by all members in the organization.

For education programs to be effective, they must relate directly and immediately to the challenges and opportunities of people's work. This establishes a standard of pertinence, but it also requires that managers themselves, especially senior managers, be personally involved. For many of the participants in the project, a substantial portion of their time is spent teaching others the history, philosophy, and vision of the organization. This not only contributes enormously to the meaningfulness and vitality of the programs, it also forces the senior managers to continually reexamine and recommit themselves to their own vision and values for the organization.

#### VII. GENERIC STRUCTURES: AN AGENDA FOR RESEARCH

One of the greatest limitations of current management education,

both within organizations and within management schools, is the inability to distill and transfer insights into organizational and strategic dynamics accumulated by successful leaders. Yet just such education is vital, if the new management style is to flourish.

The New Management Style Project has provided a unique opportunity to explore a new type of management research: identifying generic dynamics important for organizational growth and vitality. These dynamics can be codified through formal computer simulation models. Each model represents a generic structure of interactions that seem to recur in a wide variety of settings. Eventually, it should be possible to develop a library of these generic structures, covering a broad range of organizational issues.

While there is much to learn about the process of identifying, analyzing, and disseminating generic structures, the pilot phase of this project has served to demonstrate the considerable potential of this area of research. There appear to be two broad classes of generic structures: structures underlying strategic policy dynamics and structures underlying organizational development dynamics.

#### Strategic Dynamics

Past system dynamics research has revealed a range of generic strategic insights into organizational growth and stability. One of the tasks of the New Management Style Project is to assess this accumulated body of research and how it can be made more available within organizations.

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The generic structures that are likely to emerge from this work include the dynamics of goal erosion, mentioned above; the trade-offs between price, availability, and quality; interactions between forecasting and growth, in particular the dynamics of self-fulfilling prophecies; the potential effects of financial performance measures on instability and growth; and the dynamics of innovation and new product development. The first two of these areas, as well as effects of financial performance measures, have already been developed into formal models that have been discussed in the project

#### Organizational Dynamics

Much less research has gone into the formal modeling of more intangible characteristics of organizational growth and vitality. Because these dynamics are so central to the new management style, they should be a primary focus of generic structure research. Some of the key questions that this research must address are: "Why does localness of decisionmaking appear to be so important for organizational learning, innovativeness, leadership development?" "Why does alignment and the ability to adapt erode in so many organizations as they grow?" "What are the sources of hierarchical structures and the hierarchical mentality that dominates traditional organizations?" "Why is the balance between professional and personal growth and between work and family undermined in many organizations?"

In the first six-month pilot phase of the project the primary objective has been to demonstrate the feasibility of using formal modeling to clarify questions such as these. The particular focus has

been on a preliminary model exploring how hierarchical structures and mentality develop and they interact with localness of decisionmaking and the evolution of management understanding.

One of the major questions that must be considered is the appropriate forms for disseminating this generic structure research. Journal and magazine articles are limited as educational vehicles. Within the participating organizations, management training programs can be developed. However, for broader dissemination innovations in educational technology will be required. One particularly promising area of innovation appears to be self-paced learning packages for personal computers. Virtually all of the generic structures that will be developed in the project should be suitable for simulation on personal computers. The major challenge will be to develop the software and hardware to create a truly interactive learning environment for the general manager.