CHAPTER 8

SOCIAL CAPITAL: NEW WEALTH BASED ON TRUST, RECIPROCITY, AND NETWORKS

When Digital Equipment Corporation started cutting costs in 1991, one of the first memos to come down from on high carried an ominous message. The company no longer would include in computer backups employees' "non-work-related" VAXNOTES files, the huge electronic conversation system that glued this global culture of 125,000 people together. Many lived their entire lives in NOTES, finding houses, spouses, consolation, job tips, and even recipes there. They also did their projects there, but these files would continue to be backed up. Unwittingly, Digital was cutting out the heart of its corporate trust system.

"Trust" is the short word that underlies successful transactions. Because people trust one another, they agree to work together. They make deals, undertake projects, set goals, and lend resources. Conversely, business grinds to a halt when trust breaks down.

Networks both need and generate trust. The more trust there is, the easier it is to do business. As trust accumulates—in teams, corporations, communities, and nations—it creates a new form of wealth. In the Age of the Network, *social capital* is as potent a source of wealth as land, resources, skills, and technology. To understand just how

powerful an *economic* force social capital can be, we need to travel back in time nearly a millennium.

TWO PATHS, TWO SOCIETIES

As the curtain was lifting on the aptly named Dark Ages in Europe, Italy was in shambles. Throughout the peninsula, imperial rule had crumbled. Banditry was rampant. Restoring social order was the governmental imperative of the time. With the dawning of the 12th century, two radically different approaches emerged:

? In the south, steep vertical hierarchies rose up.
? In the north, horizontal networks spread out.

Hundreds of years later, these two paths reverberate still, not as faint echoes of the past but as powerful, pulsing shapers of the two disparate regions' cultures, institutions, and economies.

Beginning in the early 1100s, Italy's southern region fell under the organizing talents of Norman mercenaries. They superbly blended feudal autocracy and Byzantine bureaucracy. And for the next few centuries, they governed with relatively enlightened rule. Then, following the deaths of a line of great kings, prosperity began to wane. The steep hierarchy passed to the landed autocrats.

This vertical client—patron power structure remained intact throughout the next 800 years. In 1994, it is still spectacularly evident. The collapse of the central government through the corrosive action of corruption, a megascandal known as "Kickback City" (in Italian, *Tangentopoli),* was nearly a millennium in the making.

While the southern regimes of Roger II and Frederick II were early harbingers of the dominant Industrial Era structures, Italy's central and northern towns were remarkable forerunners of 21st-century organizational design.

COMMUNITY-STATES AND THE INVENTION OF CREDIT

Not since the rise of Athens and the other early Greek city-states had the West witnessed such a brilliant light of self-governance as shone in Florence, Venice, Bologna, Genoa, Milan, and other cities and towns in the north of Italy. From the 110 Os, decentralized centers of communal republicanism rose and prospered. At their core were voluntary mutual-aid associations that neighbors formed for protection from marauding violence and economic cooperation.

> *"From the twelfth to the sixteenth century the feature which most distinguished Italian society from that in other regions in Europe was the extent to which men [sic] were able to take part in determining, largely by persuasion, the laws and decisions governing their lives."*[1]

People formed myriad mutual-aid groups in many spheres, creating a "rich network of associational life"—in neighborhoods, among parish priests and religious societies, in political parties, and within "tower societies" that provided security. Key among them were craft and trade guilds, formed for social as well as economic purposes. A "vivid sense of equality" coursed through the affairs of these communities.

Most remarkable was the economic creativity unleashed by the growing civic communities. The northern Italian republics invented *credit*, adding this fundamental tool to the already known classic economic factors of markets, money, and law.

Before the innovation of credit, private capital could accumulate but could not travel further in the economy. Credit links savings and investment. It enables economic growth, setting up an accumulating feedback loop whereby wealth can be used to create more wealth. The prosperity of the communal north flourished through finance and

commerce, different from the affluence of the southern Sicilian Kingdom, where wealth was rooted in the land.

What lay at the heart of the discovery of credit a thousand years ago? Nothing more complex than an essential human quality already old by *then—trust.* Credit (from the word meaning "to believe") is possible only when there is mutual trust. In the *Oxford English Dictionary,* the third definition of credit *is* trust. The more trust exists, the more efficient credit is. The cost of mistrust goes down. With widespread trust in northern Italy:

> *"(S)ayings were activated for productive purposes to a degree inconceivable in previous centuries.... It was the widespread sense of honesty, strengthened by the sense of belonging to an integrated community, quite apart from definite legal obligations, which made possible the participation of all kinds of people with their savings in the productive process."*[2]

Northern Italy has maintained a rich, concentrated culture built on extensive intertwined horizontal relationships throughout the centuries, through plagues, foreign occupations, and periodic impositions of client—patron controls.

EMILIA-ROMAGNA: THE REPRISE

An unexpected visitor arrived at our office in West Newton in late Fall, 1991. He had a message that he said we could not ignore in the book we were then writing. "You must tell the amazing story of what happens when many, many, small businesses form networks," said Jean-Pierre Pellegrin, a French official at the Organization for Economic and Cooperation and Development in Paris. "Emilia-Romagna, then Denmark. Write about them." "Them" turned out to

be a very big story indeed, which begins in north central Italy.[3] The somewhat mysterious source of Emilia-Romagna's rags-to-riches story is the inspiration for the *flexible business network* movement throughout the world.

After a century of centralized rule from Rome, Italy decentralized in the 1970s. Emilia-Romagna ranked 18th in income among Italy's 21 administrative regions when these regions began to wrest autonomy from the central government.

Over the next decade, the economy exploded as hundreds of thousands of small businesses in Emilia-Romagna tied into networks. It had become the second wealthiest region in Italy, recording the greatest performance jump of any of the 80 European Community regions by the mid-1980s. Unemployment plunged from 20 percent to almost zero. By the late 1980s, there were 325,000 companies in this region of 4 million—an incredible ratio of 1 firm to 12 people, 90,000 of them in manufacturing.

Emilia-Romagna caught Denmark's attention. By the end of the 1980s, that country of 5 million, about the same size as Massachusetts, intentionally launched a similar effort. Denmark's success proved that many of the Italian lessons were transferable. In these two countries, government stimulated thousands of networks, positively affecting the national bottom line.

In the summer of 1993, Stuart Rosenfeld,[4] long a dedicated and articulate spokesman for flexible manufacturing networks, pointed us toward another startling dimension of the Italian story. A very-large-scale social science experiment, encompassing all of modern Italy beginning in 1970, richly documented the miracle of Emilia Romagna.[5]

Italy's experience in moving from centralized to decentralized governance mirrors that of many organizations. Its mandate came long before its implementation. Italy's 1948 Constitution called for the nation to decentralize and establish administrative regions. But it took more than a generation for this to occur. Italy deliberately increased its number of bureaucratic pegs by establishing an entirely new level of government in 1970. With the regions came a set of governments with fairly equivalent roles, rules, and budgets.

This rare event in a developed democracy offered a natural experiment: a set of governmental constants and a wealth of social, cultural, and economic variables encompassing the many extremes represented in Italy.

This extraordinary opportunity to do political *science* in the field was seized by Harvard professor of government Robert Putnam and a network of colleagues. Together they laid a baseline and tracked the ensuing institutional results. Putnam's book, *Making Democracy Work: Civic Traditions in Modern Italy,* succinctly summarizes their extensive findings and draws powerful implications for democracy and economic development.

They measured the performance of the new governments in three broad areas using 12 indicators:

- *Processes,* including cabinet stability, budget promptness, statistical and information services.
- *Law making,* including reform legislation and legislative innovation.
- *Implementation,* including day-care centers,[6] family clinics, industrial policy instruments, agricultural spending capacity, local health unit expenditures, housing and urban development, and bureaucratic responsiveness.

Perception is at least as important as reality in politics. These objective performance measures were tested against and found to be in close agreement with citizen and community leaders' opinions gathered by surveys and polls.

Amazingly, Emilia-Romagna topped the authors' "good government" charts[7] among all the regions. Why?

The quality of regional governments developed in dramatically different ways throughout Italy. Some regions were thriving, while others were quagmired. These conclusions leaped out of the data—field observations, case studies, quantitative techniques, and statistical analysis—prompting the researchers to keep asking why. They likened their search for clues to a detective mystery.

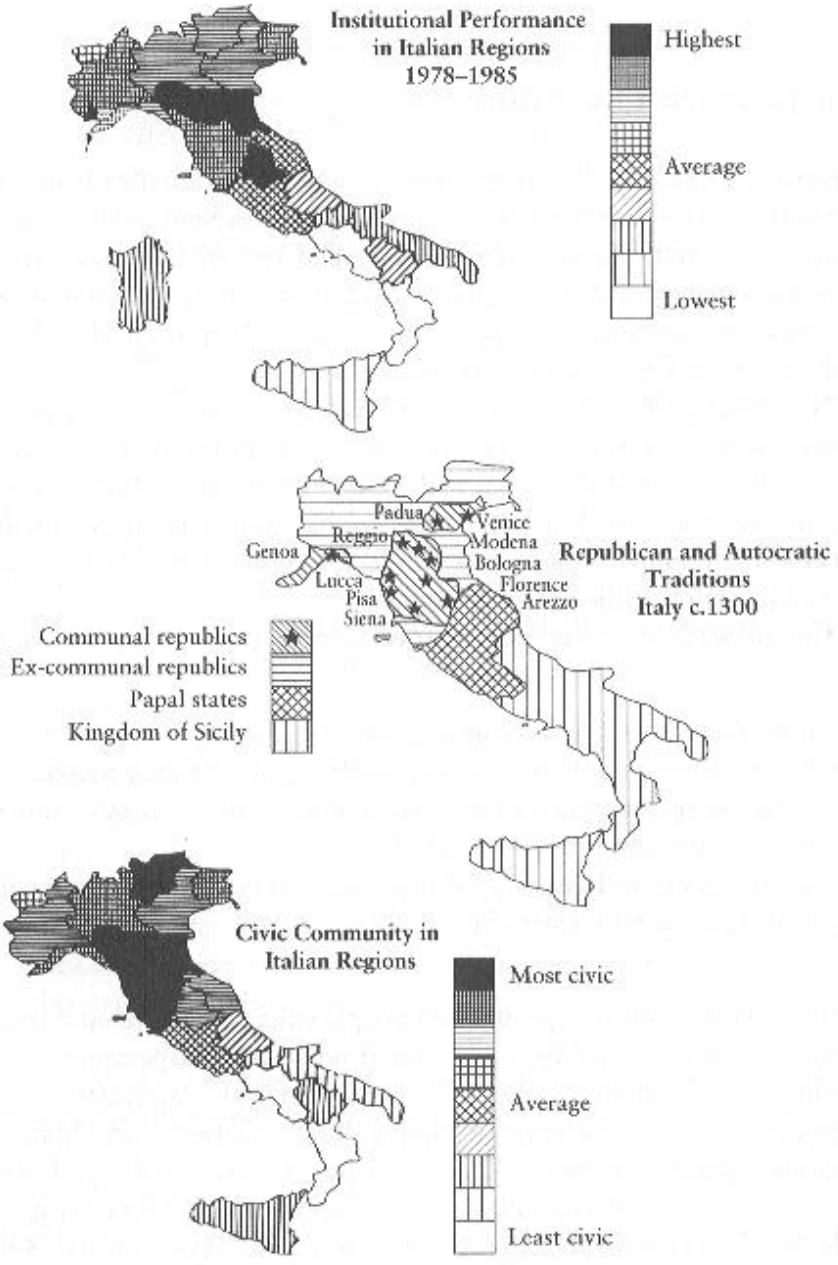
The usual explanation, that good socioeconomics leads to good government, did not square with the data. Both the top performer and the bottom one started in 1970 with many of the same below-average social and economic indicators. Yet, Emilia-Romagna, in the north, became the country's rising star, while Calabria, in the toe of Italy, turned in the most dismal performance.

The answer, once they saw it, reverberated throughout the data:

? Indicators of good government[8] correlated with
? Places where people were joined in thick, overlapping networks, what the researchers termed "civic communities,"[9] which in turn mapped uncannily closely with the
? Most horizontally organized types of governments of the medieval states as they existed in 1300.10

"Civic communities" result when people engage in horizontal relationships "bound together by reciprocity and cooperation," according to Putnam, rather than by vertical "authority and dependency."[11] At the core of civic culture are two basic human values—equality and trust. Civic societies are lush with social networks and associations of all sorts, an observation Alexis de Tocqueville made regarding the about-to-boom United States in his 1840 study, *Democracy in America*.

Many networks tightly braided people in Emilia-Romagna, which had the top measures in both civic culture and institutional perfor-


Institutional Performance
in Italian Regions
1978–1985
Highest
Average
Lowest
Padua
Venice
Reggio
Modena
Genoa
Bologna
Lucca
Florence
Pisa
Arezzo
Siena
Republican and Autocratic
Traditions
Italy c.1300
Communal republics
Ex-communal republics
Papal states
Kingdom of Sicily
Civic Community in
Italian Regions
Most civic
Average
Least civic

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mance. Putnam calls it "the site of an unusual concentration of overlapping networks of social solidarity, peopled by citizens with an unusually well developed public spirit—a web of civic communities. Emilia-Romagna is not populated by angels, but within its borders (and those of neighboring regions in north-central Italy) collective action of all sorts, including government, is facilitated by norms and networks of civic engagement."[12]

The results were simple and strong.
Governments were better where measures of "civicness" were higher.

SOCIAL CAPITAL: THE 21sT CENTURY SOURCE OF WEALTH

Bologna, once the intellectual capital of the medieval communal republics, became the "new" regional capital of Emilia-Romagna in
1970.

What fueled the unprecedented economic growth there and the creation of excellent government? What resources of capital enabled such widespread creation of new wealth? Neither new land, natural resources, nor technology graced this ancient area. Not even human capital, meaning a highly educated and skilled populace, distinguished it.

What Emilia-Romagna did have in 1970 was an abundant stock of continuously renewing *social capital.*'[3] Its wellspring of wealth had three tributaries:

? Trust,
? Reciprocity, and
? Dense social networks.

In the communal republics, extraordinary trust developed among myriad mutual-aid associations, enabling the civic regions of Italy to

invent credit. The lesson of the past millennium applies immediately to today's flexible business networks.

> *"At the core of the mutual aid societies was practical reciprocity: I'll help you if you help me; let's face these problems together that none of us can face a lone."*[14]

Today these seats of Western civilization again have shown how to spin old relationships into new gold.

Relationships among the players lodge social capital. Unlike financial and human capital, social capital cannot be the property of individuals or corporations. By its very nature, it is jointly owned.

People generate wealth in dense networks of horizontal relationships in two primary ways:

? They lower transaction costs.
? They increase opportunities for productive cooperation.

Transactions are at the heart of business. All transactions, commercial and otherwise, particularly across boundaries and over time, embody trust. Transactions have costs—heaviest when trust is low, lightest where trust is high.

Mistrust is expensive. Informal communication goes down and formality goes up: endless forms and legalisms, time and effort spent checking other people's work, drawn out negotiations, political games and backstabbing, sticker-shock at the cost of third-party enforcement, corruption, and crime. When trust diminishes, price goes up.

"Scandals in fiduciary institutions dramatize the economics of trust," writes John O. Whitney in *The Trust Factor*. "During Drexel Lambert's last month before filing for Chapter 11, money hemorrhaged while the company's officers fought to restore credibility. In the spring of 1984, people lost confidence in Continental Bank of

Chicago. Money poured out. Very little new money came in. The bank had to be rescued. The savings and loan crisis wiped out the FSLIC. The epidemic of bank failures has almost wiped out the FDIC."'~

Left unrenewed and unused, social capital runs down. It depletes, fragments, and dis-organizes with the wear and tear of transaction costs. Mistrust makes networks hard to form and relationships difficult to maintain, further diminishing trust—creating a vicious cycle. Unchecked, this social process searches for a stable state. In a dependent and exploitive culture held together by vertical controls, the norm becomes: "never cooperate."

But there is hope. Social capital also accumulates in virtuous cycles. Trust develops through *reciprocity* among people joined in *horizontal networks*. Reciprocity works in two ways as people:

? Barter in the here-and-now; and
? Bank benefits for the future, the barn-raising principle.

In barter, reciprocity is "balanced." There's an immediate and equivalent exchange, a trade of some kind (e.g., you pay the dry cleaner to get back your clothes). In barn-raising, reciprocity is "generalized," meaning "I'll do something today in the expectation of receiving some benefit from you, or others, in the future."

> *Future-oriented, barn-raising, cooperative behavior is the most productive type of reciprocity. It enables economic development.*

"Rotating credit associations," a simple example found in virtually all cultures around the world, show how trust creates new wealth. Revolving loan funds—from villages in Bangladesh to Pine Ridge Reservation in South Dakota—happen when a group contributes a certain amount to a common pot. One member uses the collective pot, perhaps to increase his or her productivity (e.g., to buy seed or a plow). After receiving the benefit, members, of course, continue to contribute. Why "of course"? Because in dense networks, where

people know one another well, the cost of lost opportunities and the threat of ostracism are prohibitive.

Trust lowers the cost of cooperation and deposits money in the bank. Informal communication increases, while formalities decrease and the need for paperwork recedes. Negotiations are brief and conclusive, while the need for "checkers" evaporates as people spend time in "real work" rather than supervision because all persons involved simply keep their word. Social capital accumulates with trust and reciprocal relationships. It remains scattered and unformed without trust. People generate trust through their interpersonal networks of relationships.

OPEN AND CLOSED LOGICS OF COOPERATION

"Greed, mismanagement ravage fisheries," reads the 1994 headline.'[6] Near us, both the United States and Canada are invoking drastic measures to curtail the catch on the once rich Georges Bank fishing grounds off the New England and Newfoundland coasts. Local economies are devastated. A precious resource is in dire danger globally.

Georges Bank is a real-world example of "the tragedy of the commons," whereby people ruin a common area by overuse. When unlimited economic actors maximize their individual gain by exploiting a shared resource, they destroy a natural, shared source of wealth. Add continuously improving technology, such as in ocean fishing, and the spiral to exhaustion accelerates.

This "dilemma of collective action," as it is known in game theory, is one of several logical puzzles that suggest that cooperation is either folly or, at best, a rarely rational choice. Early game theorists made the science of economics more dismal than Malthus had ever done with such thinking. The winning strategy, in closed cycles of transactions and isolated games played once, is to "get as much as you can and never cooperate." Selfishness is logical and rational.

However, when people play repeated games, the logic changes dramatically. People become more cooperative when their behavior in one transaction carries forward to subsequent ones. In "infinitely

repeated games," cooperation suddenly becomes rational and practical, according to more recent game theory studies.'[7]

Game theory predicts, and Putnam's study demonstrates, that society holds together at two "quite different levels of efficiency and institutional performance." In one case, the informing principle is to "always defect." In the other, the motto is to "reciprocate help."

These self-reinforcing dynamics, reciprocity—trust and dependence—exploitation, reflect building up and tearing down. They are, respectively, "vicious" and "virtuous" loops, amplifying through positive feedback.'[8]

- *Vicious:* In isolated situations where there are no consequences in the future and relationships are top-down, people "never cooperate," a predictable, suspicious, stable state. It's safer and more "rational" to "always defect," to be mistrustful and exploitive.
- *Virtuous:* When the players connect in rich networks, "brave reciprocity" prevails. News about trustworthy and untrustworthy behavior spreads quickly and widely. Here the norm is different:
  "Cooperate with people who cooperate with you (or who cooperate with people like you), and don't be the first to defect."'[9]

Trust, reciprocity, and networks all are mutually reinforcing, whether on the rise or on the wane.

> *Trust is at the personal core; reciprocity is at the interface; and networks tie it all together.*

Networks facilitate communication and extend trust. When success spreads through a network, **it** stimulates more cooperation, providing models for others about what works. Innovation increases as the latest information and trends create a large-scale learning system in which many potential users share knowledge.

Innovation is stunning among Emilia-Romagna's hundreds of thousands of tiny, networked companies. As so many have observed about this region, it reflects a vital dynamic that simultaneously integrates

vigorous competition *and* cooperation—co-opetition—among many independent players.[20]

These lessons have a timeless quality. They apply both on grand scales and on intimate ones.

NEW WORLD REGIONAL ADVANTAGE

Imagine what higher levels of trust mean in your organization—with suppliers, customers, competitors, regulators, and special interests. Picture the regional advantage that accrues from a high-trust community.[2]'

While Putnam and his colleagues were scrutinizing the Old World, AnnaLee Saxenian, a professor of city and regional planning at the University of California at Berkeley, was examining two distinct industrial regions in the New World: Route 128 on the colonial coast of Massachusetts and Silicon Valley in north central California.

The booming computer revolution of the 1970s produced two star regions of great innovation and explosive entrepreneurial growth. By the early 1980s, the semiconductor business that had fueled Silicon Valley seemed to be slipping westward to Japan. In the east around the Boston "Hub," minicomputers, which had broken the stranglehold of mainframes, now faced their great challenge: individual workstations and the runaway success of personal computers.

Both regions plunged into recession. One bounced back. Silicon Valley is lush territory again in the global economic ecology of the mid-1990s. Even though Massachusetts' economy as a whole is doing better than California's, the computer companies that powered the Massachusetts Miracle continue to slump and retrench.

TWOREGIONAL BUSINESS CULTURES

The reason is clear, says Saxenian. "Distinct industrial systems" developed in these regions after World War II. She compares them [bullets added]:

Silicon Valley has a regional-network-based industrial system—that is, it promotes collective learning and flexible adjustment among companies that make specialty products within a broad range of related technologies.

- The region's dense social networks and open labor market encourage entrepreneurship and experimentation.
- Companies compete intensely while learning from one another about changing markets and technologies through informal communication and collaboration.
- The organizational boundaries within companies are porous, as are the boundaries between companies themselves and between companies and local institutions such as trade associations and universities.

The Route 128 region is dominated by a small number of relatively vertically integrated corporations.

- Its industrial system is based on independent companies that keep largely to themselves.
- Secrecy and corporate loyalty govern relations between companies and their customers, suppliers, and competitors, reinforcing a regional culture that encourages stability and self-reliance. Corporate hierarchies ensure that authority remains centralized, and information tends to flow vertically.
- The boundaries between and within companies, and between companies and local institutions, thus remain distinct in the independent-company-based system.[22]

It's all relative. Route 128 is not Calabria in southern Italy. Nor does Silicon Valley have 800 years of cooperative history behind it. Yet the differences between vertical and horizontal business cultures are distinctive and highly instructive.

CORPORATE COMPARISONS

There are many micro corporate stories within the macro East—West regional story. Saxenian compares Apollo Computer and Sun Microsystems. Apollo virtually created the workstation market in 1980 with a superior technology and a two-year lead on Sun. But by 1987, Apollo had permanently fallen behind the faster, more flexible Sun. Two years later, Hewlett-Packard bought Apollo.

Apollo created insular, self-reliant, vertically integrated, proprietary operating systems for its machines that mirrored the nature of its organization. In contrast, Sun adopted an open operating system, Unix, from the beginning, and an open way of doing business that used standard components from vendors while rapidly introducing new products.

Saxenian also contrasts the computer systems giants in each region, Hewlett-Packard (H-P) and Digital Equipment Corporation (DEC). The comparison is particularly meaningful to us since we spent eight years—1985 to 1992—as independent consultants doing work for DEC and its customers in organizational networks.

Both H-P and DEC had $13 billion in revenues in 1990. Both of their proprietary computer systems were under siege from the fast-paced challenges of systems opening everywhere in hardware, operating systems, and applications. What was their response? Saxenian said:

- Hewlett-Packard gradually opened itself by building a network of local alliances and sub-contracting relationships, while strengthening its global reach.
- DEC, in spite of its formal commitment to decentralization, retained a substantially more self-sufficient organizational structure and corporate mind-set.[23]

From the beginning, H-P's founders, William Hewlett and David Packard, sought to avoid the hierarchical structures of the East Coast. The "'H-P Way' ... includes a participative management style that supports, even demands, individual freedom and initiative while em-

phasizing commonness of purpose and teamwork."[24] H-P leveraged management "by wandering around," by paying attention to physical settings to encourage informal communications, and by the "elimination of most traditional corporate symbols of hierarchy and status, including private offices, reserved parking spaces, and differentiated attire and office furniture."

DEC, too, sought to organize differently from traditional East Coast corporations. Its founder, Ken Olsen, also "pioneered a management model based on organizational decentralization and a participatory culture."[25] The resulting matrix organization, crossing product lines and functions, was once regarded as a model of advanced management. But, says Saxenian, "the matrix structure also masked extensive centralization: it allowed Olsen and a small number of powerful senior committees that survived the company's frequent reorganizations to retain final authority for all important decisions."[26] The principles of openness and debate all too often degenerated into vicious internal conflict.

Intense rivalries existed within and among the vice presidential units of the company. Project conflicts were known by such names as "The Database Wars" and bureaucracy ballooned. Even with consistent, long-term contractors, DEC resisted umbrella purchase orders. Each new bit of work required its own paperwork; it could take as many as 19 steps to get an invoice paid.

In 1994, H-P was flourishing and DEC's struggle continued, losing money and employees. Silicon Valley illustrates something different. A regional culture of dense networks offers a competitive advantage to big companies as well as small ones, to older companies as well as startups.

Trust also turns into value *within* organizations, as Eastman Chemical Company's story shows. It demonstrates some ways to increase the stock of social capital.

EASTMAN'S PATH TO HIGHER TRUST

When Bob Joines, Eastman's vice president of quality (see chapter 3), spoke with us in 1994, trust was on his mind. His first remark was about trust, and he threaded it throughout the whole exchange.

"We have been working on teams for many years," said Joines. "We realized that unless we removed some social impediments and barriers to trust, teams would not be effective."

"Ask what the trust level is," Joines advises other firms. "When you find out it's not as high as you want, then you need to examine why. Look into the company's substructure and define the impediments to trust."

In 1985, Eastman began their look, inaugurating a process of change that eventually reorganized a vertical culture into a horizontal one. They discovered that mistrust was built into their systems. To build trust, they had to:

? trash the traditional performance system;
? throw out the time-honored, 70-year-old suggestion system;
? equalize perks and symbols; and, most astonishingly,
? question team rewards.

"WE JUST SAID NO"

It started with the way people got paid. "We hire the 'best and the brightest' from college, the 3.8s, 3.9s, 4.0 grade point averages, people at the top of their classes," Joines remarked. "Then we say in our performance system that half of you are below average and that we are going to reward you accordingly. Now, everybody get your heart and mind engaged and be an owner of the enterprise.

"We interviewed 1,500 people over a six-month period. In the end, we just said no to our performance system and stopped it. There was an amazing, fantastic ground swell of opinion to scrap it.

"We didn't know how to solve the pay problem, but we knew enough to push the decision down in the organization. Budgets give a pot of personnel money to a unit and let the unit determine how to allocate it.

"We try to articulate principles with which to make decisions rather than give prescriptions." Here Joines again emphasized the importance of providing learning and theory, as well as training and skills, to manage hot issues like money and performance evaluation.

Another pillar of Eastman's culture proved to be an unlikely impediment to teamwork. Seventy years ago, George Eastman, the company's founder, established the suggestion system: if you have a good idea, get a suggestion form, fill **it out,** and get rewarded financially, up to $25,000.

"Look at the logic," Joines said analytically. "If I have a great idea, why should I share it with my teammates or anyone else? So we just said no to our suggestion system. It's demeaning to say that the company regularly pays for your hands and feet but not your head. Park your brain in your car? *No*. We want the feet, hands, *and* brains of everyone, all the time."

LITTLE THINGS COUNT

Eastman knew that they couldn't build trust simply by rebricking one or two major systems. Here the devil was in the details, in the small, seemingly insignificant things that affect people on a daily basis. Benefits such as health and vacations varied widely, with options graded from the executive suite to the shop floor. Now benefits options are the same for everyone.

"We changed the dress code and parking privileges, closed the executive dining room, and opened a business dining room. These things seem trivial, but they involve important issues of trust and the perception of trust. We need people to feel like owners of our enterprise."

We were surprised to learn that Eastman had virtually stopped

giving special rewards to teams. This appears to run counter to what most teams have been striving for.

"Who's the team?" Joines questioned. "We ask a production unit that exceeds its goals, 'Are the people who provided maintenance for you part of the team? How about purchasing people who made your JIT deliveries possible? Or the cafeteria staff who provided extra meals so you could continue working?' So we've backed away from using team compensation, which tends to drive a wedge between teams. The company becomes the team.

"We're still learning. We don't have the issues worked out or fine-tuned. But the philosophy is in the hands of the people who have to administer **it,** not in a central function."

From medieval communal republics to a new high-tech region to an old company with a new vitality, trust is the key.

ISLANDS OF TRUST

There are "islands of trust" at every scale. Couples, partners, families, groups, neighborhoods, departments, communities, enterprises, regions, industries, and nations all have stocks of social capital. Company cultures are storage vaults of social capital based on their history and current dynamics. This investment is available to capitalize (or not) new relationships. Each time a new group comes together, it plants the seed for a new island of trust.

WHEN THE VELOCITY OF TRUST ACCELERATES

Social capital basically consists of information about relationships among people. It doesn't behave in quite the same way as physical capital. Matter, when used, degrades. Information, when used, accumulates. Unused, information loses value or becomes a weapon in the struggle to compete and control, increasing mistrust. Like communi-

cation, trust is very personal and yet cannot be possessed by a single individual. It takes at least two to trust.

Trust, or its lack, is an all-pervasive cross-cultural reality. All people in all cultures in all ages have depended on trust, but its value greatly expands in the Age of the Network.

- Trust enables *links* to be constructed. It undergirds the high-performing organization with the profuse voluntary communications of fast, flexible, integrated responses.
- If purpose is the glue, trust is the grease. *Purposes* operate through trust—the source of legitimacy for and the vital spark of networks. Trust enables people to establish purposes articulated in detail and maintained over time.

The greater the trust, the lower the cost of communication and relationship building. The more extensive the network, the greater the opportunities arising from commonly held goals.

Conversely, mistrust creates difficulties at each step in developing a purpose. It takes longer to arrive at common goals since suspicion demands greater specificity. Enforcement is costly in terms of legal, accounting, and inspection fees and close monitoring is burdensome, sometimes proving fatally inflexible to change.

Among the ebbs and flows of turbulence and quiet come some defining moments—usually unexpected and often unwelcome. Crises often precipitate positive feedback loops in social capital—either viciously or virtuously. The vast 1993 Mississippi River floods, for example, drew upon and reinforced the hard-won prairie values of neighborly help at the same time that half of the Cabinet and President Clinton flew to the Midwest to coordinate the federal government's response. Awful as the rising water was, the flood also washed in new wealth through social capital formed by countless helping hands as some compensation for the damage.

In the Age of the Network, social capital is continuously being formed or degraded. It increases and decreases through dynamics fed by history, circumstances, crises, and creativity.

In the Age of the Network, horizontal connections explode, not vertical ones. The winners in the 21st century—companies, countries, and people—will be those with the greatest social capital.

All islands of trust, large or small, are embedded in larger environments of relationships that themselves represent stocks of social capital. Social fabrics can be rent by disasters—natural and otherwise, from the Valdez oil spill to Chernobyl to Hurricane Andrew—that threaten the health of communities and families; by migrations and refugees; and by rippling layoffs that destroy economic and personal stability. Relationships are difficult to maintain as physical infrastructures deteriorate, inhibiting travel and communication. Poverty creates isolation, dependence, and lack of access to connections. Most corrosively, reaching into all communities, violence and fear undermine and attack this form of social wealth.

The key to a society's ability to generate social capital lies in its practice of equality—political, social, and economic. Equality is under siege by the powerful global trend of an evolving two-class society, 20 percent wealthy and 80 percent poor, both within and among nations.[27]

This widening disparity will have to be reversed for the benefits of cooperation to be reaped on a global scale. To do so, John Evans, chairman of Torstar, the parent company of Canada's largest newspaper, *The Toronto Star*, says, we need "a new investment of social capital in community [and] new networks of civic engagements, involvements and commitments from individuals, private groups, corporations.... 'A society that relies on generalized reciprocity and mutual assistance is more effective than a competitive, distrustful society.' "[28]

A MATTER OF SURVIVAL

Ross Ashby's "Law of Requisite Variety"[29] is one of the most famous systems principles. In essence, the law says that for a system to survive, it needs to be at least as complex as its environment. As the

environment becomes more complex, the system—whether an organism or an organization—learns and adapts, handling more complexity. Otherwise, sooner or later it dies.

As our world becomes more complex, accelerates, and swells more global, we need to smarten up. Growing smarter means incorporating more variety, gaining access to what's happening, and intelligently connecting bits of knowledge to anticipate the future. As the pace speeds up, organizations must incorporate even greater diversity to survive and thrive. More complexity compels more organizations to develop network strategies and paths of change to increase their social capital.

Networks incorporate diversity and carry reciprocity across boundaries and borders of every scale and scope. Wide-ranging webs provide the amplifying effect that social network analyst Mark Granovetter calls "the strength of weak ties."[30] He shows how connections at the edges of people's networks, rather than conversations in their core cliques, boost the effects of innovations, ideas, and opportunities.[3]'

Boundary-crossing networks decrease the cost of transactions and open new channels of cooperation over which new patterns of trust develop.

Apple, IBM, and Motorola astonished many when they announced their joint venture to develop a new computer chip. Just a few years earlier, Apple and IBM, for example, were mortal enemies. By the time the project was well underway, the three companies even opened their e-mail systems to one another.

Boundary-crossing networks expand social capital.

Teamnets provide extra value beyond accomplishing specific goals like developing a new chip. By bringing people together to pursue

shared aims, they add to the stock of social capital. Even when people participate in networks that fail, they frame new relationships and bank trust that they can draw upon in the future.

THE BIOLOGICAL INTERNET

"Trust is really essential," Frank Starmer says (see chapter 1 for more information on his global "lab without walls"). For a group to be creative, it must have trust. Islands of trust do not have to be vast to be vital.

"It's essential to develop a level of trust where you can say anything and not regret it **or** feel that **it** will come back to haunt you," Frank says. "Only then are all the communication paths open. No one is wasting time trying to decide whether to say this or that. Complete openness and freedom lead to unconstrained thinking, which leads to good science or good art or good whatever you're doing.

"Collectively, we feel stronger as a team than we do as individuals. Otherwise, we'd drop out of the group. There'd be nothing to gain. Together, we are more competitive in the science world. Each person contributes some special talent or insight into our overlapping interests."

> *"We speak of a biological Internet. Each person has a nervous system that coordinates and controls. But there is also absolute trust between every part of the body. It's essential for coordinated behavior. And our lab without walls is just a big collective organism with a common goal."*

Imagine your organization with that level of trust. Common goals, coordinated effort, unconstrained thinking, each person contributing, more competitive, all-channel open communication—and the creative juices are really flowing. Trust is the key to success.

SECTION V

LOOKING AHEAD