

CHAPTER 9

NETWORKING TRENDS: A WINDOW TO THE FUTURE

FROM HIERARCHY-BUREAUCRACY TO TEAM-NETWORKS

There is nothing elegant about their conference room. It is plain, neon lighted, and windowless; the furniture looks like government issue. Situated in the high-security manufacturing center for “plastics,” AT&T Universal Card Services’ GetNet team is having its launch meeting. The purpose of GetNet is to aggressively increase receivables by the end of the next fiscal year, a goal set by the company’s CEO, David Hunt.

Now Hunt is standing in front of some 30 members of the cross-organizational team tasked with making GetNet happen—vice presidents, managers, and associates.

“What worked a year ago won’t work today,” Hunt says, wearing a blue shirt, no jacket, and a red, white, and blue tie. “We have to be able to change midstream. The environment is changing, and it will change again. Adaptability and flexibility are key in the marketplace.”

Hunt’s job is to shepherd a young 1990 startup, born out of a very old company, into the 21st century. “Change” is the most prominent feature on his horizon; he uses the word three times in four sentences.

To a credit card company like this one, change means interest rates

that spike and slump, intense competition from a crowded field of providers, upstart offers that take them by surprise, and the constant threat of a breakdown that could destroy a whole “vintage,” the industry term for a mass mailing of millions of pieces.

So AT&T Universal Card Services, one of AT&T’s 22 subsidiaries, a 1992 Malcolm Baldrige National Quality Award winner, pushes ahead. Besides its projected revenue goal, it is trying to raise its quality score another 100 points on the Baldrige scale, from 800 to 900 (1,000 is tops). This is virtually unheard of. It is reengineering its major business processes. Scores of teams populate the company; the senior executive level is known simply as the “B-Team” (B as in business). And, thanks to the efforts of Mike Plummer, an energetic internal consultant, the company is forging “learning partnerships to move to the next frontier of employee involvement.”

METATRENDS: CURRENTS OF CHANGE

Like its competitors, AT&T Universal Card lives in the Age of the Network. It must guard against using the default organization, 19th-century hierarchy-bureaucracy, in place of 21st-century team-networks to continue to be successful. This metatrend toward networks is so fundamental that it permeates all human organizations and embraces us all daily.

Everywhere around us, networks occur organically in nature as well as in human affairs. You see them referred to in the paper and on the air, concerning life at home, at work, in the community, and among nations. Notice how frequently you hear the word “network” and use it yourself. Check how often the idea—wherever it appears— expresses one or more of the five teamnet principles. Judge whether this metatrend appears in the areas of the world you know and care about.

The outburst of networked organizations is not the only force propelling us into the Information Age, but it is on the short list.² Overlapping, cross-cutting fundamental trends include:

- ? exploding information and its technology;
- ? economies that globalize and localize at the same time;
- ? complexity without rival in human history; and, as Hunt says,
- ? the high-velocity, accelerating pace of change.

Grouped, these powerful metatrends shape an infinite variety of unique events and patterns that make up everyday life.

Today we are well into the transition from the Industrial Age to the Information Age. More important, we are way past startup and, for the most part, beyond the moment of launch in the Information Age life cycle.

Organizational structures are crackling with the combustion of change. Every organization is changing somewhere, somehow. Structures and processes that are “decentralized,” “flat,” “horizontal,” “teamed,” “allied,” and “virtual” are realities, not the stuff of future predictions.

We live the future, but only in part. Most of us are caught in situations that are betwixt and between.

TERRA FIRMA MEETS THE UNPREDICTABLE FUTURE

We straddle two ages. Mainstream approaches to organizational change stand with one foot in the predictable past, the other seeking *terra firma* in a radically unpredictable future.

Three broad initiatives comprise much of the current best thinking on how to transform organizations:

- ? Quality,
- ? Reengineering,
- ? Teams.

All three areas involve numerous companies. With its beginnings in the 1980s for many U.S. companies, quality today often is institutionalized, either in a function and/or through training. New companies don't even think of organizing without including a quality component.

Reengineering, particularly hot in 1994 with the publication of *Reengineering the Corporation* by Michael Hammer and James Champy,³ likely is afoot in most organizations (even if only in the talking stage).

In the wake of both efforts, teams mushroom everywhere.

Although quality no longer seems new, it has set a new organizational baseline. Marriott's motto stretches over the doorway of its hotels: "Every guest leaves satisfied." We wondered whether this was just a slogan when we first saw the banner in a Jacksonville, Florida, Marriott. It proved accurate for us. When we needed breakfast before the kitchen opened, we got it by special arrangement to fit our schedule.

A promise to guests, but also a challenge to competitors. Hyatt and Sheraton read this and have to wonder whether their properties would do the same. Even Marriott has to be concerned about just how common our experience is. Your company's products and processes are constantly tested and forced to higher levels of performance by competitors who are increasing quality and decreasing costs. This miracle happens when you do more with less, a tangible result of an applied organizational advantage.

Reengineering and quality share several characteristics. Both use the same systems model. With their vigorous process orientation, both also emphasize the importance of purpose and use customers as a focus in finding it. They also differ fundamentally, in a classic East—West sort of way, which is what makes them so useful together.

? Quality is about continuous improvement.

? Reengineering is about radical, dramatic breakthroughs in organizational performance. To achieve sharply greater performance, reengineering relies heavily on information technology.

Reengineering is a perfect age-spanning concept. The term itself suggests bolts and wrenches, the mechanism of the passing Industrial Age. To “re-“engineer” some “thing,” you first must have built it. Yet reengineering catapults its way into the next century with its clear focus on process and its close alliance with information technology.

Teams stretch even further back across the ages, reaching to the Nomadic Age, when people first acquired small-group skills. The best teams rediscover and reaffirm ancient knowledge of how a small group can work together for mutual advantage.

Both quality and reengineering generate teams, often multiple ones. Teams of innovators get these programs and pilots going—decision makers, developers, trainers, and users. Then implementations beget teams, sometimes hundreds of them in very large companies.

Eastman’s 18,000 employees now work in 800—900 vertical interlocking teams and 500—600 horizontally linked, cross-functional teams, a trend that began with its first quality initiative. Reengineering regularly requires teams—both to design the new processes and to implement them.

Our experience in working on a reengineering project at an international airline is typical. A core team of about seven redesigned the planning of the carrier’s schedules, with input from dozens of others. Ultimately, hundreds of people throughout the company would have participated in “a network of business development teams.” But like many reengineering efforts, this one remained essentially on the drawing boards two years after it was proposed, having fallen victim to competing priorities—downsizing, merger, new management, and new investors.

Teams also are a natural reaction to crises of every sort, being used to carry out special projects and to solve large, general problems. Asea Brown Boveri’s Swedish software company, ABB Network Control, set up 20 teams of 15 people each (see chapter 5) when they wanted to become a learning organization. The energetic, deliberately diversely populated teams arrived at their “Life-Long Learning” solution within a few months.

Teams are central to the systems approach to management, espe-

cially the social-technical methods, which address both the design of the organization and the technology. A “team organization” is also a strategy in itself, with a large number of current management books devoted to the topic attesting to its power.

Teams share the emphasis on purpose that characterizes both quality and reengineering. Virtually all team literature emphasizes the importance of establishing a unifying purpose, this definition in *The Wisdom of Teams* being typical:

“A team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable.”⁴

The “small number”—somewhere between a minimum of two and a maximum of two dozen—is not an incidental constraint. To be effective, everyone on the team needs to know everyone else well.

But teams are not always the solution. All too often, management sets up teams as a knee-jerk reaction, a syndrome that Geri Lincoln, a quality expert at the U.S. Postal Service, has dubbed HAMFAT—“Have A Meeting, Form A Team.” The automatic appointment of a random team then contributes to the problem.

Repeatedly, teams become isolated. They feed the fragmentation problem when they are not part of an overall organizational design and strategy. In addition, many patterns of teamwork—close partnerships, intimate relationships, instantaneous hand-offs—do not work easily beyond the limits of a small group. Companies that boast “teams” of 500 or even 1,000 are not really talking about teams. This is not to say that teams do not appear at every level—from the shop floor to the executive suite.

When joined into networks, however, teams have the ability to grow large. While the size of each team remains small, the bounds of the network as a whole can be quite grand.

LEARNING ORGANIZATIONS

The “learning organization” is another major movement now rising on many management agendas. Most broadly, this term embraces how groups and people use and process information, converting it into knowledge and, in the best situations, into wisdom. It sits squarely in the Information Age.

The great management theorist Peter Drucker first used the term “knowledge worker” as early as 1950. For almost a half century, Drucker has been pointing to a radical change in the nature of work:

people who deal primarily with information are the expanding ranks of labor, having decades ago eclipsed factory workers, just as those on the assembly line once replaced farm labor. Knowledge, according to Drucker, is now the dominant form of capital in the Information Age economy.

Peter Senge’s 1990 instant classic, *The Fifth Discipline: The Art & Practice of the Learning Organization*, brought the learning organization to management’s permanent attention. It’s a very appealing concept. Senge defines learning organizations as places “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together.”⁵ A learning organization requires five core disciplines, according to Senge, a set strongly suggestive of teamnets:

- ? Personal mastery,
- ? Mental models,
- ? Shared vision,
- ? Team learning, and, the fifth discipline,
- ? Systems thinking.

Focus on the learning organization will grow, and the implications will deepen. The idea that human organizations have “cognitive

capabilities,” meaning that they are able to think in some meaningful human sense, will become mainstream. Corporate memory, reasoning, decision making, and creativity all become more visible in the learning organization.

The intelligence of a network lies in the pattern of relationships among its members. It is the “more than” that interacting parts create in forming a whole. The analogy to the physical pattern of a biological neural net is irresistible.

Saab is not the only company to proclaim “intelligence” as a feature of its product. Other ads that tout a company as being “smart” suggest that an organization as a whole really does think. Hype becomes reality as the Age of Information and the Network continues to mature.

Learning is *an* essential, if not *the* essential, skill for adapting to change for organizations as well as people.

“CREATE CONSTANCY OF PURPOSE”

Quality, reengineering, teams, and learning all contribute to organizational change in the 1990s. Networks complement and enhance these approaches rather than replace them. Networking is an integrative philosophy, one that seeks commonalities and contact among many conceptual islands.

- ? “Create constancy of purpose,” W. Edwards Deming, the father of quality, said in the first of his famous “14 Points” for quality improvement. Unified purpose is central to quality, reengineering, teams, learning, *and* networks. Indeed, it is the source of legitimacy in the Age of the Network, quite different from the tradition that ruled the nomads, the coercive force that has reigned in hierarchy, and the supreme laws that govern bureaucracy.
- ? Networks comprise diverse types of organizations. Hierarchies and bureaucracies can be independent, self-organized, self-reliant network members. Bureaucratic boxes can add value to a net-

work, not as isolated functional units but as independent integrated elements of the whole.

- ? The “big news” about networks is links, both physical and relationships humane. The technology for communication has never been more plentiful—and it’s growing. At the same time, people are looking carefully at horizontal processes to design work. The horizontal view becomes ever more vital as time drives work and change challenges it. People will value relationships increasingly for their store of social capital and learning.
- ? Traditional “one-’man’-at-the-top” leadership is under challenge by all the change movements. Multiple leadership—where more than one person has responsibility for outcomes—requires appointed and natural leaders, social and task leaders, bosses and coaches, and experts of all sorts, as well as new roles such as that of coordinator. It also means that some people will have to give up power. At the same time, the fundamental global change in the work force infuses rich, new styles of leadership as women and minorities slowly but inexorably ascend the ladder of power.
- ? Networks scale. They are multilevel structures—hierarchies in the generic sense of the word—that provide vertical alignment. From the top down comes guidance for the work processes, which are for the most part horizontal.⁶

Networks tie teams together into robust yet rapidly changing learning structures. Cross-boundary management of reengineered processes leads to a more flexible, horizontal organization. “Continuous improvement involving everyone,” called *kaizen* in Japan, and the systematic removal of barriers to teamwork push quality organizations naturally toward teamnets.

Networks offer a clear vision of the future organization at work today, including and going beyond teams, hierarchies, and bureaucracies.

VISIONS OF TWO WORLDS

“Adopt the new philosophy,” said Deming in the second of his 14 Points.⁷ In his fifth point, he said, “We are in a new economic age. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs. This is the heart of continuous improvement. Doing more can cost less? How can this be?”

Relationships that increase trust, reciprocity, and participation in networks generate new wealth beyond their immediate productive results.

It seems to us that Deming’s vision of quality inherently includes the idea of social capital (see chapter 8), the nonmonetary source of wealth that lowers the cost of cooperation. What Deming had called for is quite simply “civic community in the workplace.”

Most of his 14 Points are directed toward removing barriers to teamwork and building social capital:

- ? Cease dependence on inspection;
- ? Don’t award business based on price alone. Build a long-term relationship of loyalty and trust with your suppliers;
- ? Train on the job;
- ? Institute leadership;
- ? Drive out fear;
- ? Break down barriers between departments;
- ? Eliminate slogans, exhortations, and targets;
- ? Substitute leadership for work standards and management by numbers;
- ? Remove barriers that rob the employees of the right to pride of workmanship;

- ? Institute a vigorous program of education and self-improvement; and, finally,
- ? Put everyone in the company to work to accomplish the transformation. The transformation is everyone's job.

On a flight from Atlanta to New Orleans, another passenger struck up a conversation. He was shocked to learn that we understood his work, process improvement (in a sporting goods conglomerate), that we'd even heard of it. We said we did something similar. He did not agree. There is no process improvement without the numbers, he argued. All the "team stuff is useless," he said.

Many companies have failed to achieve the benefits of quality because they cannot achieve them with the numbers alone. True quality requires heart, cross-boundary trust, and long-term relationships—the actual sources of new wealth.

In the logic of game theory, interactions stabilize around one of two stances: either "never cooperate," a "vicious" vertical one, or "brave reciprocity," the "virtuous" horizontal one. If you aren't on the virtuous path, enlarging social capital, you're probably careening down its opposite, the vicious route, where social capital is declining.

Brave reciprocity is an appealing ideal. It enhances the quality of life, inspires high performance, and has just enough risk to keep things interesting. Bob Joines of Eastman spoke of the deeper Deming, the man who "talks about joy in the work." "Joy," said Joines, "this is the importance of working together."

NAVIGATING RAPID CHANGE

Transitions are tough—predictably so. You need good vision and sharp intelligence to navigate rapid change. You also need good models. Here are some 21st-century trends that appear when you tune in to the frequencies of the future using the network model, grouped according to the five teamnet principles.

SHIFTS IN PURPOSE

Trends focused on purpose, the first of the five principles, set the stage for the 21st-century organization.

? Radical change will prevail for the foreseeable future. Organizations will either create their own futures or find themselves reacting to the future that is controlling them.

To get where you want to go, you need vision. Successful proactive behavior requires enormous flexibility coupled with a clear view of where you are going.

Theory is particularly useful in cross-boundary contexts. It provides guidelines and tools for local use rather than prescriptions. By making explicit the basic assumptions and models behind your vision, you can treat them as hypotheses. Then you can test and improve them through experience.

Emphasis is shifting from managing “costs” to focusing on real business growth.

Many, if not most, quality and reengineering efforts are directed at cutting costs. Numberless *ad hoc* teams have been set up to do the same thing. Yet many organizations, if not industries, have already squeezed out most excess costs. The question is, what's next?

There is an alternative to downsizing: expand the business. Here big business can learn from the upsurge in small firms, where entering new markets is the norm. Unfortunately, growth runs counter to the anemic state of global economic improvement.

Networks offer two striking ways out of the world's predicament. Short-term growth can increase through cross-boundary ties—joint ventures, strategic alliances, virtual corporations, flexible business networks. Alliances expand capabilities and opportunities while limiting risk. You can try things without putting your whole business at stake. “Small giants,” groups of small companies that work together to do what they can't do alone, have learned very well how to limit risk in this way.

Longer term, networking generates new wealth based on social capital, the interpersonal good will and trust that grease cooperation. The more business relationships exist among companies, the faster social capital accumulates.

? Creating breakthrough products, entering new markets, and achieving high-performance operations will be tougher than ever.

To achieve real growth, companies will have to think differently about every aspect of their businesses. Breakthroughs, whether in products or in markets, will require genuine creativity. Persistent, interdisciplinary hard work, not dumb luck, will prevail. The norm for developing new business strategies will be to rethink, revisit, and refine purpose. Individuals, teams, and business units of all sizes will need both committed independence and a challenging but risk-supporting environment that fosters co-opetition—the conjunction of competition and cooperation, creativity, and getting an idea to market.

? As organizations reach optimal size, they will seek qualitative development rather than quantitative growth.

Growth in numbers is great when you're small and the limits are beyond view. All growth is not great if you are already big. Contrary to 1980s' propaganda, no one can repeal the "limits to growth" on earth. Population continues its steep ascent in the predominantly southern Third World, while consumerism continues to mount in the predominantly northern developed world.⁸

Buckminster Fuller's dictum, "Do more with less," proves ever more true. Social capital will drive growth by "funding" new wealth through creativity and innovation. Intelligence, flexibility, diversification, and aspirations for a higher quality of life are survival skills in markets with limited physical growth.

? Organizations will regard purpose as their richest natural resource. They will mine it with new tools, techniques, methods, and models.

Explicit purpose is the new source of legitimacy, replacing the brute force of hierarchy and the rules and regulations of bureaucracy. A whole new advice industry has sprung up for vision, strategy, and work process design to make purpose explicit. New tools—technical and conceptual, high tech and low, personal and public—will help people make their purpose more explicit. Shelves will be clogged with how-to books and products on mining and refining the raw resources of commitment and cooperation.⁹

In time, of course, these techniques will become the "Old Way" and barriers for the later 21st century to overcome. Meanwhile, we need to wean ourselves from bureaucratic policies and hierarchical commands.

MEMBERS NEED A NEW LOOK

The 21st-century organization holds people and organizations in high esteem while enhancing their self-esteem, independent and interdependent, the second of the five teamnet principles.

? Team implementations will continue to fail at alarming rates.

For the downsized organization a team structure is no longer an option; it is a necessity. The downsizing trend that began in the late 1980s is different from previous cycles of job contraction. Not only have specific-skill jobs disappeared for good, but a whole layer of jobs—middle management—is a fraction of its former size. Once you have laid an organization flat, eliminating most of middle management, you can't go back. Unlike other change initiatives that have failed, delayering leaves organizations without a fallback position. They simply cannot return to the organization they dismantled. So, teams scramble to fill in the gap—exhausted, overworked, unprepared, and lacking an overall architecture.

Where there is more than one team, there is a teamnet, whether it is recognized as such or not. Thus, the failure of any part of a teamnet can be traced to one or more of the Five Teamnet Principles. Purpose may be unclear. Members may be too dependent. Communication may be inadequate. There may be too few leaders. The team may have tried to operate at only one level. More broadly, teams in organizations that deplete social capital also will fail. Successful teams thrive in a rich social life, where associations are plentiful.

? Companies will need to reinstall loyalty and motivate their people anew to do extremely innovative work.

Loyalty is at an all-time low in many firms due to short-term employment and career uncertainty. Few organizations have found effective ways to remedy this situation. Downsizing takes a toll in fear far wider than the immediate impact on those laid off.

Teams—and networks of teams—offer smaller-scale arenas in which to build trust and clarify purpose. An enterprisewide plan for converting to a more team-network organization itself gives hope. It offers a vision of a future better than that of hierarchy-bureaucracy. Without the promise of change, all the survivors of downsizing see is more work for fewer people.

? Individuals will rebel against the unending, ever-increasing demand for higher levels of performance.

High performance all the time is the fantasy of Supermen and Superwomen everywhere. Great ideal, completely impractical. People and organizations that run wide awake at top speed all the time do not survive for long. Burnout afflicts individuals and groups alike. Life has rhythms that can be stretched but not ignored.

High-performance, intensive interaction also isolates teams from the rest of the world. Peak periods of performance strain great ecologies of nonteam relationships that are put on hold, missed, broken, and otherwise depleted. To compensate, people will acknowledge this conflict and begin to address it. Rest will become a legitimate activity, both for individuals and for groups.

? Independence will spread as cooperation increases.

Globally, East and West are polar tendencies in regard to the individual and group, the fundamental social dynamic. The East puts the

needs of society ahead of those of the individual, while the West emphasizes the rights of the individual. Networking embraces both. In theory and practice, it integrates these polarities. “Me” and “we” are equally important. Individual and group together process the fundamental dynamic of organizations.

A dramatic, large-scale example of independence with cooperation warranted this front-page headline in *The Wall Street Journal*:

“Global Paradox; Growth of Trade Binds Nations, but It Also Can Spur Separatism; A World of 500 Countries?”⁰ From Catalonians in Spain to Quebecois in Canada to Wallonians in Belgium to Tamils in Sri Lanka, “It’s a paradox of global proportions,” the article began, “the closer that trade and technology bind nations together, the bolder the moves to break nations apart.”

GETTING LINKS IN SYNCH

The third teamnet principle, with its counsel to “just add links,” influences both people and technology.

? Physical links will continue to explode—from one to one to many to many—into digital convergence in the year 2001.

“Digital convergence” is a bundle of ideas linked by the recognition that all information can be rendered in ‘digital’ (also called “computer,” “electronic,” or “binary”) form for storing, processing, and transmitting. “Anything, anytime, anywhere” is how Bill Johnson, now IBM’s networking hardware manager, put it in 1987 when he led Digital Equipment Corporation’s networking effort as vice president.” Electronic “pipes” of awesome capacity to the home, satellites connecting remote villages, the total mobility of all communication, all coming soon.

Digital convergence is one of the great breaking business stories of the 1990s. We are witnessing a global formation of *digital keiretsu*, an amalgamation like the Japanese model where large numbers of firms work together in vertical alliances. Clusters of alliances swarm around core giants like Time-Warner, Viacom, and TCI in cable and entertainment, AT&T and the Baby Bells, game players like Sony and Nintendo, richly connected computer companies like IBM and Apple, and central casting media mavens like Paramount and Disney. From book publishers to software to chip makers, from newspapers to TV to toys, from mobile to movies to online services and the Information Superhighway—it's all part of the rich interactive brew out of which digital teamnets are being created on a grand scale.

? Companies will have to learn how to share important information with all employees.

“In a command and control organization,” says Levi Strauss’s CEO, Robert Haas, “people protect knowledge because it’s their claim to distinction. But we share as much information as we possibly can throughout the company.”²

“Only the information necessary to do your job” means something very different in a secretive society than it does in a culture of openness and availability to the point of overload. Cross-boundary responsibilities, the need to understand the Big Picture, and the need to adopt the CEO view lead more people to have access to more information, a philosophy that has led Levi Strauss to five straight years of record profits.

Without information, people won’t be able to do their jobs, take responsible actions, or make choices to benefit the larger organization. Synergy, serendipity, and creativity can come from anywhere. One reflection of this trend is “open book management.” Here all the people in an organization know how they fit into the bottom line.

? Just catching up to the learning organization? Rev it up; we'll be moving on to the "fast learning" organization.

Speed is of the essence—more so than ever. Wider appreciation of “knowledge work” lifts the bar. To keep ahead, organizations consciously strive to become smarter.

Learning alone will not be adequate unless organizations can rapidly assimilate and commercialize information. More information will come from more sources. Most of it will come from across boundaries of various sorts as “not invented here” will become the norm. More people will have access to the same information sooner, so the ability to use it rapidly for business advantage will provide the competitive edge. Learn, apply; learn, apply.

? The backlash will mushroom against purely high-tech approaches to resolving problems and meeting challenges.

Installing a computer network or voice mail system does not guarantee that suddenly everyone will start working together. We first heard the early warnings of this rumble inside Digital Equipment Corporation in 1988. A report from one of their largest accounts held a startling discovery. The customer had studied productivity gains from their \$2 billion information technology investment and found, strikingly, none. Further, they found the source of the problem to be not in the technology but rather in having ignored people and the organization of work.

Today fewer believe that technology alone can solve people problems.³ Networks provide a common language to approach organizational and technology issues—that is, “high-touch” and “high-tech” together.⁴ “Business spent \$1 trillion on information technology in

the last decade—but showed little gain in efficiency. Now, productivity is finally bursting out, thanks to better software and a reorganization of work itself,” says *Business Week*.⁵

? Social capital will be seen as a new source of wealth. This recognition will develop slowly, then suddenly catch on as success stories accumulate, reaching critical mass at the century’s turn.

Tom Melohn, “head sweeper” at North American Tool and Die, who forged *The New Partnership*,⁶ is a harbinger of a new way to build companies. Melohn based his company’s turnaround of a traditional machine shop simply and practically on applied honesty and trust, for himself and for his associates, vendors, and customers. A culture where “we’re all bosses” requires four “currencies,” he says: “equality, mutual respect, dignity, and self-worth.”

Social capital says that history is important, but it is not the only factor shaping the future. History is where you start, but there are many ways to accumulate trust and develop relationships. As more organizations, regions, and other islands of trust achieve high performance, a high quality of life, and visibility, social capital finally will burst into public consciousness.

LEADING TRENDS

The fourth principle, multiple leadership, challenges people’s ability to cooperate, requiring them to behave with maturity, a hallmark of people in 21st-century organizations. “In a heterogeneous group, maturity is essential,” writes Marc Hequet in *Training*.¹⁷

? A new style of leadership is emerging. The old-fashioned just-do-as-I-say hierarchy doesn't work across company lines. Meanwhile, those to be led are of a completely new ilk.

“The New Post-Heroic Leadership: Pull yourself off the pedestal and share the power at last,” reads the cover of *Fortune*.⁸ Inside, Tom Peters says, “People realize now that they really must do it to survive. Warren Bennis agrees: “Leaders must learn to change the nature of power and how it’s employed.” Like the Information Age, the new leadership has moved from Sunday supplement articles about the future to today’s reality and basis for survivability.

WL. Gore & Associates is a prime example of a successful organization that started with a dramatically different postindustrial approach to leadership. Everyone who works there is an “associate,” and everyone has a sponsor.⁹ Other examples, like Southwest Airlines, the young company that transformed itself during rapid growth, and Levi Strauss, a classic industrial icon that overcame all the constraints of a traditional enterprise, indicate that any firm can reinvent leadership.

? A new generation of leaders is being groomed. They come from a much more diverse pool, bringing vast cultural differences with them.

Biodiversity has a social counterpart in cultural diversity: The number of sovereign countries has nearly doubled in half a decade. Children in the Los Angeles school system speak more than 100 languages. There are more than 20,000 separate Christian denominations. Asian decision making differs from African; Scandinavian business meetings

are unlike those in Brazil. Highly collective societies, like Japan and Singapore, must trade with highly individualistic ones, like the United States and France. Russia rumbles relentlessly as its eastern neighbor, China, where one-fifth of the world's population resides, still clings to the 19th-century industrial invention of communism and the awesome bureaucracy that it spawned.

And even now, we haven't called out the force of women. Still locked out of the executive suite and the boardroom, women nonetheless dominate the new work force. Women manage differently from men. They balance different priorities, converse differently, reach conclusions through different routes, and, some scientists believe, even have different cognitive processes.

Organizations without diversity at the top will fail in the 21st century.

? New jobs and leadership roles are being invented to manage the burgeoning, bewildering webs of connections and relationships.

Coordinators, brokers, liaisons, facilitators, consultants, catalysts, linkers, matchmakers, and "netweavers"²⁰ all represent new types of jobs. Cohn Hastings, a London-based consultant who has looked extensively at new networking roles, has identified these in addition:

mentors, integrators, *animateurs* (similar to what Apple Computer once called "evangelists"), counterparts (liaisons), developers, investigators, and disseminators.²¹

The explosive expansion of connections breeds new types of jobs. But the jobs will not come easily. People don't want to pay for networking, which is all too often regarded as a "free" activity, not requiring compensation to remain economically viable. But "networking is not for free," as Ulf Fagerquist, a nuclear physicist and systems designer, told us long ago. Creative funding of these new positions will firmly establish this trend.

? The top will be the last to truly team. Some executives will continue to be embarrassments to their corporate change efforts.

“The true team at the top is still hard to find,” says Deborah Ancona, associate professor of organizational studies at MIT.²² It’s no wonder. Executives occupy the last bastion of vertical control. They are the designated officers in the owner’s army. Inescapably, they constitute the irreducible hierarchy in the organization. Executive teams always must vigorously manage the “bothland”—both executing hierarchical responsibilities whenever necessary *and* showing team leadership whenever possible.

LEAPING LEVELS

The fifth principle, integrating levels, is both the most conceptual and the most practical. Organizations will not survive in the Age of the Network without using it.

? Layer cutting just for the sake of cost cutting will destroy organizations. Team-networks work best across multiple levels.

Don’t get us wrong: relative to traditional steep hierarchy-bureaucracies, hierarchies in teamnets are much flatter. But in networks, each level of the organization requires its own integrity and source of self-reliance. Members at each level have a characteristic independence and range of purposeful decision making.

One company that embodies the careful use of levels is Asea Brown Boveri. With a quarter of a million employees in over 140 countries,

ABB has just five levels of organization: teams, profit centers, companies, countries/business areas (which house its matrix), and an executive committee.²³ Each level has its own economics and management integrity from a business point of view, with its appropriate purposes, loyalties, and scales of operation.

*? Single-solution approaches to management
are out; more holistic, integrated views are in.*

Complexity makes a mockery of “magic bullets,” “quick fixes,” and “one size fits all” solutions. As complexity becomes more manifest, people are adapting creatively. They adopt strategies that lead to greater awareness of how all the elements of their businesses interrelate.

Everyone in the enterprise needs to be aware of the whole, not just the few at the top. Even key customers, suppliers, and other significant external partners need companywide knowledge to be effective contributors. At the same time, companies need more creative models to protect the privacy required for competitiveness.

ON HOLONOMY

Bill Miller has seven desks at home. The director of research and business development at Steelcase, Inc., the Grand Rapids, Michigan, office furniture company, Miller has visions of “body-mounted” computing. He asks questions like “How do you network a billion things together?”

“I’m one of the guys who created local area networks like Ethernet,” Miller says to explain himself. Now he is thinking about how to help people work more effectively. So, he troubles over networks that are both self-configuring and self-diagnosing, about such topics as “ubiq-

uitous” computing, which means being able to be online anytime, anywhere. He predicts that before long, our desks will contain 10,000 electronic devices—at the microprocessor level. This may not be what you expect to hear from a company like Steelcase, the first to manufacture filing cabinets on a grand scale. Look at the company’s mission statement today, whose goal is: “to help people work more effectively.”

“We believe that there’s a major transformation in business management,” Miller says, “and it’s all based on holons.”

Miller works at the juncture of the physical, social, and information environments that people and groups inhabit. For Miller, the holon crosses conceptual boundaries of these different disciplines; it shows up quite concretely in the design of their office products.

At Steelcase, R&D represents another trend, that of *intellectual* development.

? Networking will accelerate the resurgence of interest in systems theory—both for its human touch and for its scientific approach to management.

“HOLONS” ARE WHOLES AND PARTS

Everything is naturally a holon, which means “whole-part,” hol-on. A holon is a whole that is also a part—like a person, an individual whole yet a social part; like a cell or an atom.

A company is a whole but is part of an industry. A department is a whole of groups, yet also part of a larger organization. A state is a federal part and a whole made up of localities. Families are parts of communities and wholes of parents and children.

Only at the extremes of quantum physics and cosmology are there (maybe) *smallest* parts/relationships and *largest* wholes/patterns; everything else is a holon.

The word “holon” was coined by Arthur Koestler, the giant intellect, artist, and scientist,²⁴ who wanted a small word to express a very big and somewhat awkward idea implicit in the nature of everything: systems within systems within systems. Herbert Simon called this principle the “architecture of complexity” (see chapter 3). For the architect Christopher Alexander, it is the foundation of “a pattern language” for design.²⁵ For Steelcase, it means designing modules within components within systems for people within groups within organizations.

Systems theory works across boundaries. It captures insights, principles, and laws that span both traditional sciences, such as physics and biology, and newer sciences, such as information theory and cognition.

But it’s hard to make the word “system” very popular. For good reason, people hate “the system.” It does nothing but aggravate them. Just think about going to renew your driver’s license, or trying to get a bill corrected, or, heaven forbid, having to engage with the legal system. Systems, in their common connotation, deserve their stereotypes as vast, impersonal, impenetrable, and too often inhumane. Indeed, people often confuse organizational systems generally with the apparatus of the traditional hierarchy-bureaucracy.

Networks are systems by another name.²⁶ They have the same cross-boundary, cross-science characteristics as systems. Instead of being “black boxes” with opaque boundaries, networks are “glass boxes” with translucent and transparent perimeters. The innards of networks are immediately evident and accessible to observers; they offer another language for very open systems.

Nearly a century after the revolution in the natural sciences begun by physics, the human sciences still are in desperate need of a robust conceptual foundation. The incredibly obsolete Newtonian framework is still rampant in human affairs. Systems theory, network style, offers a direct link to modern thinking in the natural sciences. Its conceptual architecture and practice incorporate the complexity and ambiguity required in the human sciences.

Systems theory is cross-disciplinary in the extreme.²⁷ There are now many general systems theories, each developed to explain large chunks of everything. In *Holonomy: A Human Systems Theory*,²⁸ Jeff

compares many of the prevailing systems theories in the search of their common patterns.

Many theorists—including great first-generation systems thinkers such as Bateson, Bohm, Boulding, Fraser, Forrester, Koestler, Laszlo, Miller, Polyani, Prigogine, Rapoport, Simon, von Bertalanffy, and Whyte—recognize one or both of two fundamental patterns in systems:

Levels and complements: Where there are system structures, there are hierarchies of levels. Where there are system processes, there are complementary relationships.

An organization as a structure has levels, from the entry one to the CEO, and is enmeshed in many more, larger levels. Whether small groups, hierarchies, bureaucracies, or networks, human organizations of all sorts are holon-archical. People and companies alike are holons, both wholes and parts.

An organization is also a system of processes. In business, we act in complementary relationships all the time: buyer and seller, customer and supplier, the law of supply and demand. These counterbalances underlie basic business processes and drive markets. Balancing (stabilizing) and reinforcing (amplifying) feedback loops are the stuff of systems dynamics.²⁹

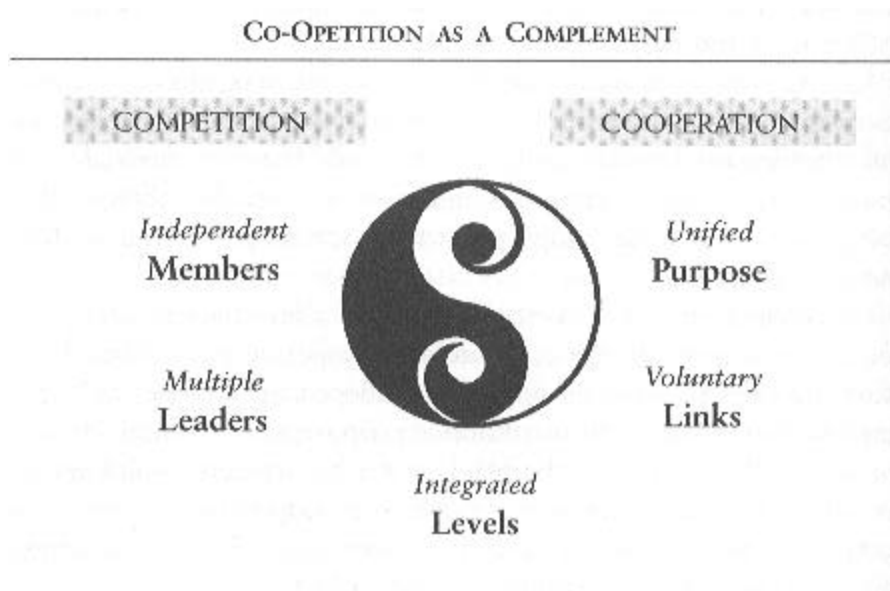
The ancient yin—yang symbol, which we adapt here to make the point, shows how we can compete and cooperate at the same time using the Five Teamnet Principles. As independent people, we compete; as a group striving toward shared purpose, we communicate and cooperate. By connecting the black and white centers, which traditionally remain separate, competition and cooperation become co-opetition, a holon in action, a dynamic expression of these concepts. The whole—part is fundamental to networking.

Structure and process also are complements, snapshots of persistence over time. Networks are the structure and networking is the process, sometimes particlelike and sometimes wavelike.

Our favorite example of levels and complements is, naturally, our own: independent and complementary as woman and man, we are a couple, another level. Our marriage perseveres through the chaos of our lives, our own “process.” In time, as a couple, we give birth to our daughters, Miranda and Eliza, another level (and in that order). With them, we form a new whole as a family, with additional dynamics of parents and children.

The dynamics of the person and the group churn in all human processes. “If you rethought the office from the ground up, and said that the team is the primary contributor, you would think of the office very differently,” said Mike Brill, president of a Buffalo, New York, think tank on office work and office design.³⁰

Like many other intelligent organizations, Steelcase demonstrates

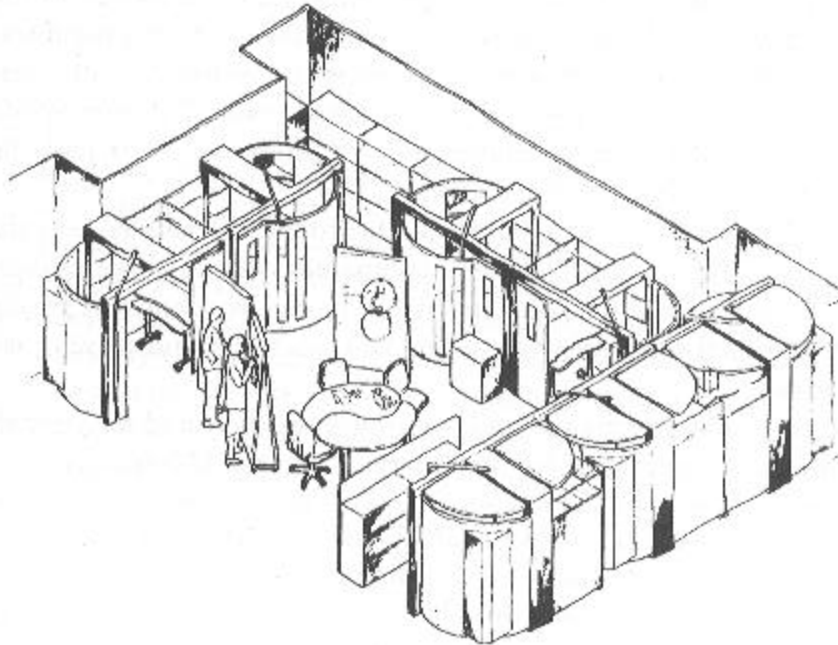


this profound understanding of both human and technology systems. Steelcase is stepping out of the Industrial Era, with its rigid caricature of a standardized person at a standardized desk, and into the Knowledge Era, where people work both independently and in groups, here and there, at a desk, on the phone, and with a computer, standing, sitting, and even pacing.

Steelcase's highly flexible teamnet furniture system puts an organization on wheels, meaning that each module—from the chairs to the white boards to the individual offices—is completely movable and re-configurable. Private spaces, which they call “personal harbor,” combine with public spaces, which they call “commons,” for ongoing teamwork)

In bureaucracy, public and private are separate. In networks, they are complements.

PERSONAL HARBOR™ AND TEAM COMMONS



SOUL SEARCH

One thought has tugged on us from the day we consciously began working on networks in 1979: values. What values motivate these new organizations? Unifying purpose is a focused, specific way of talking about values, which are diffuse and general. Values are very big and pervasive, and they give rise to the last trend.

? The search for soul will accelerate and move from the individual and family to organizations of all sorts and sizes.

People seek meaning in their life. Work is a big part of life, sometimes most of it. The search for values, held at bureaucratic bay by the strict separation of home and work, will continue to invade organizations. In the Age of the Network, the trend to integration with independence inevitably will lead to a more holistic view of all parts of life working together. The consideration of “family issues” is just one small part of integrating life and work.

“Soul” is a place holder for what Christopher Alexander calls the “quality without a name.”³² Vital companies with a culture of trust and openness have it. You can’t name it, but you know a strong organizational soul when you see it. You can feel it and sense it; it’s magnetic.

Networks bridge the self and the group, the daily and the eternal, the mundane and the sacred, and carry us into the 21st century.