
TWENTY-FIRST CENTURY ORGANIZATIONS:

FOUR PLAUSIBLE PROSPECTS



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Cover Art

Improvisors Fratelli Bologna led the participants in “A Line At A Time”—an exercise in which two people take turns drawing and naming a picture. This reinforces collaboration, teamwork, and letting go of control: organizational skills for the twenty-first century?

TWENTY-FIRST CENTURY ORGANIZATIONS: FOUR PLAUSIBLE PROSPECTS

Introduction

In November 1995, Global Business Network, in association with the Sloan School of Management at MIT, brought together 150 managers, faculty members, thinkers, and networkers, to consider the organization of the year 2010. This WorldView meeting, GBN's largest to date, grew out of an ongoing collaboration around the Sloan School's new initiative: "Inventing the Organizations of the 21st Century."

There is a hopeful premise at the core of this MIT project. In the turbulent global environment of the modern business world, there is enormous potential leverage in designing a viable, desirable model of the organization of the future. In fact, one way to "make a better world" or evolve a more enlightened society might be to consider more carefully how work can be best organized—at levels of activity ranging from the largest corporation to the smallest, networked, entrepreneurial business.

Once we accept the MIT premise, it still leaves us with two burning questions. First, what does it mean to make the world "better"? How do we know that our feasible models of the organization of the future are, indeed, desirable? Second, if they *are desirable*, how might they come to life? What plausible kinds of organizational change could help society reach the goals which we set for ourselves and our organizations?

GBN, as a growing network organization engaged in scenario planning work with many of the world's leading companies, was focusing on a slightly different dimension. "Perhaps," suggested GBN Chairman Peter Schwartz, "today's organizations simply are not working—and it's getting worse!" To Peter, the issue was not just how to build better organizations, but also understanding how the forces that drive change in the external business environment might interact to affect the organizational "self." What forces would shape the possible forms of new organizations, desirable or not? What forces might make organizational change inevitable during the next 15 years?

With this in mind, the meeting was designed around eight key themes, selected by GBN and MIT to illuminate the possible evolution and nature of twenty-first century organizations:

- Organizational Form, Design, and Purpose
- Coproduction and Customer Integration
- Knowledge Creation
- Networking
- Creativity and Entrepreneurship
- Technology, Organization, and Productivity

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- Culture, Values, and Diversity
 - Leadership and Power Relationships

For two days, most of the 150 participants gathered in workshops oriented around these themes. One subgroup developed scenarios for the organizations of the future, fed by the deliberations of the other theme groups. This collective work culminated in four clear prospects for organizational forms in the year 2010. While all four have dark sides, they are all fundamentally optimistic—each in a different way:

- Networks of communities and families in which organizations, abetted by computer technologies, are intimately entwined with the vernacular (personal and community) interactions of local and global humanity
- Corporate virtual countries, in which large organizations assume the form and responsibilities of a democratic, large-scale national government—including the election of managers by the workforce
- Tribes in which large-scale, durable, nongovernmental organizations purvey ideologies and attitudes with the same force that they purvey brand name products today
- “Roll your own” companies in which a plethora of organizational forms co-exist in eternal turbulence, often lasting no longer than a particular project, with the global electronic network providing most of society’s stability

This report is a snapshot of the meeting’s views, conglomerated and set into perspective with each other. As a result, this report is best treated as a kind of way station. The scenarios are not fully realized; indeed, they are probably scaffolding for a sharper, more intensive, more useful view of what corporations could be. Whether you were at the meeting or not, you undoubtedly have a conception of the future of organizations yourself. I have tried to set up this report primarily to spark your reactions, and the reactions of other people reading it. My aim is to draw forth concerns and considerations that have not been considered, so that together—as assorted managers, faculty members, thinkers, and networkers ourselves—we can develop our own shared sense of how corporations might change.

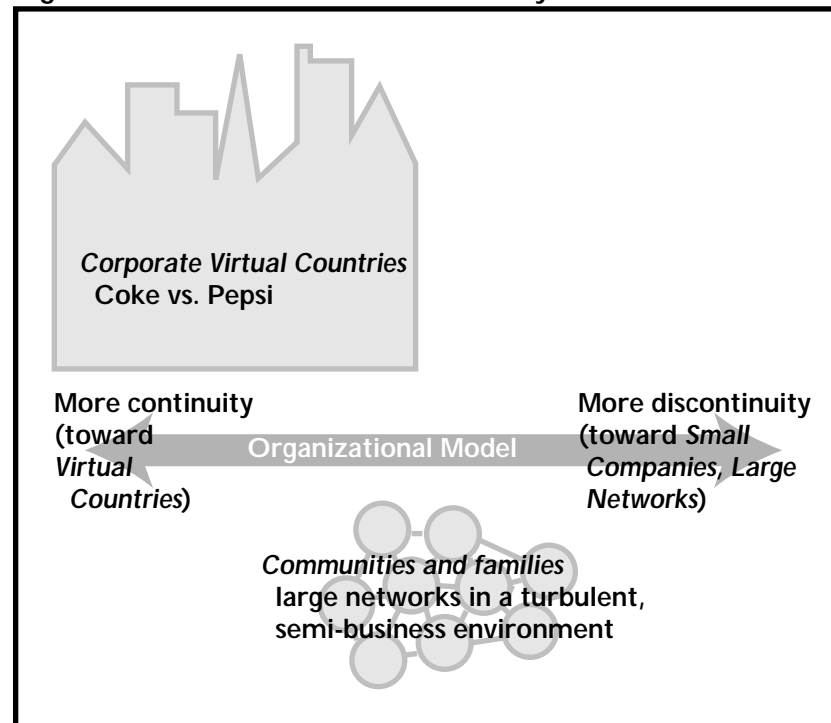
And of what value will that be? It could help inform decisions made within organizations today—particularly decisions that concern the deployment of information technology within the firm, or the way in which you undergo restructuring, or your investment in boundary-spanning relationships.

Wick Sloane (GBN consultant, and co-organizer of this WorldView meeting, at the opening plenary session): We gather as Yitzhak Rabin is being buried, a casualty of courage. We can’t succeed without taking great risks. Our success depends upon that kind of courage.

THE SEEDS OF SCENARIO WORK: TWO ALTERNATIVES

We didn't start from scratch. In 1994, a working group of MIT faculty, led by Tom Malone and facilitated by Peter Schwartz, had met several times over a one-year period. That group developed two coherent scenarios for desirable organizations of the future. These weren't full-blown portraits. They were seen as preliminary "seeds," useful as foundations on which to build more in-depth research. They organized themselves along a "continuum of continuity,"¹ as Figure 1 illustrates:

Figure 1: The Continuum of Continuity



The horizontal axis represents the degree to which institutions expect longevity: the degree to which they expect to remain in similar form, and the duration of their influence as organizations. The further to the right, the more flexible, temporary, and freewheeling organizations may be, often staying together as an entity only for the duration of a project; the further to the left they are placed, the more the organizations become stable, enduring, and focused on maintaining their distinct identity. In practice, because size comes with longevity, organizations in worlds at the right would tend to be smaller than organizations in worlds at the left, but there is no absolute reason why this must be so. Organizations of thousands of people might emerge and last for only a couple of months or a couple of hours in the

¹ Actually, the original continuum was based on the size of organizations. A world of large organizations would be "virtual countries"; a world of small organizations would be "small companies, large networks." However, at this WorldView meeting, participants reframed the distinction as I describe it here.

world of the right, while in the world of the left, a brand name might be maintained for centuries by an organization of just a few people, armed with computers and enduring relationships.

Scenario One: *Small Companies, Large Networks*

It is now the year 2010...

The corporation of the late twentieth century was just a transitional form. It lasted more than one hundred years, but few corporations of that form remain today. Now, looking back at the “dinosaur” era in which General Motors, Microsoft, and Sony stalked the earth, we are most aware of the tiny “mammals”—entertainment production companies, construction project teams, and consultant work-groups—which operated without much public notice back in the 1990s, only to become the prototypes of today’s modern organization.

Today, nearly every task is performed by autonomous teams of one to ten people, set up as independent contractors or small firms, linked by networks, coming together in temporary combinations for various projects, and dissolving when the project is done. Consider the design of automobiles: in a typical project, a variety of independent firms form competing coalitions to explore alternative designs for the electric system, the chassis, or the task of putting the car’s subsystems together. Some of these firms are joint ventures, some share equity, some are built around electronic markets that control prices and wages. All are autonomous and self-organizing. All gain their stability from the ubiquitous, high-bandwidth, transaction-heavy, electronic network that connects them to each other.

Authority is still evident, but not through commands. A small “Chevrolet-Saturn” central company still has senior people who exercise their judgment by choosing where to invest their R&D, marketing, and production capital. But groups also try wild-eyed ideas that turn out to be very successful (and financially rewarding for their participants). For instance, one team of four people created a factory for nano-engineering individualized lighting systems for each car’s grille. They bucked conventional wisdom when they built it, and all became millionaires in the process.

The world would be lonely and unsatisfying for everyone if all interactions were contractual. Therefore, we are all fortunate to have independent organizations for social networking, learning, reputation building, and income smoothing. These evolved from unions, fraternities, clubs, and churches; many are similar to the writers’ and actors’ guilds of Hollywood. They help people to save for retirement, and most pay a percentage of their income to their “guilds” as a voluntary form of unemployment insurance.

Big and small companies exist in this world, but very few are permanent. Some organizations (backed by long-term investors) focus on long-range research and far-sighted visioning; others exploit momentary market opportunities on a second-by-second basis. Together everything emerges from the natural activity of the network. The most successful entrepreneurs manage, time and again, to be in the right place at the right time, just long enough to broker the deal, and be a focal point for resources—quickly, before the game shifts and opportunities pop up elsewhere. Some of the most desirable employees are fast learners who can manage other fast

learners. Everyone in the working world knows the basic skills of new management: how to collaborate, negotiate, broker deals, set up a team, budget and meet budgets, facilitate meetings—and, above all, how to use the network effectively. Social services and charity are all built around the network. We all know that our quality of life is maintained by continuous investment: if we don't keep giving back, we'll all suffer in the end.

Most of us are very happy living this way. But there are some people who fall prey to “instability sickness” or lack facility for using the network. Their projects get out of control; they are emotionally dependent on mentors and partners. They lack what 1990s writer Daniel Goleman called “emotional intelligence”—the group of skills involved in managing ones emotions, and developing the capacity for empathy, self-sacrifice, and self-control. Most people in a networked world have learned that such skills are necessary for survival. Security depends, after all, not on intelligence or even competence, but on relationships. (Relationships, in turn, may depend in part on intelligence and competence, but emotional skills are paramount.) Most of us know that although we do not know what will come our way tomorrow, the network will provide for us somehow. An opportunity is just around the corner, as certain as the next glider-bus rolling into the station.

Scenario Two: *Virtual Countries*

It is now the year 2010...

The huge global conglomerate has emerged as the dominant way of organizing work. These *keiretsu*-style alliances, each with operating companies in almost every industry, have minimal national allegiance. Members of the same family work for Sony-Microsoft or General Electric-Toyota, and feel little loyalty to the United States or Japan. It would be considered disloyal and unusual for members of the same family to work at competing *keiretsu*. The alliances meet all our needs on a cradle-to-grave basis—income and job security, health care, education, social networking, and a sense of identity. Our organizations are as powerful and influential as nations, and we owe allegiance to them. They have no dominion over our land, but they control our much more significant assets—access to knowledge, the networks, and our livelihood. They even wage war on each other—using lawyers instead of armies, valiantly protecting the trademarks of our company.

These days, if you want to define me, you can ignore my geographic location; I can be stereotyped according to the company I work for, in whose service I expect to retire. My friends and family members from around the world all work for the same organization. Occasionally, although I work for Shell-Daewoo, I must ride a non-aligned airline, and I run across someone from Exxushita. We always converse, full of curiosity, but guarded—taking advantage of a rare opportunity to see ourselves as others see us.

Just as the nations of the twentieth century ultimately turned to democracy, the corporations of the twenty-first century have all moved to representative governance. Employees own them, through pension plans, stock options, employee participation contracts, and other vehicles. Shareholders have the right to elect the managers of the company, not only at the board level, but at almost every level throughout the organization. Decisions are made hierarchically, but every year, on

election day, we choose from slates of managers who vow to do the best job for the company as a whole. Since our livelihoods depend on the choice, nearly all of us take advantage of our *keiretsu's* “open-books” financial reports, which provide a constantly updated overview of the business’s priorities and assets.

Some people think of this system as paternalistic and bureaucratic. But actually, there is very little “fat” in the system. Nepotism, ossified command structures, and sinecures don’t last long, since everyone benefits from improved performance. Specialist “organization designers” travel through the massive alliances, brokering partnerships and helping make sure that people communicate effectively across boundaries. All of us tend to get along, because our companies tend to attract people who agree with the prevailing attitudes. We all know the “Shell-Daewoo way,” and we live and die according to it.

THE LOGICS THAT DRIVE THE SYSTEM

Back to 1995...

Are either of these scenarios—*Small Companies, Large Networks* and *Virtual Countries* plausible? Are other desirable organizational scenarios possible? We came to the conclusion that the answer depends on the prevailing structure of the global environment. At this meeting, six key logical structures emerged as significant. Each of them embodies a paradox which threatens to rend our own world apart. How we deal with these contradictions today will help determine the type of organizations that exist tomorrow.

Information Wants to “Lock in”—But When?

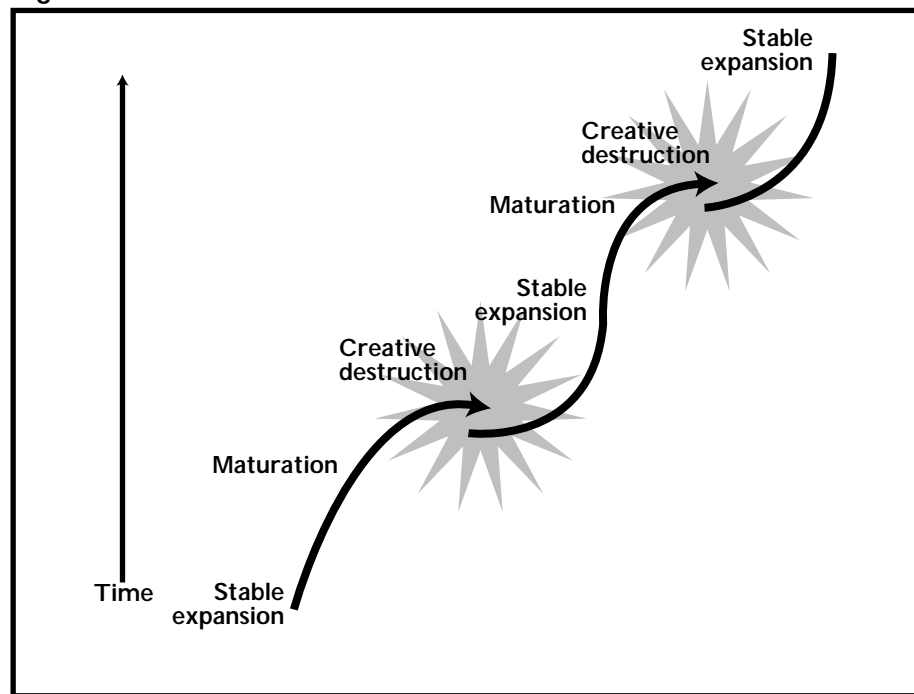
Consider the ferocity of Moore’s law—the law of increasing computer-telecommunications capability at decreasing cost. In 1976, a Cray 1, capable of 160 million instructions per second, sold for \$20 million. In 1995, a MicroUnity controller, designed for the top of a TV set, had six times the computing power, and sold for \$500. The number of commercial sites on the Internet, in the meantime, is growing at a rate of 10 percent per week. No business has ever grown that fast before. In such a world of explosive technological change, we may never see stability again. Or we may see definitive stability—a freezing of innovation in the computing-communications arena—before the end of the decade. It all depends, not on technology per se, but on a cultural factor known as “Lock-In” (see Figure 2).

Lock-In occurs when technologies or organizations reach a level of consistency and standardization that is extremely difficult to change. Often, Lock-In is not propelled by technological factors, but by the overwhelming force of a prevailing cultural pattern. The QWERTY keyboard (a familiar example) came to the fore during the early years of typewriter design, when it was necessary deliberately to make the keyboard difficult, to slow down typists and prevent them from jamming the machines. But once a critical number of people had mastered the pattern, it couldn’t be changed; the market would not permit new innovations. Other examples of Lock-In include

the Bell System telephone network; the electric power grid in most nations; the NTSC and VHS video standards; the existing formulas for return on investment (which, once adopted by a prevailing number of auditors, could not be ignored); and the Bretton Woods financial agreement. Although Walter Chrysler greatly admired Buckminster Fuller's aerodynamic car in the late 1930s, Chrysler's bankers would not let him produce it, for fear it would devalue the existing stock of used cars in dealer showrooms—a concern born of pure Lock-In.

When Lock-In occurs early, technologies freeze in their development. Novices find it easier to use the machines, and development focuses on incremental improvement. By stabilizing the kinds of products available, Early Lock-In may increase the probability of more stable organizations, as in the *Virtual Countries* scenario. And, indeed, Early Lock-In was a critical factor in the standard model of economic development, as proposed by economist Joseph Schumpeter. The economy moves from one wave of stability to another, punctuated by brief periods of convulsive change which Schumpeter called “creative destruction,” where all the economic roles were briefly in flux.

Figure 2: Lock-In



When Lock-In occurs late, or not at all, a state of Perpetual Transition may develop (See Figure 3). Growth continues at a fast pace; the field is rich with opportunities for gain and loss; there is constant pressure to downsize and cut costs, and investment careens wildly from one outlet to another. Consider the various cellular telephony standards in the U.S. A shopper must ask: “Should I buy analog or digital? What company will I take a chance on? Or should I simply buy the cheapest system I can find, so I can change more easily when the ultimate standard finally locks in?”

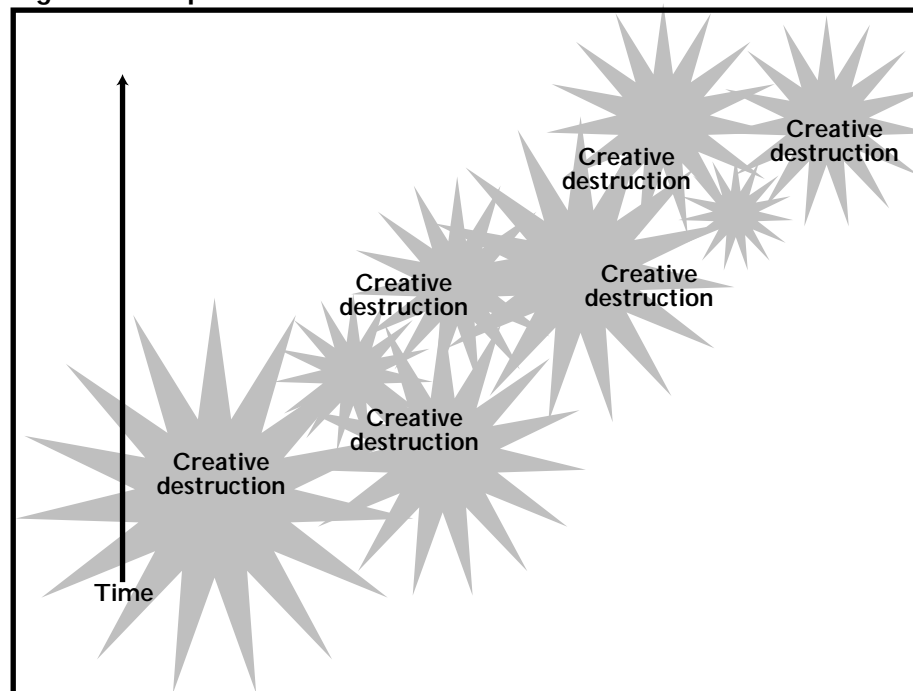
A late Lock-In, by leaving products flexible, may increase the chances of flexible organizations as in the *Small Companies, Large Networks* end of the continuum.

Essentially, as Peter Schwartz suggested at the meeting, Schumpeter's model of economic transition gives way to another model, in which the period of creative destruction never ends.

Peter Schwartz (GBN chairman) describing this logic to the participants: This is the scenario everybody fears: collapsing structures and Perpetual Transition. Organizations will be unable to capture the value of their investments. There will always be new competitors. People can't plan for the future, their retirement, their children's education. They're anxious. A recent survey showed that 35 percent of the college graduates with degrees do not expect to get a good job. In such a world of explosive technological change, we may never see stability again.

Moreover, Perpetual Transition could be devastating for environmental reasons. Planned obsolescence would not just be a marketing strategy, but a fundamental feature of all technology. It would be absurd to build products to last, except for the most basic commodities, because most of them would be replaced in a few years.

Figure 3: Perpetual Transition



Riding such waves of change would represent an enormous challenge, both for institutions and society. Yet, can we imagine an alternative? In a laissez-faire political environment, with our current rate of technological progress, is it plausible to imagine a period of Early Lock-In? If so, that might encourage corporations to form alliances for their own preservation—and possibly move toward the “virtual countries” future, or to some other future altogether.

What Value are Human Values?

There is a values crisis in corporations today, recognized independently by a startlingly large number of participants in separate “breakout” groups. Tom Malone suggested in one breakout session that this crisis manifests itself in the “counterfeit heart” syndrome. An organization’s senior managers espouse that “people are our greatest asset,” while their actions and decisions convey the idea that they will readily sell out the firm’s employees and customers if it means a rise in the share price.

As a result, Peter Schwartz noted, “There’s a perception that the system is no longer working for most people—as employees, as voters, and even as consumers. People are annoyed. They’re showing their crankiness in lots of different ways.” They are more persnickety consumers, more abrasive shareholders, and more argumentative employees. Within organizations, people are demanding a greater sense of fair play and opportunities to realize their own aspirations within their work: to bring their work lives and personal lives together. They want to belong, and to feel as if they’re in a community. Some managers have moved so far to promote values that they are accused of fostering cults—a sign that people in organizations have not found effective ways to balance the drive for performance with the soul of work.

As Francis Fukuyama has recently written, the ability to trust others is a cornerstone of human progress; society cannot function flexibly without it.² Where, then, will trust come from in organizations of the future? Interestingly, both of the original MIT-GBN scenarios implicitly depended upon trust and openness—within the boundaries of *Virtual Countries*, or throughout the world in *Small Companies, Large Networks*. Where would trust come from in a network world? From the dynamic ubiquity of information on the Net. Secrecy would be much harder to maintain, particularly when it involved destructive abuses against relatively powerless people. News would travel too quickly, in too fine-grained a fashion. Abusive experts—the Stalins of organizations—would no longer rise in hidden hierarchies, because all hidden machinations would, sooner rather than later, be made public. Science fiction writer John Brunner eloquently foreshadowed this idea in his 1970s novel *The Shockwave Rider*.

However, it is impossible to guarantee that human values will take hold in the corporate environment—either in a network-oriented world, or a world of *Virtual Countries*. A fundamental contradiction is at work. On one hand, people are unique and not interchangeable. On the other hand, there will probably be eight billion people in the world by 2015.³ About one billion of these people will live in the current “developed” world. Presumably more than one billion, worldwide, will work in organizations and thus, in effect, support the rest.

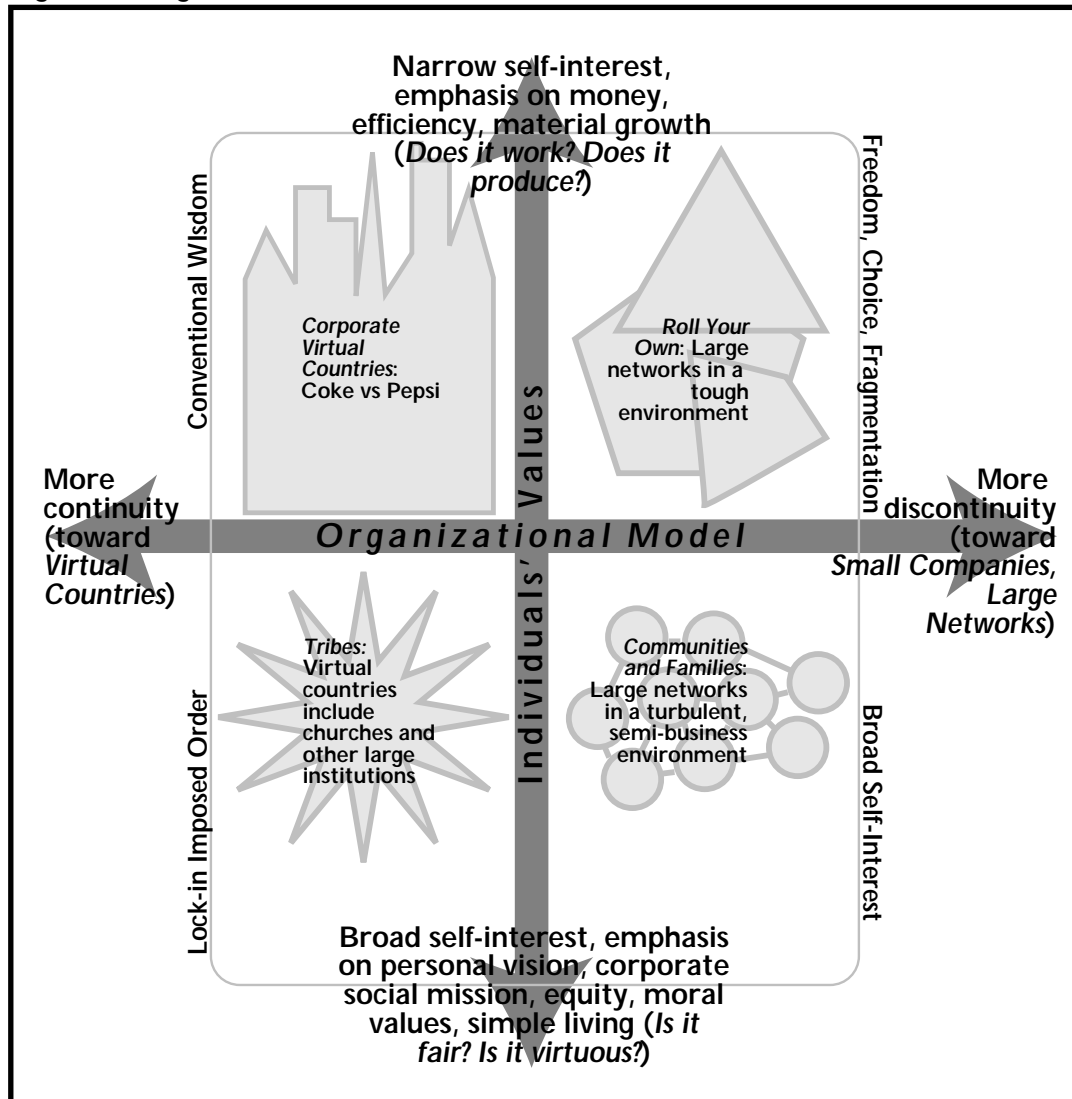
What will the members of this workforce want? What values will they hold? Specifically, will they conceive of their self-interest narrowly? Will they try to get as high a standard of living for themselves and their families as possible, at the expense of the rest of the world? Or will they conceive of their self-interest broad-

² Francis Fukuyama, *Trust: The Social Virtues and the Creation of Prosperity* (New York: The Free Press, 1995).

³ According to projections by the United Nations, quoted in the Netherlands Central Planning Bureau, *Scanning the Future* (The Hague: Sdu Publishers, 1992), p. 103.

ly? Will they see a systemic connection between their prosperity and well-being and the prosperity and well-being of everyone around them? It is impossible to predict—but the results led the group to overlay another continuum for “individual values” over the first continuum, and create a matrix of four possible corporate futures (See Figure 4).

Figure 4: Organizational Forms and Individual Values



The futures at the bottom, with broad self-interest, are plausible because of a shift in the way people think of issues like social mission and simple living. These were once considered political concerns. Now, they are personal. They affect not just voting and political association, but the activities of commerce: what people buy, where they choose to live, and how they seek employment. And they can be very powerful. Management professor and writer Rosabeth Moss Kanter, shortly after the Berlin Wall fell, suggested that the Soviet bloc was collapsing because “people in Eastern Europe want to go shopping.”

At the “broad self-interest” end of the values continuum, corporations would feel moved to resolve their “counterfeit heart” problems—to close the gap between their espoused values and the real behavior of the business. This would come from enlightened self-interest: only by reflecting higher values could they attract the best employees and customers. As Scottish Enterprise’s Eamonn Kelly put it, companies would become “strange attractors” for human values: drawing people with resonant attitudes and reinforcing those attitudes more sharply as teams of people work together. “Come work for British Airways,” the recruitment ad might read. “We value creativity.” Or, “Come work for Lotus Development Corporation, where we won’t lock you into a lifetime of employment.” Already, GBN member companies have begun initiatives to be “green” simply because their employees want to be part of a green company.

Different value sets would attract different types of people—not just as employees, but as customers, suppliers, and investors. With the greater availability of information about companies, people could more capably assess the values of the organizations they involved themselves with. Gradually, corporations will be expected to live up to an increasing number of responsibilities:

- To promote cultural diversity
- To recognize regional interests and cultures
- To produce higher-and-higher-quality goods and services as consumers become more discerning
- To provide all employees with opportunities to realize their aspirations at work

This imperative may not be all-encompassing; it will probably never be strong enough to compete with the pressure to provide high return on investment to shareholders. But it will be increasingly pervasive, and it will not go away. Nor will it be satisfied with substance-free public relations. Nor, in fact, will the imperative be satisfied with slippery talk about “values.” After all, the quiet businessman or entrepreneur may contribute much more to the public good than a loud espouser of “good values.” Value shifts, to be effective, are personal: they depend upon people making small shifts in their attitudes, and thus in their day-to-day behavior. However, small shifts, magnified in the corporate hothouse, could lead to dramatic changes in the culture as a whole. For example, a few people would be moved to find ways to develop patient (long-term) investment capital. If the world moved lower on the continuum, economic growth might move faster in the developing countries of the world.

"It doesn't surprise me," said GBN principal Eric Best, "to hear talk about human values here. The same issues kept coming up in GBN's earlier meetings on the evolution of the global economy. We're all trying to articulate an understandable code of human values that goes beyond Adam Smith and gets us into the next century."

Perhaps that's why I feel compelled to add this personal note of inquiry to the report. Even within the conference, even with all the talk about values, a wide variety of opinions surfaced about what those values might mean. To some, like Eric, the values matrix represented a sort of economic-ethical manifesto: "Just as communism had to confront its internal contradictions, the capitalist market system has to confront its internal contradiction—its assumption that everyone pursuing their self-interest could actually fulfill it in a diminished-resource world where the use and abuse of the environment would eventually catch up to us."

To others, like former Royal Dutch/Shell scenario planner Kees van der Heijden, the concerns about "values" seemed abstract and distant—separated from the drive that pulls people into business in the first place. Kees took part in a breakout group assigned to brainstorm the "most successful public offering of the year 2010." They imagined a company called "Under Your Skin": people could buy the DNA of celebrities to inject into their own children. Suddenly Kees noticed that they sounded like entrepreneurs—"fully switched into a problem-solving frame of mind," he said later. They pounced with glee on each others' ideas, thinking of products, producing a plan for going public, developing a company as if it were real. Who cared about the "values" of this product—or even about scenarios? These people were swept up in the "real" task of business: to make something, to do, to create, to achieve. To Kees, the episode reminded him that this type of "business" mindset had been curiously absent from the meeting.

There may indeed be something animalistic about the business mindset of "making and doing," something antithetical to "social values." In its grip, we forget about anything but our immediate goal, and we ravenously devour whatever we need to consume. Indeed, the force behind business success probably depends on this raw, vital, and probably amoral charge. Concerns about "social values" seem irrelevant, glib, and superficial by contrast.

Yet there is also something noble about the idea of civilizing business. Business after all, provides the economic buttress that makes civilization possible. That's why the talk about values at this conference seemed glib and superficial at times to me. If we care about the future of organizations, we need a deep, sophisticated, and heartfelt understanding of morality and human purpose. How do we cast the animalistic force of business enterprise in an appropriate role for the future? Should it be welcomed? Should it be controlled? Should it be left alone, to play out its destiny in systems of emergent values? Or should that life-force be wooed and tamed, tapped to serve the human race as a whole, instead of merely producing the sheer joy of individual self-fulfillment?

—Art Kleiner

In a Global High-tech Economy, the Only Sovereignty is the Ability to Shift Money

Corporations are bound by the capital available for growth. Their ability to raise funds determines how they can organize themselves, and what values they may adopt. Hence, investors' demands remain a critical driving force for any scenario involving corporations.

There is not much to report from the WorldView meeting on this driving force. Doug Carmichael of the Metasystems Design Group, however, raised the issue of investor influence as a potentially dire driving force. In recent years, he suggested, capital has tended to become rootless and exploitative. Would it continue to move to high-yield, high-risk emerging nations? If so, it would draw labor and opportunities out of developed nations at higher and higher rates.

The "Four-Billion-Woman March," and Other Pressures from the Bottom Rung of Maslow's Ladder

Before the industrial era, communities and families were the primary source of stability. Then government increasingly assumed responsibility. Now, explicitly or implicitly, nearly all the participants seemed to assume that the role of government in providing safety nets would decline. The "haves" of the middle class would turn to large organizations (or to networked organizations) for their emotional and community stability. The "have-nots" could feel increasingly disenfranchised—politically, economically, and in opportunities. Brazil-based oil and gas consultant Ben Edwards told his fellow working group participants that, in Brazil, roughly 60 percent of the education budget goes to wealthy children and 20 percent goes to corruption. Only 20 percent of the budget is available for schooling the country's 14 million poor children. When social order breaks down past a threshold of acceptability (except within the corporate enclaves), he asked, how will the world cope?

Currently, the pressure of job creation is a key driving force in the corporate world. The large corporation is a transition tunnel, through which people in developing nations emerge from the non-money barter economy into the monetary economy. In Brazil, labor leaders have pinned their hopes on corporate investment, assuming that it will provide jobs.

But corporations will never guarantee jobs merely with their presence, as they did in the 1950s and 1960s. In a world of distributed decision-making, as in the Net, no one will feel responsible for creating jobs; and in a *keiretsu* or "Virtual Country" world, corporations are unconcerned about the people outside their boundaries. Outsiders remain a vast group of "untouchables" in either case—literally untouched by communications capability and opportunity. Will they exist in silence? Or will they rebel?

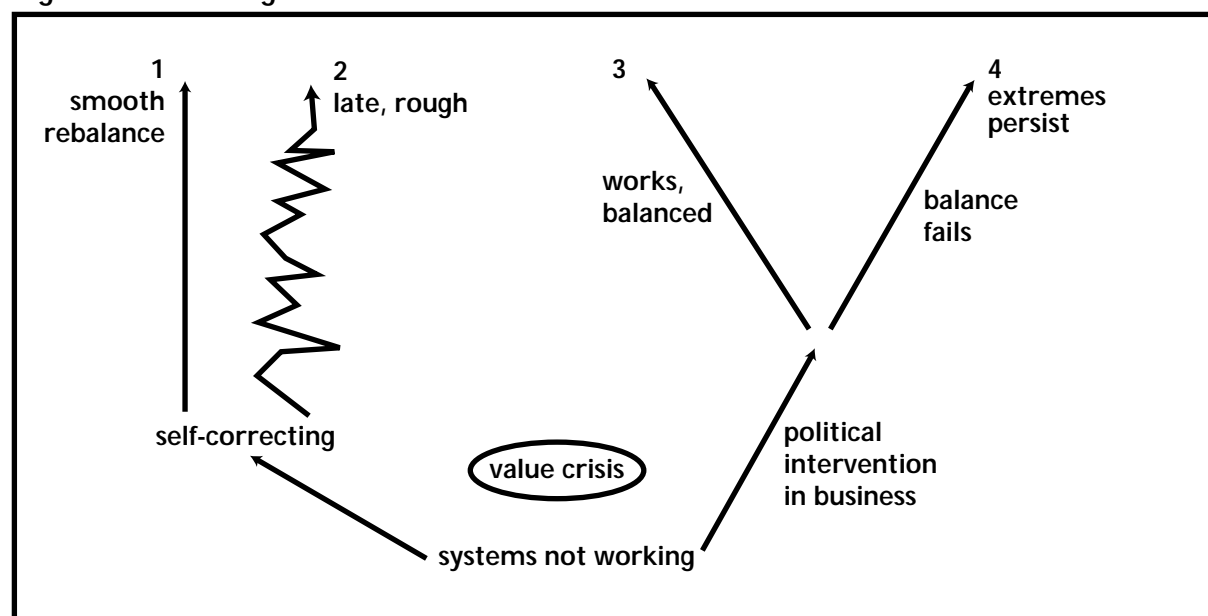
One working group saw the rise of a populist conservative right-wing movement: Pat Buchanan on a global scale. Another group imagined the "four-billion-woman march," gathering together the disenfranchised women of developing nations

everywhere. “They’ve been docile for centuries; perhaps we should rely on that docility continuing. Or maybe it will burst.”

Esther Dyson (editor of *Release 1.0* and GBN Network member): You can redistribute land or money, but you can’t redistribute education or information as quickly—it’s a much longer process.

Will business organizations generate sufficient economic growth to spur a continual rise in the world’s standard of living? Or will institutions fail to generate wealth for a broad cross-section of people, so that society falls prey to tension? One working group posited a series of possible geopolitical alternatives as shown in Figure 5.

Figure 5: Searching for Balance



Today, the system is not working; the imbalance between haves and have-nots is drifting dangerously toward what former Shell planner and GBN Network member Ted Newland calls “Colombianization”—a world of vast numbers of hopeless poor, with the world’s wealthy middle classes cowering within heavily policed, “gilded cage” communities.⁴ Colombianization gives us an image of a world spinning quickly out from under the middle class; a world of aristocrats and indigence, a world which is probably, in the long run, incompatible with democracy.

In Futures 1 and 2, the system would be self-correcting. Through market forces, economic growth would trickle down to create a more equitable rebalance of wealth—either quickly and smoothly (Future 1) or roughly, after a period of turmoil (Future 2). On the other hand, perhaps there would be a large-scale intervention, to produce a universal social safety net. Since we did not consider any scenario

⁴ “The High Road,” unpublished manuscript by Ted Newland and Edouard Parker, 1992.

plausible in which government successfully makes this intervention, we thought it would probably take the form of some new type of business concept, perhaps local investment communities sponsored by various large-scale corporations or organizations. If the interventions worked, then (Future 3) there is a stable environment; if not, Colombianization would hold sway.

Corporate Structure: Stability Through Diversity

Hierarchies will continue, but there is ample reason to believe that many new forms of organizational structure, evolving today in experiments around the world, will coexist in the year 2010. “It is not obvious,” said Tom Malone, “that there will be a single dominant model of organizational work in the future.”

Peter Schwartz noted that every company he knew was undergoing an enormous amount of ferment in redefining their structures: “Reengineering, reinvention, restructuring, repurposing.” Every time there was a shift, managers would ask themselves: Have we finally got it correct this time? Can we be stable—or will the management consulting bills keep coming?”

The largest, most influential organizations, in a world of diverse organizational forms, would not control their destinies by giving orders. They would be like queen ants in an ant colony, incubators of new activity who live off a large number of “worker ants”—small suppliers who cannot fulfill their own needs alone. The “worker ants”—whether divisions of large companies or networked small companies—might take a variety of forms. Outsourcing relationships, coproduction (joint production ventures), employee stock ownership plans, third-world barter networks, cooperatives, Internet fanzine-publishing collaborations, renegade business units, learning organization efforts, even McKinsey-like consultations: any of these may become the seedbed for new organizational structures.

Karen Stephenson (anthropologist-human resources expert and GBN Network member): A network is primarily [a form in which] entities, whether they be groups or individuals, relate to each other—the focus is really on relationship. They can be formal or informal. Typically, networks have a purpose or a qualifying condition and work best for knowledge creation or transfer. There's a sense of reciprocity, but it's not necessarily quantifiable. And scale matters.

One likely form is the “virtual region”: an organization composed of expatriate Chinese (for example), interacting around the world like an extended clan in diaspora, speaking a language unknown in their host countries. Another possible form is the ambassadorial outpost. Today, the head of Shell Malaysia is a very powerful man in Malaysia. The manager of a local plant for General Foods, located in Kansas, lunches regularly with Bob Dole and Karl Menninger. In the future, such ambassadors might exist in relative isolation, with no company or plant to back them up—only a perennial need for subcontractors, and the status of being the representative of a far-off brand name. Eric Best suggests that AIDS may be fought in Africa by collaborative ventures of corporations and non-governmental organizations, specialized to meet the needs of regions beset by the disease.

Organization consultant and Network member Charles Hampden-Turner described the “inquiring cluster” as a prototype of companies. The Italian leather goods industry in Tuscany, and the Teletch Park in Singapore are two models. In both cases, organizations cluster together because they foresee that they will prosper together. “They are open to experiment,” Hampden-Turner said. “They have ‘coopetition’: they compete but share information. Everybody bids up everybody else’s standards. Companies demand higher standards of quality from suppliers and subcontractors. The organizations are temporary; they break up as soon as the job is done. On the other hand, because they are assembled from the same pool of people, in every third or fourth group you meet your old friends.” In an inquiring cluster, information is stored in relationships. Each member knows whom to bring in to retrieve the knowledge they need. Top management doesn’t give orders; it asks questions and sends self-organizing teams out to find out the answers.

Much depends on how experience defines the effective size of a work group. If the effective size is small, it makes small, networked organizations more viable. If large-sized workgroups are needed for large-sized projects, such as semiconductor development, that suggests *Virtual Countries* or some other large-scale durable organizations may become more prevalent. Firm size itself may become less important: inside *Virtual Countries* there could be networks of *Roll Your Own* companies (see Figure 4). At the same time, new technologies may render firm boundaries obsolete. In the future, for example, there may be only a few huge clothing manufacturing firms. Clothing will be custom-designed by thousands of individual designers, but few companies will actually manufacture all the clothes.

New organizational forms will undoubtedly include coproduction, a key theme in this conference. Coproduction simply means: People from different organizations working in the same room to make something together. In coproduction, there is no “supplier” distinct from an “assembler” or “purchaser.” There are only collaborators. “If you manage coproduction well,” said scenario planner Adam Kahane in a report on the coproduction syndicate’s work, “then there are mutual self-interests among the coproducers, and you have a win-win situation.”

Coproduction has been much lauded in theory: the principle is encouraged by many of the global environmental trends, such as the increases in uncertainty, risk, complexity, and specialization. But, in practice, these arrangements tend to fall apart. A large car manufacturer might establish a long-term relationship with a headlight supplier, but there will be constant temptation to undercut them and get a better deal.

“Forces restricting coproduction,” as Kahane’s workshop group put it, include the “loss of freedom, the loss of autonomy, the loss of independence, the loss of power, the dangers of liability, the loss of accountability, the cost of maintaining relationships.” The principle cannot tolerate a win-lose attitude as a foundation for business relationships.

Adam Kahane: What would it take to keep the marriage of coproduction going, recognizing the forces against it? Over and over, we came up with the importance of shared values—a history of working together, a common culture, language, understanding, and ability to manage the interdependence. In summary, what is needed is a different kind of leadership: the capacity to lead in a non-hierarchical way.

Knowledge is Unmeasurable; Yet it Must be Bought and Sold

One of the working groups, charged with thinking about “knowledge,” came up with this story (among many others):

It is the year 2010. Everyone who applies for a job must take the “Knowledge Certification Test,” an international standardized exam, tailored for every profession. As a budding futurist, ready to be hired by the megaconglomerate “ABB-Nissan & York,” you would sign up for a general test in the morning, and a specialized “futurist” exam in the afternoon. Of course, the results would be specious—no one can measure the knowledge of a futurist, or of any other profession—but there would nonetheless be immense pressure to score well. For six months before the test, you would have spent three evenings a week and all day Saturday at a cram course, where underpaid proctors would drill you: “What was the name of Herman Kahn’s first book?” Or, “Explain four different approaches to gathering information for scenario planning.” Or: “Using the following series of equations, estimate the potential likelihood of storms in Madagascar in 2030...”

It is predetermined that knowledge will become an increasingly valuable commodity. In an optimistic future, therefore, what can be done to make sure that organizations structure themselves to take advantage of knowledge-work in an effective and fair way? The answer probably depends on the ability of managers to recognize the key component of knowledge—a tacit, indefinable quality.

People are unique, in part because of the rich mine of tacit knowledge that each of us has built up since childhood. This is the knowledge we have in our bones, the knowledge that comes from experience. It is not “data” (raw, partial facts); nor is it “information” (signals with meaning). It is assimilated experience that can produce action. It’s hard to convert data into knowledge: knowledge tells you what to do.

One significant distinction: tacit knowledge is embedded within individuals, below the conscious surface. It is difficult to communicate, in part because it is bound up with our deepest mental maps and our emotions. Explicit knowledge is more communicable and easy to articulate. And a punch line: organizations cannot depend on sharing explicit knowledge. They must find a way to bring tacit knowledge to the surface, or they cannot learn in any effective way that leads to new action. So goes the theory broached at this meeting.

But the theory makes sense. Consider how difficult it is to “know” New York (or any other city) merely from reading a guidebook, or a shelf full of guidebooks. You can only know a city from living or staying there, learning its manners and byways, exploring its attractions and restaurants, and (ideally) trying to communicate some of your knowledge to others. “Your tacit knowledge,” said Scottish Enterprise strategist-facilitator-scenario meeting designer Eamonn Kelly, “will tell you which places you don’t go into at certain times, and which places you don’t go into at *any* time.” Even then, your knowledge—of New York, or of your organization’s environment, or your professional theories and methods—will be different from someone else’s knowledge of the same subject. True collaborative knowledge occurs when you can compare notes honestly and openly, without fear of retribution or embarrassment, because knowledge creation depends upon the ability to develop new cognitive associations—links within the mind, between facts, perceptions, memories and observations.

In itself, however, tacit knowledge is not enough. Most technology was developed according to traditional scientific methodologies, which are deductive, explicit, articulated processes. People take this type of knowledge for granted these days; the “knowledge” working group actually forgot about its existence until halfway through the meeting. “The traditional approach to knowledge creation,” said Kelly, “has always involved a tremendous amount of communication, conversation, sharing of language, sharing of ideas, and cross-fertilization. But the perception of that is much more active in organizations today than it was perhaps ten or fifteen years ago.”

In the end, organizational form will be shaped by the economics of knowledge creation. How expensive will it be to build, retain, and use knowledge on a large scale? The more expensive this is, the more likely it is that large, durable firms will be needed to manage that expense. If training and information technologies are deployed in a seat-of-the-pants, purposeless fashion, then the result is knowledge depreciation over time. But, as some members of this working group suggested, knowledge can appreciate if it is stored, somehow, in shared computer software that can, itself, become an ongoing database of the shared tacit knowledge of the firm.

Al Barnes (associate dean of UCLA's executive education program and former manager of IBM business research): CEO Lou Gerstner brought outsiders in to IBM who wouldn't tolerate the inflexible culture there. “Don't tell me why I can't do it,” the newcomers would say. “Tell me how we're going to do it.” IBM had never had outsiders as senior executives before. In 1993 they hired 40 outsiders to work at senior levels. In 1994 they hired 60. In 1995, they hired 100. The new people have brought knowledge into IBM. What they say is completely alien. It forces IBM people to pay attention in a way they never had to pay attention before.

THE SCENARIOS: FOUR VIEWS OF ORGANIZATIONAL DESTINY

Given these driving forces, what forms might organizations take? Four images emerged at the meeting—variations of the seed scenarios shown in Figure 4. Each, as we shall see, raises significant unanswered questions.

Communities and Families

Lock-In	Takes place late, accentuating networking
Human values	Take precedence in managerial concern, but only through a free-market structure of benefits and a liberated, non-paternalistic attitude
Global economy	Tolerant and experimental, permitting investment in a variety of forms; but set up so that local money is reinvested more in local venues
Geopolitical stability	The “have-nots” are seen as a prime responsibility of all organizational life. “Colombianization” is self-corrected by the system
Corporate structure	Extremely diverse; blurred line between corporations and all other institutional forms (non-profits, even families)
Knowledge work	Part and parcel of everyday life

It is the year 2010...

A form of organization has emerged, more or less on its own in the last 10 years, that is geared to boosting creativity and local relationships. With the full flowering of networks, people have finally felt free to develop local roots, as they haven't since the beginning of the industrial revolution. Flexible manufacturing has meant that factories can stay close to their customers; “one-on-one” marketing has increased the value of local customs and attitudes, at the same time that people have become more comfortable exchanging thoughts and images with others around the globe. They have found they can stay in one place and work anywhere in the world. Most companies have shrunk to small “core competency” firms, outsourcing most of their work. We have the freedom and fluidity of a world of “small companies and big networks.” There is no stability in any job or task. And yet we do not feel adrift.

Communities and families have filled the gap. Everyone grows up in a constantly shifting web of nonprofit organizations, school and church groups, guilds, family-based pension plans, trusts, affinity groups, and barter networks. Some are local; some are worldwide. Some take their flavor from a world-wide profession; others are unique to their locale, be it Moradabad, Little Rock, Cape Town, or Limón. All are linked by a vibrant electronic network. Very few large corporations remain. There are brand names, still, which have existed for a century or more, maintained by

family firms that have shrunk back to the size of the family, all else is outsourced—often to other families and sometimes to free-floating temporary organizations.

It began when governments, in full neoconservative force, eliminated the tax deductibility of employment benefits. A few pioneer corporations, beginning with Microsoft, began to pay people the value of their benefits in the form of increased salary, letting employees make their own choices. To provide the necessary services, other networks emerged—for health insurance, pensions, and training-education. Government liberalized the rules which formerly restricted these options, and the rules governing liability and risk. Now people have discovered that they can combine many of their investments and life services with their support networks of friends, family members, and communities. Voucher systems have emerged, designed by a team at MIT, that allow people without money or connections to gain admittance to the networks. Basic security has been decoupled from its industrial sources: the dole and the job. It has returned to its preindustrial source: the human relationship, but now with an unprecedented level of network-based support.

Could this world plausibly take place? It might require a reneging on mobility, and a reframing of family ties that seems inconceivable in the 1990s. It might also require an end to the time-honored industrial principle of economy of scale.

Corporate Virtual Countries

Lock-In	Takes place early, accentuating “virtual countries”
Human values	Take precedence in managerial concern, through “cradle-to-grave” approach
Global economy	Investment is tied up in <i>keiretsu</i> which seek stable, long-term mutual relationships amidst the turbulence of the marketplace.
Geopolitical stability	The “have-nots” are either welcomed into organizational roles, treated as corporate charity, or ignored. Great socio-economic pressure exists as investment circles resist any suggestion that they have social welfare responsibility. Government probably does not intervene.
Corporate structure	Vast, interlocked hierarchy-democracies, in which management acts on a day-to-day basis with autonomy, but is elected by the “membership” of the firm
Knowledge work	A key specialization and path to elite success

This future essentially repeats the MIT *Virtual Countries* seed scenario; but with more detail. It plays out in a severe geopolitical environment. The scenario team described the prevailing organizational ideology in this world as “friendly fascism”—meaning that benevolent corporations would take on all the functions of society, including the provision of a geopolitical safety net. These organizations would be oligopolistic, dedicated to controlling competition, “much more mission-driven than profit-driven.”

The scenario team saw this future ending on a pessimistic note. They did not seem to believe it was plausible that oligopolistic virtual countries could keep hegemony in a turbulent network-laden world. With the first set of serious economic shocks, the *keiretsu* would get into difficulties. Authoritarian managements would take over. Benevolence would shrink. "People must go out into the cold; there's no more safety net for those outside the firm." The virtual country becomes, essentially, a corporate version of Ted Newland's "gilded cage." Given this possibility, how can we prepare now for a world of "corporate virtual countries," to prevent the dark side of this scenario from overwhelming all other possibilities?e System ?

Tribes

Lock-In	Takes place early, accentuating <i>Virtual Countries</i>
Human values	Take precedence in managerial concern, in ideological forms that span the boundaries of corporations, churches, and nonprofits
Global economy	Dominated by large-scale investment
Geopolitical stability	Most likely, chaos would be held back by last-ditch involvement of large churches, corporations, and governments, which increasingly become detached from the land (but not from their members' identities).
Corporate structure	Like the Mormon Church
Knowledge work	Relegated to serving the "tribal" needs

The year is 2010...

Corporations are no longer considered corporations. They are vast meeting grounds, reservoirs within which people spend their lives, buttressed by the fine-grained interactions of dedicated networks. The closest parallels from the 1990s were the growing churches. These churches came to provide everything for their members: employment, belonging, education, and a sense of ideological or spiritual identity. As the churches grew in popularity worldwide, secular-oriented people responded with churches of their own. There is no more Microsoft; long ago, it melded with the Archdiocese of Seattle. There is no more Daewoo; long ago, it melded with the international fraternity-sorority of people of Korean descent. The world is democratic; people participate in their churches, and the churches participate in global political life together.

Back in 1995...

At first glance, this scenario may not seem plausible. It was not fleshed out very far in the WorldView meeting. However, it seems to have a lot to offer people thinking about the organization of the future. It is disturbing and perhaps dangerous, with its subsuming of individual identity to the needs of the hive; yet, it also fulfills a human need which no other scenario in this report begins to address. It fulfills the burning desire to belong to something, to be secure, and to be taken care of by the larger system.

Roll Your Own: Networks in a Tough World

Lock-In	Takes place late, accentuating networking
Human values	“Hey—If they matter to you, they matter to you. No skin off my nose. I’ll be kept in line by my customers, suppliers, and the law of the network.”
Global economy	Tolerant and experimental, permitting investment in a variety of forms, with little restriction on the structure of the market
Geopolitical stability	“Colombianization” is held back by self-correcting economic growth
Corporate structure	Extremely diverse; blurred line between corporations and all other institutional forms (nonprofits, even families)
Knowledge work	The most essential skill is the knowledge of how to learn. Second most essential, how to manage learners.

It is the year 2010, and this future is only beginning to emerge.

It has taken 15 years, because of the reactions to the immense wave of downsizing and restructuring of the mid-to-late 1990s. The networks have been in place technologically all along, but the financial structure was weak. Growth expectations were hampered in a global recession. Regionalism dominated political activity. America retracted its power. The European Community shrank back into itself; so did Japan. Conventional companies were now on a clear downward slope, in which profits kept rising but the structure of the company fell apart. “My stock split so many times that I had to hire a storage locker for the certificates.”

This atmosphere has now paved the way for a network-dominated economy—growing rapidly now, after a soft, gentle decade. Managers pushed out from big companies, plus young university graduates, have formed an interconnected web of commercial activity, based on joint ventures, alliances, “clusters,” and short-term organizations. There are so many corporate forms that pundits speak of having a “roll-your-own” economy. The financial system does not quite keep up with them; everyone is perpetually in debt, at least on a commercial basis. Since there are no assets available on which to borrow money, peoples’ collateral is their relationships: their abilities to guarantee returns based on who they know.

For 10 years, people have been frustrated about the state of the world. The number of “have-nots” continues to rise, and the “haves” are powerless to do anything about it. But this situation is about to change. Finally, enough wealth has been created on a broad scale to make up for the shrinking of the middle class in the 1990s. We look ahead to an optimistic future, in which everyone with a terminal or telephone can count on making a living—as long as they know how to communicate. However, to be plausible, this scenario depends upon a long gestation. What forces could lead a dangerously unstable situation to “flip” into a benign future?

Early Indicators

One of the most valuable tests of any set of scenarios is the “indicators” and “signals”—the signs that indicate ahead of time how the future may be shaping up. A few tentative examples of indicators emerged at the WorldView meeting. Here are some of the indicators that participants suggested:

- **Role of government:** If Newt Gingrich decides to run for governor of Georgia, because nothing is happening in Washington, that would be a clear sign of a move toward *Tribes*. If he decides to become vice-president at Time-Warner, that would show movement toward *Virtual Countries*. If he stays in Washington, but fewer people care, that might show movement toward *Families and Communities*, or toward *Roll Your Own*.
- **Development of the network:** How prevalent does it become? How quickly does it become integrated with everyday life? Will it have a role in social change? How much is it bounded by Lock-In—or will Lock-In be avoided because technology is self-accelerating? How does the network develop technologically? Does *Roll Your Own* omit two-thirds of the world unless there is a pervasive infotech infrastructure of communications and computers?
- **Corporate jargon:** In Silicon Valley today, companies engage in “coopetition,” to produce “infotainment,” for “prosumers.” More jargon like this, spreading out into the rest of the business community, would suggest a trend toward *Roll Your Own* or *Families and Communities*. Similarly, continued talk of “corporate mission” would suggest movement toward *Virtual Countries* or *Tribes*.
- **Trade alliances:** More NAFTAs and GATTs promote *Virtual Countries*. More attention to Perot and Buchanan promotes *Tribes*. Ennui about the trade issue suggests that *Roll Your Own* has begun to roll out.
- **Management literature:** Books on killing the competition—in entrepreneurial terms—suggest a trend to *Roll Your Own*. Books on protecting the large-scale enterprise, amidst the turbulence of the world, suggest a trend to *Virtual Countries* (or, perhaps, a reaction to *Roll Your Own* or *Friends and Communities*). Books about the soul of work might suggest *Tribes* (if they’re sold on home-shopping network channels) or *Friends and Communities* (if they’re available primarily as web pages).
- **The continuing trend toward employee ownership** would reinforce *Roll Your Own* or *Friends and Communities*, depending on how innovative the structures became.
- **The welfare state:** From government to private sector, suggests *Virtual Countries*. From government to church and company suggests *Tribes*. From government to no one, suggests *Roll Your Own*. From government to a redefined government might suggest *Families and Communities* (or, perhaps, *Tribes*).
- **Microsoft:** “All the forces of the network,” said Stewart Brand, “are arrayed against Microsoft.” If Microsoft absorbs Netscape, we move toward *Virtual Countries*. If Windows dissipates its hegemony, we move toward *Roll Your Own*.
- **Average market capitalization:** An increase of average market capitalization on the stock market suggests a move toward *Virtual Countries*. A decrease implies a move toward Net-based economy.

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- Leadership: In small networked groups, leadership is more about taking action than position based on power and authority. In fact, power is of a virtual nature and resides in competence. It's increasingly skill-dependent (including connecting people who have needed skills).

Coda

One of the most interesting aspects of any set of scenarios is their omissions. To my mind, one of the more significant questions arising from this set of scenarios which was not addressed (at least directly) is the question of corporate purpose.

Corporations have always wrestled with the question of purpose. Chartered by the state, organized by managers, and beholden to shareholders and employees, they have always been emergent entities, possessing enormous power and very little conscious drive or focus, beyond the needs of the moment.

The first corporations, according to the historian John P. Davis, were Benedictine monasteries—groups of people banded together to manage their life and work independent of the larger church and state authorities. The form evolved, through ecclesiastical universities in Oxford and Paris and medieval guilds, through the joint stock companies of the mercantile era, to the chartered corporations of the industrial age. In all of these forms, these independent organizations were formed to accomplish tasks that governments could not accomplish, and people could not manage alone: sailing unfamiliar seas, importing, exporting, establishing a religious life, educating the privileged leaders of society, developing a craft, and ultimately, providing material wealth to managers, shareholders, and employees.

Each of the scenarios in this exercise suggests that this sense of corporate purpose may evolve still further. In *Virtual Countries*, corporations exist to establish hegemony and dominate a sphere of life. In *Roll Your Own*, corporations exist to create a project, and then dissolve. In *Friends and Communities*, corporations exist to ratify and express the potential of human relationships. And in *Tribes*, the corporate form returns to its original ideal of the monastery. Now, however, the monastery contains hundreds of thousands of people.

If we consider these futures, then we must ask these questions (or ones like them). Do corporations and other organizations really hold responsibility for social welfare? Do they hold responsibility for making their people happy? Do they exist to return investment to shareholders? To produce good “numbers”? To accomplish works on a great scale? As stepping stones for the careers of a few of their members? To employ the largest number of people? Or simply (as author and former Shell planning coordinator Arie de Geus suggests) to survive, intact, for their entire natural lifespan—do they have any purpose beyond sustaining themselves?

During the next 15 years, managers and investors will wrangle over the answers to these questions. In the process, some new corporate form may indeed emerge—if only because the current corporate form, the decentralized-yet-authoritarian global enterprise of the multinational organization, feels unsustainable. Many of us have dreams for how the infrastructure of the post-modern era can evolve into a more

efficient, humane, and well-designed framework of industrial development—an infrastructure in which ideas like “industrial ecology” are not novelties, but taken for granted.

The infrastructure cannot be rebuilt without the participation of large mainstream corporations. That’s why questions about corporate purpose are so vital. Arguably, never before in human history has an entity existed whose power was so great, and purpose so uncertain. It does not exist to govern, or to promote spiritual health, or to educate, or heal. It exists to fill material needs—but whose? With what responsibility? And with what degree of completeness? Answering those questions, in a way that really helps the organization-builders of the next 15 years move forward, will require every drop of imagination and foresight that we have.

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GBN WORLDVIEW MEETINGS

Global Scenarios for the 1990s (West Coast Review)

Lakeview Club
Oakland, California
November 1988

Global Scenarios for the 1990s (East Coast Review)

Thinking Machines
Cambridge, Massachusetts
January 6, 1989

Global Scenarios for the 1990s (European Review)

SIFO
Stockholm, Sweden
March 1989

People in the 1990s

Autodesk, Inc.
Sausalito, California
September 22, 1989

The Future of Europe

International Stock Exchange
London, England
November 30, 1989

Entertainment, Media, and New Technologies

Directors Guild of America
Hollywood, California
February 16, 1990

The Evolution of Global Finance

AT&T
New York, New York
April 20, 1990

Short Term Scenarios & The New Management Agenda

SwedBank
Stockholm, Sweden
June 8, 1990

Environment as Infrastructure

Biosphere 2
Tucson, Arizona
September 13-14 1990

The Network Corporation

CNIT
Paris, France
December 7, 1990

Complex Adaptive Systems

Santa Fe Institute
Santa Fe, New Mexico
March 11, 1991

1991 Scenario Book

Working Meeting
Delancey Street Foundation
San Francisco, California
June 12, 1991

The Future of Information Services

INFORUM
Atlanta, Georgia
September 27, 1991

Environmental Technology

Monterey Bay Aquarium
Monterey, California
November 18, 1991

The Architecture of the New Europe

Brussels, Belgium
January 17, 1992

Beyond the Limits to Growth

Hotel Jerome
Aspen, Colorado
March 29-31, 1992

The Human Dimension in Business

Treasure Island
San Francisco, California
June 10-12, 1992

Risk Within and Beyond the Organization

Forsmark Nuclear Power Plant
Forsmark, Sweden
August 31, 1992

Does the Election Really Matter?

Ritz Carlton, Pentagon City
Washington,
District of Columbia
November 2-4, 1992

Los Angeles as Microcosm

St. James Club and Hotel,
Hollywood
Los Angeles, California
February 9-11, 1993

Les Lieux de la Memoire: The Places of Memory

The Lutetia Hotel and La
Fondation Electricité de France,
L'Espace Electra. Paris, France
April 29-30, 1993

Informed Heart: The River Trip

Taos, New Mexico
July 18-24, 1993

Whither Capitalism?

Rival Forms of Wealth Creation
London, England
October 6-8, 1993

Women as a Driving Force in 2010: A Window on Change

New York, New York
December 9-10, 1993

Restructuring of the Global Economy

San Francisco, CA
April 20-22, 1994

***Political Uncertainty and Change:
Shaping the New Political
Geography***
Amsterdam, The Netherlands
September 28-30, 1994

The Future of Public Education
Washington, DC
November 14-16, 1994

***Pathway to Development:
El Camino al Desarrollo***
Mexico City, Cuernavaca
December 8-10, 1994

The Edge of Technology
San Francisco, CA
May 3-5, 1995

***Changing Norms and Values in
Business and Society***
Stockholm, Sweden
August 28-30, 1995

***Organizations of the
21st Century***
Boston, MA
November 5-7, 1995



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