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## Achieving Systemic Organizational Change

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This book is an attempt to meet a challenge first posed over thirty years ago. A former MIT colleague, Douglas M. McGregor, in his classic *The Human Side of the Enterprise* challenged managers to rethink their assumptions about their roles, their organizations, and the values, motivations, and talents of their employees. McGregor's work was motivated by an intense belief that the key to organizational success in the future would be determined, in part, by the progress made in the theory and practice of organizational change and management. In his words:

It has become trite to say that the most significant developments of the next quarter century will take place not in the physical but in the social sciences, that industry—the economic organ of society—has the fundamental know-how to utilize physical science and technology for the material benefit of mankind, and that we must now learn how to utilize the social sciences to make our human organizations truly effective. (McGregor, 1957, p. 1)

McGregor then went on to challenge theorists and practitioners to develop creative and useful models of organizational change that could turn this “pious hope” into organizational reality.

Have scholars and organizational practitioners lived up to McGregor's challenge? Few would answer yes, judging from contemporary concerns over the ability of firms to adapt to and compete effectively in today's global economy. This concern is voiced most clearly in the United States through reports of various productivity or competitiveness commissions that have been issued in recent years. Groups as wide ranging as the Council on Competitiveness to the National Academy of Sciences Commission on Technology and Employment, to MIT's Productivity Commission report *Made in America*, to the Collective Bargaining Forum and National Planning Association, groups of leaders of major corporations and unions—all seem to agree that changes are needed in the way U.S. firms compete and utilize their human, financial, and technical resources.

Moreover, these concerns are not limited to U.S.-based organizations. Similar debates are occurring across Europe and Asia as firms, nations, and regions search for new organizational strategies and institutional arrangements to take advantage of new opportunities posed by such things as the remarkable political events unfolding in

Europe and the advancing Asian economies. Thus we need to take a broad, international perspective to these issues.

A common theme emerging out of these debates, discussion groups, and reports is the view that systemic and continuous changes in organizational practices will be needed if firms are to compete successfully in today's and tomorrow's global economy. Moreover, a view is emerging that changes in any single organization are not enough. For a national economy and society in general to benefit, these changes need to be diffused broadly across organizations.

By calling for change, these groups have opened a debate over the organizational practices that can best serve advanced industrialized economies and societies of the future. But the debates to date leave a number of very basic questions unanswered: What is the new model of organizations that underlies the changes being advocated? Do these changes fit together in a coherent, internally consistent fashion? What evidence is there to suggest this new model or these new practices are superior to the traditional approach? What groups, forces, and policies must be mobilized to achieve systemic organizational change? Finally, how are systemic changes or transformations in organizational practices to be achieved?

## COMPETING VIEWS OF ORGANIZATIONS

The current debates about organizational change reflect a deeper, but as yet unjoined debate over two competing views of organizations and their roles in society. These competing conceptions are outlined briefly in this section. We urge the reader to keep this broader debate in mind while examining the more specific issues and evidence presented in the individual chapters included in this book.

### The Traditional Conception

In the traditional conception, the central purpose of the corporation is to maximize shareholder wealth. The primary legal and fiduciary responsibility of management and the board of directors is to promote shareholder interests. An effective organization is defined as one that maximizes shareholder returns.

Organizations form when markets are inefficient or incapable of coping with opportunistic (self-interested) behavior. Relations among different organizational participants and relations across organizations are dominated by self-interested behaviors. Controlling self-interest or opportunistic behavior is a critical function of organizational schema and contractual relations. For these reasons, organizations are designed with hierarchical structures, clear boundaries, and sharp divisions of labor, authority, and functional expertise and responsibility.

Organizations have deterministic technologies that are chosen on technical and rational economic criteria, independent of their organizational settings or human context. Technology not only is separate from labor but is a substitute for labor in the production function.

Individual employee voice or participation is to be focused around organizational goals or task-related problem solving. Independent organization or collective articula-

tion of employee interests is to be avoided if at all possible or, if necessary, limited to highly stylized and tightly circumscribed forms of negotiations.

## The Transformed View

In the transformed conception, by contrast, organizations are composed of and therefore responsible to multiple stakeholders. Effective change and mobilization of the energies of these stakeholders requires responding to their varied interests and needs. An effective organization is defined as one that meets the expectations of multiple stakeholders, including shareholders, employees, customers, and the societies in which they are located. The effective organization also commands the loyalty and commitment of these stakeholders to the long-term survival of the organization and social network in which it is embedded.

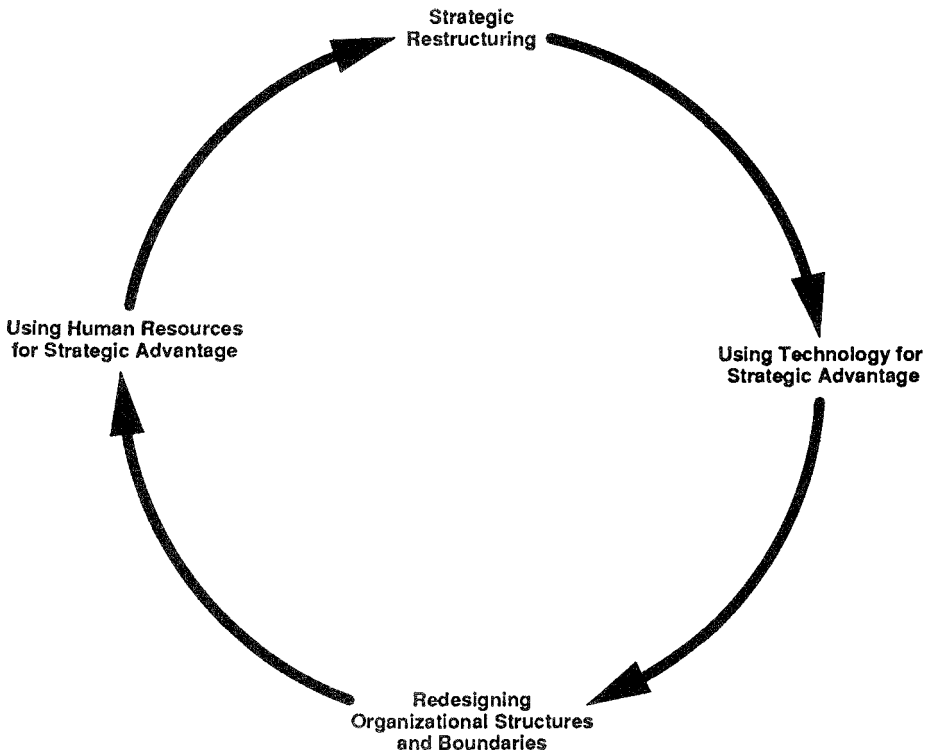
The boundaries across traditional functional units, roles, and organizations are blurring or becoming more permeable. Achieving effective cooperation and coordination across traditional boundaries is critical to organizational effectiveness. This requires building institutions and practices that sustain trust and instilling values of community and concern for mutual welfare into these cross-boundary relationships.

Technology cannot be separated from its human inputs and organizational contexts. A new form of sociotechnical design and conceptualization is critical to effective development and utilization of advances in scientific and technical knowledge.

Employees and other stakeholders are the best judges of their own interests and institutions. Individual and collective voices are critical to change and effectiveness in modern organizations.

Critics of the traditional conception of organizations do not challenge its descriptive validity as much as they challenge its functionality, that is, its ability to meet the varied demands facing contemporary organizations. Yet there is also a concern that transforming organizational practices from one conception to the other is neither an easy nor a natural phenomenon that will occur solely in response to market signals or technological change. Moreover, because of the interrelationships among the components of the alternative models, piecemeal change in one set of organizational practices is unlikely to be sustained or successful in the absence of supporting changes in other dimensions. This, in short, is what is meant by the phrase “transforming organizations.” These are the issues and questions we asked our faculty and industry colleagues to consider in preparing and discussing the chapters included in this book.

The chapters that follow are organized into four broad interrelated areas shown in Figure 1.1. As this figure suggests, we see the challenge of achieving systemic changes in organizational practices as involving four highly interdependent activities: (1) strategic restructuring, (2) using technology for strategic advantage, (3) using human resources for strategic advantage, and (4) redesigning organizational structures and boundaries. We next introduce the broad arguments found in contemporary debates over each of these issues and then provide a brief preview of how they are treated in the chapters and discussion to follow.



**Figure 1.1** Multiple domains for achieving systemic change.

## STRATEGIC RESTRUCTURING

### The Argument

The central argument in the area of strategic restructuring is that many large firms prospered in the decades following the Great Depression because they adopted strategies that were successful in capturing large and expanding domestic markets. Now the challenge lies in adapting to global markets in a world economy where firms in other nations have caught up to or surpassed the capabilities of many American firms. The question, therefore, is what strategies and processes of adaptation are likely to be most effective?

Given large mass markets, firms adopted strategies that emphasized large volumes, long production runs, mass production of undifferentiated goods, economies of scale, and cost minimization. But today's global markets seem to be calling for more differentiated and higher quality goods and services. And shorter product life cycles put a premium on innovation and time to market. The challenge is for firms to adapt in ways that combine a focus on quality, cost reduction, changing customer needs, and the capacity to innovate.

Yet American firms have been highly criticized for being too focused on short-term cost minimization and profit maximization strategies and for being slow to learn and adapt innovations from other companies and other countries. Some of the reasons American firms tend to adopt these strategies may reflect the incentive structures produced by our financial markets and institutions. In particular, the 1980s witnessed



extensive restructuring of American corporations as a result of an emerging market for corporate control. The chapters included in Part I review these developments in the United States and, through the lens of comparisons with Japan and Europe, ask how this approach to restructuring compares with the alternative approaches in other countries.

## The Evidence

Ronald Dore starts the debate by describing the process of strategic restructuring adopted by Japanese firms. He points out that we cannot understand how Japanese managers restructure unless we first understand the fundamental assumptions Japanese society makes toward organizations. Organizations are communities, subject to communitarian values and expectations. Employees are highly important stakeholders. Moreover, Japanese financial institutions allow managers to take the long-term perspective expected of them as they adjust to changing markets. Dore's work further suggests that this approach allows Japanese firms both to achieve flexibility and to preserve the trust relationships required to maintain their capacity to innovate. He concludes that this approach to restructuring contributed to success enjoyed by the Japanese economy and its structural adjustments in the past two decades.

Richard Locke argues that patterns of strategic restructuring are not constrained by national models but instead are increasingly shaped by local socioeconomic and historical factors. In recent years, changing conditions of world competition and technological innovation have spurred increasing numbers of individual firms as well as entire industries to restructure. Contrary to traditional political economy analyses, which seek to understand these patterns by focusing on national institutional patterns, Locke argues that the current wave of restructuring is testing and sometimes transcending the boundaries of national regulatory regimes.

Whereas national institutions and arrangements have proven unwilling or perhaps unable to adjust to or even accommodate these changes, individual firms have continued to experiment with a variety of solutions that have transformed their structures and strategies. This combination of micro level effervescence and macro institutional stagnation has provoked the reemergence or renewed salience of local patterns of industrial politics. In other words, to fill this vacuum in the center, more localistic patterns of strategic restructuring, embedded within more regional or local socioeconomic contexts and histories, have emerged. Locke illustrates this more general trend by analyzing the reorganization of two Italian automobile firms. Locke's analysis develops an alternative way of understanding both how organizations like firms change and how the micro and macro levels of national political economies are linked.

Michael Useem then documents two of the dominant restructuring strategies adopted by U.S. firms in the 1980s, employment downsizing and changes in ownership. Useem introduces a new variable for organizational analysis by showing that many of the organizational changes occurring in recent years have been stimulated by pressures from external financial markets. This is not an area traditionally linked to study and practice of organizational change.

Useem notes that restructuring sets off a chain reaction of somewhat predictable internal organizational changes. If the current wave of restructuring follows previous patterns, we are likely to see organizations that are more centralized, less diversified, and perhaps less outward looking.

In the case of leveraged buyouts or hostile takeovers, the dominant hypothesis is that the greater responsiveness to shareholders is likely to reduce responsiveness to the interests of other organizational stakeholders such as employees and the community. Stated more broadly, the argument is that highly leveraged new owners (or executives in firms threatened by the prospect of a hostile takeover) will have shorter time horizons, will invest less in research and development, be less innovative in human resource development and policy-making, and, finally, be less successful.

These arguments, however, must still be viewed as hypotheses in need of more rigorous and extensive testing and examination. Indeed, the very basic question of the effects of different forms of corporate restructuring on corporate financial performance is still subject to intense debate. Paul Healy summarizes the empirical evidence available on these issues. He reports that the evidence on mergers and acquisitions is more positive than critics might suggest, but the long-term performance of leveraged buyouts and hostile takeovers is still uncertain.

Although these chapters stress the impact of external forces as stimuli to organizational change, none of the authors suggest that the course of these changes cannot be shaped by the organization. That is, organizational decision makers are far from passive parties in the change process. Edgar Schein picks up on this point in his chapter by documenting various strategies he has observed chief executive officers (CEOs) following as they manage and shape the change process. His data are drawn from studies of how CEOs use information technology. The CEO is the person in an organization most able to set the direction for change and most influential in the internal change process; thus an understanding of the CEO's role is critical to the overall task of understanding organizational change.

John Henderson and N. Venkatraman use information technology-induced change to show the importance of integrating and aligning an organization's competitive strategies with its policies for managing technology, human resources, and related internal processes and procedures. While this point is especially pertinent to information technology given the evidence of its limited economic return to date, the theme of integration and alignment is apparent in many of the other chapters collected here as well.

Rebecca Henderson's chapter identifies technological change as another external stimulus to organizational change. Moreover, she points out that some forms of technological change are highly problematic for existing organizations because they reposition the relationships among different knowledge bases, expertise, and organizational interactions. She uses the metaphor of architectural change to describe this phenomenon. As she suggests, and as the conference participants wholeheartedly agreed, this metaphor is helpful in conceptualizing the changes in thinking and action required in other organizational domains as well. Indeed, it became the dominant metaphor in our discussion and we draw on it in our final chapter in summarizing the central lessons for the future study and practice of organizational change.

## USING HUMAN RESOURCES FOR STRATEGIC ADVANTAGE

### The Argument

Advanced industrial economies can be competitive at the standards of living their citizens expect only by excelling in the development and full utilization of their human

resources. This will require a public and private partnership to develop a highly educated, motivated, and adaptable work force and organizational practices that utilize these attributes. American society now finds itself behind many other nations in attending to its human resource infrastructure. The challenge therefore lies in:

1. Upgrading the quantity and quality of education and training in the work force.
2. Learning to value the differences and diversity found in the work force of today and tomorrow's global firm.
3. Sustaining a high level of participation and cooperation among employees and managers within organizations.
4. Supporting the transformation of industrial relations and human resource policies, practices, and traditions to diffuse and institutionalize commitment by business, labor, and government to these principles.

### The Evidence

If these propositions are correct, the United States and perhaps other nations as well face considerable challenges. As the chapters in Part II suggest, the challenge goes beyond the ability of any single organization and will require a concerted and coordinated response by all of the institutions that affect employment relationships—employers, the government, labor unions, professional societies, and household and family units.

In the first chapter in this section, Lisa Lynch describes the changing demographic and educational profile of the labor force of the future. In doing so, she provides a starting point for the discussion that follows since a necessary precondition for realizing strategic advantages from human resources is that present and future employees be highly educated, skilled, mobile, healthy, and available for work. Only when this labor force is secured can one go on to examine the equally important requirement of designing policies and practices that fully utilize and reward the attributes of the work force. Lynch outlines the various approaches to training and skill acquisition that are currently used by companies and individuals. She challenges organizations to do more to link their training and development policies to other aspects of the organization's long-run strategies.

The key word that describes the work force of the future is *diversity*. The days are gone where the dominant model of a worker was a white male employed in a large firm for an extended period of time with a wife at home taking care of household and family affairs. Although there was always considerable variation around this stereotype of the average worker, in an era where future labor force growth will come largely from women, minorities, immigrants, and/or dual-income families, this stereotype is rendered meaningless. Thus a necessary condition for organizations to gain value from their work forces will be that they become skilled in *learning* from diversity.

Deborah Gladstein Ancona and David E. Caldwell probe the conventional wisdom about the importance of teams by showing that there is wide variation in team performance. They also show that the diversity inherent in cross-functional team composition is sometimes a mixed blessing. On the one hand it provides the diverse technical expertise that is needed to produce creative and efficient solutions. But on the other hand it can reduce team cohesion and thereby hamper internal team processes. Thus again the theme comes through that one type of change, in this case structural change

(i.e., cross-functional integration), is not a sufficient strategy for improving organizational performance. What then does make teams work? Ancona's research suggests that at least one key characteristic lies in the ability of teams to both manage internal diversity and coordinate relationships with external stakeholders and clients. This implication leads into a central theme developed in a later section of the book, namely, the importance of cross-boundary coordination and cooperation.

Thomas Kochan and Robert McKersie review the innovations in human resource and labor-management practices that occurred in many leading union and nonunion firms in the 1980s. Kochan and McKersie outline the considerable challenges that must be addressed if labor, management, and government officials are to diffuse and institutionalize these innovations in the 1990s. They see this as becoming a major public policy issue for this decade. Thus we come full circle—strategic choice of individuals, their firms, and their representatives together will shape the larger environment and society in which we all live and work. But through the leverage provided by well-informed public policy, society can also influence the choices made at these micro levels and speed the diffusion of their effects.

Lotte Bailyn then argues that employers and policymakers will have to redefine the relationship between work and family in ways that reflect the growing diversity of the labor force and the need to create a more acceptable balance between the demands of the job and the home. In doing so, she alerts us to a paradox. The participative mode inherent in high-commitment organizations by itself is likely to exacerbate the work-family conflicts of dual-earner or single-parent families. Thus a “whole life” approach will be required—from government and corporations—to deal simultaneously with increasing competitiveness and with the interests of the nation's future workers and consumers.

## USING TECHNOLOGY FOR STRATEGIC ADVANTAGE

### The Argument

Given the high cost of labor and the standards of living expected by citizens in advanced industrialized countries, firms in these settings will need to adopt strategies that gain competitive advantage from advanced technologies and new product development rather than strategies that emphasize cost minimization. Historically the United States has been a leader in scientific and technological discovery, but mounting evidence suggests that U.S. firms have difficulty in transferring science and technology through the design and manufacturing processes to the marketplace. To improve the transfer process, most management and engineering experts are now stressing the importance of greater teamwork and cross-functional integration in both new product and new process development activities. Thus significant changes in organizational structures and practices will be needed if firms are to gain competitive advantage from advanced technology.

## The Evidence

These issues are taken up in several of the chapters of Part III. Taken together they build on a modern variant of the longstanding “sociotechnical” model of organizational and technical systems. As we will see, however, these chapters go considerably beyond traditional sociotechnical models. They extend the hypothesis that it is the integration of a host of organizational, social, and human resource factors with technical considerations that will determine the extent to which new technologies are fully utilized and result in tangible benefits to different organizational stakeholders.

An important theoretical statement and empirical test of this argument is presented in the chapter by John Paul MacDuffie and John Krafcik. They develop the differences between an integrative approach and a traditional engineering approach to the design of technology and production policies, work organization systems, and human resource practices. The integrative approach that is most commonly found in Japanese manufacturing firms requires flexible work practices and a work force that is highly skilled, trained, and motivated. Without these attributes the production system cannot achieve the twin goals of high productivity and high quality. In contrast, the approach to production systems more typical of traditional U.S. engineering practice is to design controls or buffers that ensure against variations in the performance of the human resource system. This chapter provides the beginnings of a new sociotechnical model of technology and production system design and management. Their evidence suggests this new model is not culture bound but, instead, when adapted to reflect cultural differences, it appears to perform well in diverse national settings.

Marcie Tyre’s chapter begins by showing that U.S. business units in the firm she studied lagged behind their European counterparts in meeting several standard performance benchmarks for new process development projects and teams. She goes a step further, however, in probing some of the historical and institutional reasons why these differences are observed. She argues that just changing the structure of the organization to introduce greater cross-functional integration and teams will not be sufficient. Instead, one needs to examine the interconnections across different dimensions of what might be called the internal labor market system. Thus Tyre’s chapter illustrates the importance of systemic rather than piecemeal organizational change.

Eleanor Westney’s chapter demonstrates the additional complexity associated with organizational design and strategy for a global corporation by asking which organizational model—one patterned after the parent corporation or one that incorporates practices that dominate in the host country—firms will adopt in managing organizations in multiple national contexts. She uses the internationalization of research and development activities as her window on these problems, but as she notes, these are generic questions that apply to all functional activities in transnational organizations. Thus she poses what may indeed be the fundamental organizational design question facing today’s global firm.

A chapter by Michael Scott Morton summarizes the major conclusions derived from a large-scale study of the effects of information technologies on management and organizational processes. He concludes that the need for integration of technology with its organizational and human contexts is equally critical to achieving the full benefits of information technology as the other chapters have shown it to be for manufacturing

technologies. He too reinforces the need for an integrative approach to the study and practice of organizational change and management.

Robert Thomas's chapter extends the discussion beyond the shop floor to the design process by focusing on the early stages of decision making about new technologies. He notes that the choice of a technological system or "solution" to a "problem" is not dictated by technical factors alone. Instead technological choice and the process of implementation are part of a highly contested political process involving a competition over both resources and substantive content. Because the parties recognize the political nature of these decision and implementation processes, the process tends to be highly stylized with defined and limited roles for various technical specialists. Engineering design specialists tend to dominate the early stages of problem definition and the search for alternatives, leaving human resource specialists out of the process until the final stages of implementation. Thomas's case study evidence and theoretical model therefore lead him to suggest that achieving real integration of human resource policies with the design of new processes will require fundamental structural change in organizations.

## REDESIGNING ORGANIZATIONAL STRUCTURES AND BOUNDARIES

### The Argument

The hierarchical principles upon which today's corporations are structured grew out of the era of mass production and were influenced by the military principles of command and control. In contrast, many voices now argue that organizations need to encourage and support participatory decision making, vertical and horizontal communications, creativity, risk taking, cooperation and teamwork, and coordination across traditional specializations and organizational boundaries. The argument is that innovations in organizational design and structures should occur in several areas:

1. Organizational hierarchies will need to be flatter to encourage the flow of ideas and influence from below.
2. Departmental and disciplinary boundaries will need to be more permeable to promote cross-functional integration, communications, and problem solving.
3. Barriers to cross-firm cooperation and collaboration will need to be overcome.
4. Organizations must be open to continuous learning and improvement.

### The Evidence

Opening up organizational structures and boundaries is not only hard to do, but many of the proposed changes are contrary to human and organizational tendencies to specialize and focus on narrowly defined and self-interested behavior. Each of the chapters in this section questions the permeability of internal and cross-organizational boundaries and the stability and effectiveness of the various forms of cross-boundary cooperation and coordination that have been established.

Michael Piore starts this discussion with a broad-ranging analysis and interpretation

of the factors that underlie the cross-firm collaborative networks observed in small enterprises in northern Italy. He starts with a theoretical premise that the only way to understand individual and organizational behavior is to see economic action as embedded in a broader social structure and society. From this starting point he emphasizes the importance of building upon community values and an overarching set of shared objectives rooted in local networks. Piore argues that the demonstrated ability of these types of networks to do this flies in the face of traditional economic and organizational theories of human behavior.

Stephan Schrader provides an additional interpretation of factors that affect the amount and stability of cross-organizational information flows. He emphasizes the joint benefits and reciprocal relationships that produce friendships and personal links that feed the flow of information and expertise across traditional boundaries.

Edward Roberts takes up the alternative to change in an existing organization or organizational structure by discussing the alternative design options open to organizational decision makers when confronted with new technological possibilities and markets. He notes that careful strategic choices need to be made in selecting among alternative designs such as joint ventures, outside acquisition, and internal venturing. His concept of the “innovation paradox” captures the dimensions of the challenge to organizations: the more radical the departure from one’s current market niche and technological expertise, the greater the risk of failure. The solution to the paradox lies in developing the skills needed to manage cross-boundary organizational designs.

Peter Senge and John Sterman provide an appropriate caveat to the prescription that decentralization and involvement of lower level participants are universally beneficial. They note that unless these structural changes are combined with strategies that ensure local level participants are aware of and take into account the larger system implications of their decisions, considerable suboptimization will occur. This in turn can lead to a counterreaction to recentralize or add a coordination layer of management. They stress the importance of organizational learning and describe how systems thinking and the tools of systems dynamics can foster this type of organizational learning.

## THE ROLE OF LEADERSHIP

Changes in organizational practice are not likely to occur in the absence of strong, intelligent, and visionary leadership. For this reason we asked two highly respected and experienced leaders—one from the world of business and the other from the world of labor—to share their views on the types of leaders needed in today’s organizations. Their statements were intended to initiate further debate on organizational transformation, and they sparked a lively discussion over the questions of who should be considered a leader, who leaders listen to and learn from, and how leaders from diverse backgrounds and organizations can collectively lead organizations and institutions to change.

## CREATING THE LEARNING SITUATION

The interactive nature of our conference was designed to promote mutual learning among the researchers and practitioners present. The discussions and debates that

followed the papers generated a range of new ideas and themes that are summarized in our closing chapter. In the chapters that follow, therefore, we have included practitioner commentary on each of the chapters as well as excerpts from the researcher–practitioner dialogue that took place in each section of the conference. This approach is in keeping with our belief that systemic organizational change and transformation can best be accomplished by bringing together individuals and groups with diverse knowledge and experience bases to form a learning community.

If successful, the changes discussed in the book should point toward the creation of learning organizations, the subject of the final chapter of the book. A learning organization, as our authors and industry representatives conceive it, is not a static, transformed mirror image of the traditional organized model outlined earlier in this chapter. Instead, it is a living and evolving entity that engages in continuous learning and adaptation by engaging diverse stakeholders from inside and outside its traditional boundaries in a process of experimentation, analysis, problem solving, and feedback. In short, it is an entity that creates and nurtures a culture that sustains learning and change and that allows change to originate from diverse sources. In this vision leadership and the management process are dispersed activities, along with the power to initiate and the skills to manage change. Organizational transformation does not become an end state but rather a process or mindset that keeps the organization open to opportunities for continuous improvement.

This may sound like an unrealistically visionary view of organizational life, at least as we currently experience it. Yet it is the vision that is generated by the models, data, and experience of those researchers and practitioners who participated in the production of this volume. The extent to which this vision appears to be beyond our current reach may therefore be one measure of how far we, and our organizations, have to travel in the quest to be competitive in tomorrow's world. It also challenges us to examine further the evidence and base of experience that lead such a group to produce this type of vision. Only by delving into the evidence and relating it to our own experiences will we either confirm the validity of this vision or take sufficient exception to it to generate an alternative view. In either case our hope is that this material sparks an intellectual debate that, in turn, stimulates constructive and systemic organizational change. We invite you to now examine the ideas that follow and to thereby join our debate and learning community at this incipient stage.

## REFERENCE

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