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26

## LEAN AND MEAN

### *The Changing Landscape of Corporate Power in the Age of Flexibility*

BENNETT HARRISON

#### BIG FIRMS, SMALL FIRMS, NETWORK FIRMS

There are more than 1,200 booths arrayed across the football field-length floor of the David P. Lawrence Convention Center in Pittsburgh, Pennsylvania. The smells and tastes of cigarette smoke, coffee, and Coca-Cola fill the air. Everywhere, people (mostly men, but a surprising number of professional women, as well) are giving lectures, inspecting one another's wares, exchanging telephone numbers, and making deals.

We are attending a trade show of companies in the steel business. Companies from around the

world are advertising their competence in a wide variety of activities. Some actually make steel bars, sheets, and related products. Others manufacture the machinery, parts, or computerized control systems. Still others offer the mill owners services ranging from design and plant maintenance to personnel management. And some specialize in disposing of the hazardous waste materials thrown off in the process of making steel.

As my friends and I pick up brochures and stop to chat with company representatives, we look for the presence of small, high-tech, independent entities. They are hard to find. Either the firms represented have themselves been created by consortia of companies from different countries, or they are branches, subsidiaries, or divisions of foreign

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multinationals whose parentage appears on the brochures and posters only in the small print (if at all). Sandwiched in between the row on row of cross-national companies, we occasionally encounter a certifiably independent, local small firm bearing the placard "Benton Harbor, Michigan," "Oakland, California," "Portland, Maine," or "Birmingham, Alabama."

But there is little doubt about who dominates these proceedings. It is the GEs, the IBMs, the Digitals, the Westinghouses, the 3Ms, the Hitachis, the Sumitomos, the Rockwell Internationals, the SKFs, the Bachmanns, the Ebners, the Herkules, the Siemens—alone, and together with their worldwide networks of large and small "partners." A similar convention of purveyors of construction or financial services—and of computer and semiconductor manufacturers, as well—would have an equally multinational character, dominated by the big firms.

To read the daily newspapers, this judgment must seem awfully surprising, to say the least. Headlines report on the crises of such giant corporations (and household names) as IBM, General Motors, and Sears Roebuck. We are bombarded with expert opinion about how these and other big firms have lost their competitive edge because of organizational rigidities and obsolete technological capabilities. The big firms, we are told, have become too inflexible, too rigid, and unable to adjust to the brave new world of heightened global competition, where only the fleet of foot—rather than the strong—survive.

At best, these observations tell only part of the story of how business is evolving in the closing years of the twentieth century. In the fields of computer hardware and software, IBM may again be in trouble—it has happened before—but those other standard-bearers in the industry, Intel (whose microprocessors drive most personal computers) and Microsoft (whose operating systems direct those Intel and other chips) go from victory to victory, and both are members in good standing of the Fortune 500 (to the extent that Intel's long-run command of the industrywide microprocessor standard *is* being challenged by other chip makers, the challenge is coming from such consortia as the Somerset group, created recently by IBM, Apple, and Motorola—all very big companies, indeed). The declining significance of the catalogue business of retailer Sears

Roebuck has been succeeded not by the emergence of a thousand small niche distributors but by even more successful mass retailers and distributors such as Lands End and Wal-Mart.

Other giant American companies have found ways to flourish in the new, more uncertain, more competitive environment. AT&T and Xerox are regularly cited by business analysts and executives as successful multinational corporations. And except for its problems with the same mammoth pension liabilities that are haunting companies in all of the mature industries, the Ford Motor Company has substantially transformed itself for the better—in only a decade.

We are constantly being told that technological change now systematically favors (or is mainly the product of) small companies. The idea is pervasive, but it simply is not correct. Take that quintessential high-tech activity: the design and manufacture of computers. It is no secret that in Japan, the computer industry has from the beginning been dominated by the NECs, the Toshibas, and the Fujitsus. But dominance by major firms is also true in America. In 1987 (the most recent year for which the appropriate data were published by the U.S. Bureau of the Census), 85 percent of all the individual enterprises in the computer industry in the United States did indeed employ fewer than 100 workers. Only about 5 percent of all computer makers had as many as 500 employees. Yet that comparative handful of firms—that 5 percent at the top—accounted for fully 91 percent of all employment and of all sales in the computer industry in that year.<sup>1</sup>

Meanwhile, in eastern Asia, the giant *keiretsu* of Japan and the *chaebol* of South Korea—huge industrial, service, and financial conglomerates—enter new domains of economic activity, from entertainment and health care to aerospace and medical technology, by adding more divisions to their already enormous holdings. If the Japanese economy is in some difficulty these days, the source lies mainly in the bursting of the speculative financial and real estate "bubble" of the 1980s; the rise of the exchange value of the yen, which has seriously dampened the exports on which that country's overall economic development strategy has long been based; and the global recessions which are just ending in the United States, if not yet in Europe.

Recent Japanese successes may indeed have been "miraculous," but no economy can grow without customers. Nevertheless, few knowledgeable students of Japan doubt the long-run technological and financial viability of Mitsubishi, Sumitomo, Fujitsu, or Toyota.

And even as Europe rides the next wave of consolidation of its Economic Community—now sure to extend some day to the Ural Mountains of Russia, albeit at a slower pace than was popularly expected when the Berlin Wall first fell—that continent is experiencing a veritable blizzard of mergers and acquisitions, and all manner of cross-border strategic alliances, involving both the public and the private sectors.

To see just how much the economic development action remains where it has been throughout the twentieth century—under the control of big corporations and their partners—one need only look at two commodities that are central to the daily lives of every North and South American (and Asian, and European) household: television sets and cars. The cost of developing the next generation of high-definition televisions is astronomical, and once the U.S. Federal Communications Commission (FCC) selects a standard, the winning design will immediately have a guaranteed mass market for TV sets oriented to that protocol. That is why some of the world's biggest high-tech corporations decided to form teams to develop the new standard system. Initially, one team included the French giant Thomson, the Dutch electronics conglomerate Philips, and NBC, probably the most famous American pioneer in recording technology. Other teams were led by General Instrument, working with M.I.T., and by Zenith, which joined forces with AT&T. But given the huge stakes, and with explicit shepherding by the FCC, the three teams announced in May 1993 a "grand alliance," under which they would share technical know-how and divide the eventual winnings.<sup>2</sup> This is not a story about the local Chamber of Commerce or the Elks Club. Rather, it is a story about big corporations and government industrial policy.

And what about cars? By the spring of 1993, it had become apparent that Toyota, Ford, and Honda were making great strides in developing truly global production systems. Parts manufactured in one

location were being delivered to final assemblers based in another. Assembly lines located on every continent were turning out automobiles that were being shipped not only to local markets but across continents—even (in the case of Honda and Toyota) back to Japan, itself! The German car makers are moving in the same direction. Why? The answer: to hedge against unexpected currency fluctuations and to take even greater advantage of economies of large-scale production.<sup>3</sup> Again, this is hardly a story about industry growth driven by small business. If such direct foreign investments into *this* country have slowed down in recent years, blame it on the recession at home—not on the plans and deep pockets of the foreign giants.

Yet despite such examples, a multitude of writers continue to preach the virtues of small firms as the engines of contemporary economic growth. We are told that, as discretionary incomes increase and living standards reach historically unprecedented levels around the world, consumers increasingly seek more customized, fashion-oriented goods and services. Mass markets become saturated, the demand for such commodities as clothing and furniture becomes increasingly fragmented, and mass education and mass communications both facilitate and promote a growing heterogeneity in customers' tastes. In a fashion-conscious world, agility in identifying new wants and in getting new products to market becomes the key to winning the competitive wars.

These developments are said to conjoin to favor technically adroit, well-informed small enterprises—or at least give them a new fighting chance. Why? The answers we are offered are partly behavioral and partly technical. The bureaucratic organization of the big firms militates against agility. And the fragmentation of markets deprives the big firms of the opportunity to exploit various technical advantages that, over the course of the last century, were made possible by the drive toward standardization and mass production.

That's the theory. The facts show otherwise. With the usual few headline-capturing exceptions, small firms turn out to be systematically *backward* when it comes to technology. For example, on every continent, the big companies and establishments are far more likely than are the small ones to invest in, and

to deepen their use of, computer-controlled factory automation.

And the argument that the proliferation of niche markets is inexorably driving a small firm renaissance reflects a misunderstanding of the nature of contemporary markets.

[...]

What the architects of the romance of small business are ignoring is that the big firms can produce for both mass and niche markets—a neat trick that few small firms can pull off. Thus, Toyota can deliver both its big-selling, inexpensive Corolla and the high-priced, world-class Lexus.

[...]

To be sure, small firms and individual business establishments do have a role to play in the evolving industrial structure of world capitalism. And managers most certainly care about “flexibility.” But as I show later, the role that small firms are playing is typically that of follower, not leader. And while it may be enhancing the agility and profitability of individual firms, the search for flexibility—by the managers of both big and small companies—is also leading to practices that are undermining the employment security and incomes of a growing fraction of the population, exacerbating inequality and contributing to the underlying sense of futility that now characterizes politics worldwide.

#### CONCENTRATION WITHOUT CENTRALIZATION: HOW THE BIG FIRMS ARE REORGANIZING GLOBAL CAPITALISM

Announcements of the demise of concentrated economic power in the form of the large, resourceful, multidivisional, multiproduct, multiregional, often multinational corporation are premature. Yet the difficulties facing traditional big business are formidable. How then, *have* the survivors managed to cope? How do newly emergent large firms make it in a world that was thought to belong to the smallest of the small?

Rather than dwindling away, concentrated economic power is changing its shape, as the big firms create all manner of networks, alliances, short- and long-term financial and technology deals—with one another, with governments at all levels, and with

legions of generally (although not invariably) smaller firms who act as their suppliers and subcontractors. True, production is increasingly being decentralized, as managers try to enhance their flexibility (that is, hedge their bets) in the face of mounting barriers to market entry and of chronic uncertainty about political conditions and customer demands in distant places. But decentralization of production does not imply the end of unequal economic power among firms—let alone among the different classes of workers who are employed in the different segments of these networks. In fact, the locus of ultimate power and control in what Robert B. Reich, the U.S. Secretary of Labor and a Harvard University lecturer, calls “global webs”<sup>4</sup> remains concentrated within the largest institutions: multinational corporations, key government agencies, big banks and fiduciaries, research hospitals, and the major universities with close ties to business. That is why I characterize the emerging paradigm of networked production as one of *concentration without centralization*.<sup>5</sup>

[...]

But the competitive success of the large corporations is not without its own contradictions. In particular, the restructuring experiments pursued by the big companies and their strategic partners since the 1970s are polarizing the population, contributing to the growing inequality among white-collar workers as well as between blue-collar and white-collar. The polarization is now evident and palpable. It manifests itself in terms of income, status, and economic security. [...]

It works this way: According to a central tenet of best-practice flexible production, managers first divide permanent (“core”) from contingent (“peripheral”) jobs. The size of the core is then cut to the bone—which, along with the minimization of inventory holding, is why “flexible” firms are often described as practicing “lean” production. These activities, and the employees who perform them, are then located as much as possible in different parts of the company or network, even in different geographic locations. A good example is the siting of the “back offices” of the big insurance companies, banks, and corporate headquarters. These facilities house masses of typically poorly paid, overwhelmingly female clerical workers, tucked away in

suburban “office parks,” far from the downtown corporate headquarters to which they are linked, where their companies’ higher-level functions are performed.<sup>6</sup>

Although represented as state-of-the-art management, the practice of lean production (the principle applies as much to the service sector as to manufacturing) involves the explicit reinforcement or creation *de novo* of sectors of low-wage, “contingent” workers, frequently housed within small business suppliers and subcontractors.<sup>7</sup> The advent of these generally big firm-led core-ring production networks is almost surely adding to the national (and increasingly international) problem of “working poverty,” in which people work for a living but do not earn a living wage. As a result, both within the big firms and their most trusted partners and suppliers, and ultimately over the economy as a whole, core employees become increasingly segregated from outside peripheral employees—a gap that is measurably reflected in the by now widely acknowledged phenomenon of growing earnings inequality among American (and, as we shall see, some overseas) workers.<sup>8</sup> I call this the dark side of flexible production.

To sum up the argument: I am suggesting that the emerging global economy remains dominated by concentrated, powerful business enterprises. Indeed, the more the economy is globalized, the more it is accessible only to companies with a global reach.

[...]

#### WHY SMALL FIRMS DO NOT DRIVE ECONOMIC GROWTH AND CREATE THE MOST NEW JOBS

My argument about the revitalization and transformation of the big firms and their production networks must sound even more surprising to a public that, for more than a decade, has been told repeatedly that *small* companies are now the engines of economic growth and development. According to the new conventional wisdom, the large corporation was in many respects becoming something of a dinosaur, increasingly unable to compete in a “postindustrial” world characterized by continually fluctuating consumer demands, heightened international competition, and

the need for more flexible forms of work and inter-firm interaction.

As the big firms collapsed under their own weight, we were told, a panoply of small, flexible enterprises were rushing in to fill the ecological void. Small enterprises were said to be creating most of the new jobs in all of the world’s highly industrialized countries. The world described by an earlier generation of scholars—Joseph Schumpeter, Raymond Vernon, John Kenneth Galbraith, and Alfred Chandler—was thought to be collapsing before our very eyes. Now it was the turn of the small, agile companies to drive technological progress.

But hard evidence shows that the importance of small businesses as job generators and as engines of technological dynamism has been greatly exaggerated. In the United States and Germany, after we factor out the ups and downs of the business cycle, the share of all jobs accounted for either by small companies or by individual workplaces with fewer than 100 employees (the official criterion for “small” that is used by the Paris-based Organization for Economic Cooperation and Development—the OECD—when making international comparisons) has hardly changed since the 1960s. Moreover, many *de jure* independent small companies turn out in varying degrees to be *de facto* dependent on the decisions made by managers in the big firms on which the smaller ones rely for markets, for financial aid, and for access to political circles. As we shall see later, there are also sound technical reasons why precisely the kinds of short period changes in the size distribution of firms that so appeal to the “small is beautiful” ideologies systematically exaggerate the relative importance of the tiniest companies, and overstate the fragility of the biggest corporations.

Still, on every continent, stories on the front pages and in the business sections of the leading newspapers and magazines feature seemingly endless anecdotes about an explosion in the number of small businesses. Thus, for the American economy as a whole, for mature as well as for high-tech industry, the consultant David Birch reckons that “very small firms [with fewer than 20 employees] have created about 88 percent of all net jobs in [1981–85].”<sup>9</sup> And *Business Week*, always an opinion setter on economic matters, announced in a

lead story that "Small Is Beautiful Now in Manufacturing,"<sup>10</sup> while across the Atlantic, the London-based *Economist* editorialized:

The biggest change coming over the world of business is that firms are getting smaller. The trend of a century is being reversed. . . . Now it is the big firms that are shrinking and small ones that are on the rise. The trend is unmistakable—and businessmen and policy makers will ignore it at their peril.<sup>11</sup>

Economists use the concept of economies of scale to describe the potential savings in unit production costs as facilities are operated at higher volumes. Scope economies are said to exist when the joint cost of making more than one product on the same basic equipment, or "platform," in the same facility is less than the cost of turning out the same set of products in separate facilities. Historically, these economies of scale and scope joined financial and supervising economies in reinforcing the tendency toward larger units of production and distribution.

Now, thanks to the advent of new, more flexible computer-based technologies, from electronic barcode readers at the supermarket checkout counter to numerically controlled machine tools and flexible manufacturing systems for the factory floor or the laboratory workbench, these internal economies of scale and scope are said to be disappearing. In the words of the management consultant Tom Peters (of *In Search of Excellence* fame), "old ideas about economies of scale are being challenged. . . . Scale itself is being redefined. Smaller firms are gaining in almost every market."<sup>12</sup> The commentator George Gilder is only the most prominent popularizer of the even more extravagant claim that the smallest companies are now even *more* technologically sophisticated than the old giants.<sup>13</sup>

[ . . . ]

A rather more interesting variation on the small firm theme calls our attention to the survival from an earlier era (or in some places, the recent emergence) of networks of mostly small, loosely linked but spatially clustered firms. The businesses that make up these so-called industrial districts are described as typically utilizing a craft form of work organization. The alleged widespread adoption of small-scale

computerized automation helps to make these networks of what the M.I.T. economist Michael J. Piore and the M.I.T. sociologist and creator of the field of "industrial politics" Charles Sabel call "flexibly specialized" firms capable of rapidly reconfiguring themselves to meet the continually fluctuating demands of the world market.<sup>14</sup> In the modern era, the industrial districts were first discovered in north-central Italy in the 1970s, then elsewhere in Europe, and they have now become the object of both study and policy prescription in many different regions of Europe, North America, and eastern Asia.<sup>15</sup>

At a time when many Western and Third World political leaders continue to entertain the philosophy that further government involvement in the economy only erodes economic efficiency—probably the most long-lasting and pernicious legacy of the Reagan-Thatcher years—in Japan, North America, and Europe, local and regional governments have been actively supporting their industrial districts with a variety of infrastructural and business services. Tying it all together are (we are told) a sense among the locally oriented small firm owners and managers of shared long-run interest; of mutual *trust* deriving from repetitive mutual business contracting said to be *embedded* within deeply rooted local social relationships associated with political, familial, and (in some places) religious life; and the practice of *reciprocity* among all the actors in the community.<sup>16</sup> Giacomo Becattini, the prominent, elegant Florentine economist, calls this the "industrial atmosphere," borrowing an evocative language first coined by the British economist Alfred Marshall, who depicted the late-nineteenth-century steelmaking district around the town of Sheffield, and, more or less at the same time, by Alfred Weber, the German father of industrial location theory.<sup>17</sup>

More than anything else, it is the embedding that is thought to confer on these new growth poles of generally small enterprises the ability to capture simultaneously economies of scale and scope, but at the level of the district as a whole rather than within individual firms.<sup>18</sup> Therein lies their alleged competitive advantage over the large, vertically integrated, centralized, and concentrated monopolies that dominated economic life in the industrialized world for most of the twentieth century. In the elegantly argued and widely influential view of Piore and

Sabel, the world has come to a "second industrial divide," at which a resurgence of the nineteenth-century districts has been made possible by the growing complexities of a global economy, which make it ever more difficult for large, concentrated economic organizations to compete.<sup>19</sup>

#### WHY ARE WE SO READY TO ACCEPT THE SMALL FIRMS STORY?

[ . . . ] It is easy to see why both the entrepreneurial and the industrial district versions of the theory of small firm-led growth would become so popular in the 1980s, especially among policy makers. The 1970s constituted a historical moment when the managers of large corporations in many places seemed to have lost their strategic bearings. Moreover, by the end of that decade, and well into the 1980s, the very legitimacy of government was being challenged by newly reenergized conservative political movements that had succeeded in capturing political power and decisive influence on public opinion, especially in the United States and the United Kingdom but to some extent also in the Federal Republic of Germany, Austria, and eventually even Sweden, the country with the world's most highly developed welfare state. Both tendencies strengthened interest in and celebration of entrepreneurship, small business, free enterprise, deregulation, and decentralized ("free") markets.

This is the environment that has proved so hospitable to the questionable statistics of Birch and to the laissez-faire ideological tracts of Gilder, both of whom are outspoken advocates of economic development policies fashioned around the allegedly driving force of the dynamic small firm. It is the same environment that has given rise to such public policy conceptions as the enterprise zone, the industrial incubator, government deregulation, tax preferences for venture capital funds, and science parks—all in the interest of promoting and nurturing the growth of small businesses. This approach has acquired a special champion in the American media, in the influential magazine *Inc.*, and in Europe, in the London *Economist*.

Interestingly, the Left in many places has also become enchanted with many of the elements of

such a program—although for different reasons. To many, the big firms seemed hopelessly inaccessible. Moreover, as socialist and social democratic parties and groups attained some degree of control over municipal, state, or provincial governments (and even the national government, as in France and Spain) during the depths of the recession of the late 1970s through early 1980s, it was both ideologically attractive and seemingly feasible politically to articulate a "progressive localism" that encouraged the development of cooperatives and other kinds of small firms. Nowhere was this inclination more apparent than in the United Kingdom. There, in the early 1980s, the small firm "renaissance"—and the Italian model in particular—caught the interest of several leaders of the Greater London Council and the Greater London Enterprise Board.<sup>20</sup>

In the United States, efforts to self-consciously construct (or preserve) industrial districts got under way in a number of states, including Massachusetts, Pennsylvania, and Michigan. The Washington-based Corporation for Enterprise Development became a prominent voice for the planned emulation of the Italian model. And in New York City, the architect C. Richard Hatch, who knows Italy intimately, advocated the transferability of the Italian model with the same fervor that, in the late 1960s, he brought to the argument that Third World import substitution strategies also made sense for the economic development of black urban ghettos in the United States.<sup>21</sup>

These initial efforts to create small firm-led American production networks on the Italian model have met with mixed results, at best. But the advocates have been working harder than ever to improve their performance and to gain political support from the White House and from a recently revitalized U.S. Small Business Administration. [ . . . ]

#### WHAT'S WRONG WITH THE SMALL FIRMS STORY?

[ . . . ] Take the job generation question. As a general proposition, across the industrial world, the biggest companies and plants unquestionably are downsizing, especially in manufacturing (on the other hand, at least in the United States the average individual facility in the *service* sector has actually

been getting *bigger*).<sup>22</sup> Why are manufacturers getting smaller? We know that managers are outsourcing work they used to perform inhouse.<sup>23</sup> They are also partnering with other existing firms, as a way of accessing new technical know-how, markets, territories, and capital without having to make new capacity-expanding investments themselves. In this regard, Bo Carlsson, a Case Western Reserve University industrial economist, reports that

the share of multi-unit companies in U.S. manufacturing employment increased throughout the postwar period until the late 1970s. But after 1977, the share of multi-unit companies declined for the first time. . . . This suggests that subcontracting and outsourcing have become more important forms of disintegration in recent years.<sup>24</sup>

But then the increasing number of small firms turns out to be in part a function of the core-ring, lean production strategies of the *big* companies. It is the strategic downsizing of the big firms that is responsible for driving down the average size of business organizations in the current era, *not* some spectacular growth of the small firms sector, *per se*.<sup>25</sup> What we have witnessed over the last decade constitutes the lopping off of the tip of an iceberg more than it does a meltdown of the old prevailing structure.

In fact, in the United States, Germany, and Japan, once we account properly for the usual ups and downs of the business cycle, the shares of national employment in both small *establishments* (that is, in individual plants, stores, and offices) and small *enterprises* (entire companies) have hardly changed at all for several decades. The Japanese data for the most recent years actually record a slight *decline* in the small firm (and plant) shares of jobs. Only in the United Kingdom did the small firm (and establishment) shares grow steadily between the mid-1970s and the mid-1980s. But even there, this looks to be mainly the result of the sharp decline in the fortunes of the biggest corporations during the disastrous economic years of 1973 through 1983, these corporations' subsequent laying off of middle managers as well as shop floor workers, and the permanent shuttering of their older, most inefficient large factories—not some explosive growth of small business, *per se*.

Nor do countries with a high proportion of their overall manufacturing employment in small firms display systematically superior economic performance. Across the member nations of the OECD there is no correlation whatsoever between the relative importance to each country of small manufacturing firms and either the national unemployment rate or the rate of growth of overall national manufacturing employment.<sup>26</sup>

New attention to the *dynamics* of job creation and destruction over time does even more damage to a naive small firms story. For example, recent research from the United States and Germany points to a consistent tendency of the *largest* firms in any cohort to experience the fastest rates of growth over time, and the smallest chances of going out of business during any given interval of time.<sup>27</sup>

Still another kind of evidence has emerged that casts doubt on Birch's thesis that very small start-up businesses are the principal source of economic vitality in modern industrial economies. In 1989, after years of providing Birch with his data on company and establishment births and deaths in American industry, the Dun and Bradstreet Corporation (D&B) decided that it had had enough of being quoted so often as the source of the claims that small firms were creating most of the jobs in the United States.<sup>28</sup> So the company set its in-house economists to reassessing what their own numbers seemed to be saying.

What they found was startling. Among the 245,000 new companies that were started up in the United States in 1985—in the middle of the Reagan-era military- and real estate-driven economic boom—75 percent of the employment gains by 1988 occurred in those firms that, at birth, had *already* employed more than 100 workers when they were first launched. Moreover, this group of businesses constituted only *three-tenths of one percent* of the 1985 cohort.<sup>29</sup>

[ . . . ]

Finally, there is the matter of just how independent the small firms really are, especially in relation to the big firms for whom they act as suppliers and subcontractors. In their writing for the International Institute for Labour Studies (IILS) in Geneva, the Harvard Business School's Gary Loveman and IILS Director Werner Sengenberger conclude that "large

enterprises often have very many legally independent subsidiaries. While the subsidiaries are *de jure* independent, they are *de facto* part of the large enterprise and should be accounted for, accordingly." For example, one German study found that "the 32 largest German manufacturing enterprises had in excess of 1,000 legally independent subsidiaries, and the number grew by almost 50 per cent from 1971 to 1983."<sup>30</sup> Once again, what we are seeing is evidence of how *production* may be decentralized, while power, finance, distribution, and control remain concentrated among the big firms.

For all the widespread interest in small firms as job generators, Birch and Gilder have failed to address a rather obvious companion question: How well do small companies do, *vis-à-vis* the largest firms, in providing their workers with a respectable standard of living? That is, how do wages, benefits, and such working conditions as occupational health and safety differ (if indeed they do) by the size of the organization? Certainly, for the purposes of evaluating the public policy implications of government subsidization of the small business sector, whether through grants, loans, tax incentives, or relaxation of environmental and other regulatory controls, these would seem to be important concerns.

[ . . . ]

For the United States, the definitive study of whether the big or the small firms offer better working conditions is to be found in a book published in 1990 by the economists Charles Brown, James Hamilton, and James Medoff.<sup>31</sup> [ . . . ] The authors found, first, that across American industry, "workers in large firms earn higher wages, and this fact cannot be explained completely by differences in labor quality, industry, working conditions, or union status." Second, employees of the big firms also enjoy "better benefits and greater job security than their counterparts in small firms." Third, in American political life, small firms are more likely than large ones to be granted exemptions from environmental or health and safety regulations, with the inevitable negative implications for their employees. Finally, workers in small firms are more likely to quit their jobs, and the fact that they express a greater desire to join unions (if they do not already belong to one) than do those working for big companies reinforces the strong impression that the workers themselves

perceive conditions as being better in the larger organizations.

I have been presenting evidence on how the distributions of jobs, wages, and benefits differ between big and small businesses. There are still other flaws in the small firms story. Earlier, I alluded to the belief that smaller companies and establishments are now actually *more* technologically innovative than the supposedly rigid and inflexible big firms. Some writers assert that computer-programmable machinery systematically favors smaller units of production.<sup>32</sup> Or, as Gilder argues, the dramatic (in other words, the miniaturization) of microelectronic components leads inexorably to a commensurate shrinking of the "optimal" scale of the firms that make them.<sup>33</sup>

Much new theory and empirical evidence adds up to a powerful challenge to this contention. There is no particular size of firm, nor any special scale of production, that any given technology invariably favors or requires—nor any one "best" design of jobs that employers everywhere will introduce in connection with some new round of automation. For example, the Carnegie Mellon University economist Wesley Cohen and his colleagues have shown that small firms do best as product rather than as process innovators, and then only under certain market conditions. In other settings, the large producers still have a measurable advantage, given their greater resources.<sup>34</sup> Carnegie Mellon's Kelley has conducted a number of econometric studies from which she concludes that big firms are far more likely to adopt and use both complex *and* small-scale factory automation than are smaller companies and factories. In fact, during the 1980s the technology gap between the smallest and the largest American manufacturers actually grew *wider*, according to private industry trade association data.<sup>35</sup>

Gilder's biggest error in reasoning is his disregard of the fact that even playing in the league where "microcosmic" technology is being created requires ever larger scale production and concentrated control over finance capital. Consider the remarks of Intel's board chairman, Gordon E. Moore, in announcing a corporate plan to turn Intel's Albuquerque, New Mexico, chip factory into the world's biggest facility of its kind: "This is our first billion-dollar factory, but it won't be our last. Chip

factories are getting bigger and more expensive as our manufacturing technologies continue to become more complex. The entry fee to be a major player in the global semiconductor market of the '90s is \$1 billion—payable in advance.<sup>36</sup>

[...]

### TROUBLE IN PARADISE: HIERARCHY AND INEQUALITY IN THE INDUSTRIAL DISTRICTS

Small, independent firms are neither as bountiful nor as beautiful as the new conventional wisdom has led us to believe. But what about those *networks* of small firms, those locally oriented industrial districts in such regions as north-central Italy and California's Silicon Valley? Here, too, we can see signs of concentration without centralization—geographically and organizationally dispersed production, but with strategy, marketing, and finance ultimately controlled by (or, in the case of the Italian districts, coming increasingly under the control of) the big firms.<sup>37</sup>

As a growing number of Italian researchers and local government officials are themselves observing, as they pursue the economic development of their own areas, powerful "lead firms" from within and without the districts now threaten to alter the collaborative nature of interfirm relations inside the districts. Mergers and acquisitions are on the rise. Financial conglomerates are dictating production procedures to what used to be truly independent small firms.

I interpret neither the appearance (or reappearance) of hierarchy, nor unequal power and the remote control of key elements of a district's economy by outside corporations, as a sign of regional economic *failure*. Instead, such changes are more a sober reminder that, for all their intended local orientation, the districts are operating within much more extensive fields. In the context of a global system populated by big companies perpetually on the prowl for new profitable opportunities, the very success of a district can itself bring about changes that give rise to its opposite, and we observe the re-creation of hierarchical organization.

All of these concerns are relevant to constructing a richer, more balanced reassessment of the

evolution of the Western Hemisphere's most dramatically successful high-tech region—Silicon Valley. Those who wish to characterize the Valley as an industrial district on the Italian model are not wrong. But they are offering only a partial perspective. Silicon Valley has many faces, each of which manifests a different aspect of the emerging post-1970s system of networked production that I have named concentration without centralization—including the dark side.

In the most romantic characterizations,<sup>38</sup> Silicon Valley's astonishing success as the home base for a myriad of companies that design, produce, and export computers, workstations, microchips, disk drives, and software is mainly a story about an adventuresome gang of creative, supremely—even belligerently—-independent entrepreneurs, many of them refugees from other, less free-wheeling parts of the country and the world, practicing textbook-style free market economics.

Silicon Valley shows another face to other observers. As seen by AnnaLee Saxenian, a city planning professor at the University of California at Berkeley, Silicon Valley is a full fledged industrial district, a dense thicket of mostly small and medium-sized (but also some quite large) firms that alternately cooperate and compete with one another.<sup>39</sup> These networks of producers are said to be embedded in a local political economy that provides job training, finance capital, and an incessant flow of ideas and information about the latest design and production techniques. Well connected to the rest of the world, Silicon Valley's flexibly specialized firms nevertheless have a "Marshallian" orientation, in the sense that the district may trade with the rest of the world (and quite successfully, thank you), but *production* relationships remain (according to Saxenian) highly localized.

From yet a third perspective, Silicon Valley increasingly faces outward. According to a bevy of astute observers—including the management professor David Teece, the regional economist Ann Markusen, the technologists Kenneth Flamm and Martin Kenney, the management consultant Charles Ferguson, the political scientist Richard Gordon, and the urban planner Richard Florida—Silicon Valley as a production *system* was substantially created by major multinational corporations and

remains profoundly dependent on them, and on the fiscal and regulatory support of the national government—especially as represented by the Department of Defense (as recently as the mid-1980s, Santa Clara County, the heart of Silicon Valley, remained one of the three top recipients of defense contracts in the United States).<sup>40</sup>

[...]

On every continent, the great majority of the good jobs within the districts themselves are held by men of the dominant color and ethnicity. Minorities, women, and immigrants are overwhelmingly treated as outsiders, consigned to jobs situated in the back rooms of these district's shops or outside these regions altogether, in the small factories and sweatshops that occupy the periphery of the geographically extensively production systems of which the districts, *per se*, constitute only the core. By drawing too narrow a box around the activity taking place solely *within* the districts, advocates are understating the degree of inequality among workers and between regions.

In Italy, a good example is Benetton, the maker of colorful clothing sold in spritely little franchise shops in seventy-nine countries—more than 300 shops in Japan, alone.<sup>41</sup> Most of the design and the high-end production work continue to be situated in or around Treviso, near Venice, where the firm was founded in the 1960s and where it is still headquartered. By contrast, nearly all of the labor-intensive assembly, pressing, and embroidery work is contracted out. A first tier of midsized firms perform R&D, design, or high-level manufacturing functions, collaborating closely with (but working for the most part on orders from) technicians and managers in the core corporation. In turn, these subcontractors are expected to manage successively lower order tiers of suppliers, situated within the Veneto region and farther away, in southern Italy, Turkey, and other low-wage areas.

These lower-tier suppliers are typically very small, highly specialized, and almost never unionized, and they are generally owned and run by small-town or rural men who employ a workforce consisting predominantly of women under the age of twenty-five. Labor costs in the lower-tier workshops are below the national average. Whether the national labor laws with respect to health and safety,

minimum wages, paid vacations, and the like are observed depends mainly on whether the local political parties, the owners' confederations, and the unions enforce them. As for skills, managers expect newly hired workers to be able to carry out assigned tasks within, at most, a year of coming on the job. The pace of production in the small contract shops can be extremely intense.

Finally, at the lowest level within this interregional and obviously hierarchical production system stands the *home worker*: lacking skills (or, at any rate, power), receiving the lowest wages, and having no legislated health and safety protection. Such home work appears to be more prevalent in the south of Italy than in the more urbanized north, but even on this question, the visitor gets contradictory stories.

The inequalities are not quite so stark in Silicon Valley, but there are important underlying similarities in the labor process and in its geography. As early as the 1970s, it was becoming apparent that the workforce employed inside the semiconductor companies at the heart of the Silicon Valley economy was highly stratified. As Saxenian documented in her earliest published research,<sup>42</sup> at the top of the hierarchy are the highly educated, well-paid managers, engineers, and other professionals. At the same time (and often within the same factories and laboratories), nearly half of all workers in the Valley's high-tech companies perform production and maintenance tasks, four-fifths of which are officially classified as semiskilled or unskilled. Wages in these jobs are dramatically lower, and benefits often nonexistent.<sup>43</sup>

During the 1960s and 1970s, immigration into Santa Clara County reflected this stratification. Well-educated engineers and scientists moved into the western foothills near Stanford University, to be closer to their offices and labs, as well as to the more expensive luxury homes and amenities. At the same time, the industry's demand for production workers stimulated an equally large in-migration of unskilled, predominantly Mexican, Chicano, and Asian workers. These workers were shunted off to new residential areas far from the heart of the Valley, especially in and around the explosively growing city of San Jose.

Now, as has been shown by the University of California political scientist Richard Gordon, the

San Jose urban planner Linda Kimball, and the UCLA professors Paul Ong, Allen Scott, and Michael Storper, there are whole neighborhoods of Los Angeles—hundreds of miles away from Santa Clara County—where both documented and undocumented workers perform unskilled and semiskilled assembly tasks, often at home, for contractors to the high-tech firms of Silicon Valley. In those neighborhoods, the quality of housing and public services is as far below that of the northern reaches of the Valley as one could possibly imagine.<sup>44</sup> These urban ghettos are as much a part of the famed "Silicon Valley production system" as are the engineering laboratories at Stanford, or the military R&D facilities within Lockheed's Missiles and Space Division in Santa Clara County.

#### WHY SHOULD WE CARE? RETHINKING NATIONAL AND REGIONAL ECONOMIC DEVELOPMENT IN A WORLD OF PRODUCTION NETWORKS

[...] If living in a world of lean and mean companies and their global networks of suppliers, strategic partners, and financiers is inescapable, then policy makers are sooner or later going to have to come to grips with the dark side of flexibility—if only to get themselves reelected. Because flexibility depends so fundamentally on the perpetuation of contingent work (that is, part-time, part-year, temporary, and contract work), the shift toward network forms of industrial organization promises to *strengthen*, not arrest, the politically volatile trend toward income polarization.

The class and associated wage structures that characterized nineteenth-century industrial capitalism could be depicted as a *pyramid* with a narrow top and a wide base. The rapid growth of a wage-earning middle class during the twentieth century (and especially in the years following World War II) effectively transformed that distribution into one with the shape of a *diamond*, featuring a small number of very rich individuals at the top, a declining fraction of very poor people at the bottom, and a burgeoning middle group.

But economists, sociologists, and journalists now almost universally (if reluctantly) agree that since

the 1970s the distribution of income has been changing its shape again, becoming an *hourglass* with an expanding upper end of well-paid professionals (including Reich's symbolic analysts), a growing mass of low-paid workers at the bottom, and a shrinking middle class made up of downwardly mobile former factory workers and middle managers made redundant by the philosophy of lean production. Moreover, it appears that this unsettling trend toward a polarization of earnings is occurring worldwide, albeit at varying rates. The consequences differ, also, since countries have such very different "safety nets" in place to prop up those who cannot make it in the labor market.<sup>45</sup>

Finding ways to maintain civilized labor and living standards in a world economy increasingly populated by forms of industrial organization that exacerbate such polarization will be no small feat. [...]

#### NOTES

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3. Jane Perlez, "Toyota and Honda Create Global Production System," *New York Times*, March 26, 1993, p. A1; Eike Schamp, "Towards a Spatial Reorganisation of the German Car Industry? The Implications of New Production Concepts," in *Industrial Change and Regional Development: The Transformation of New Industrial Spaces*, ed. Georges Benko and Mick Dunford (London: Belhaven Press/Pinter, 1991), pp. 159-70.

4. Robert B. Reich, *The Work of Nations: Preparing Ourselves for 21st Century Capitalism* (New York: Knopf, 1991).

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10. "Small Is Beautiful Now in Manufacturing," *Business Week*, October 22, 1984, pp. 152-56.

11. "The Rise and Rise of America's Small Firms," *Economist*, January 21, 1989, pp. 73-74.

12. Tom Peters, "New Products, New Markets, New Competition, New Thinking," *Economist*, March 4, 1989, pp. 27-32.

13. George Gilder, *The Spirit of Enterprise* (New York: Basic Books, 1984) and *Microcosm: The Quantum Revolution in Economics and Technology* (New York: Simon & Schuster, 1989).

14. Michael J. Piore and Charles Sabel, *The Second Industrial Divide: Possibilities for Prosperity* (New York: Basic Books, 1984).

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20. See Michael Best, "Sector Strategies and Industrial Policy: The Furniture Industry and the Greater London Enterprise Board," in *Reversing Industrial Decline?*, ed. Paul Hirst and Jonathan Zeitlin (Oxford: Berg, 1989); Best, *The New Competition* (Cambridge, Mass.: Harvard University Press, 1990); and Robin Murray, ed., *Technology Strategies and Local Economic Intervention* (Nottingham: Spokesman 1989).

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## PART X

### ORGANIZATIONAL CULTURE

Though there are many different definitions of culture, a society's culture is usually defined as its values, norms, beliefs, and attitudes, and the symbols and rituals used to express them. Institutional theory argues that the wider culture has a strong impact on organizational structure and functioning (see Reading 19). Another stream of research is interested in the culture *within* organizations, considered as social systems in their own right.

Organizational researchers have long recognized that different organizations have their own tone or "feel." Even when they are in the same industry or are performing the same function, different organizations may be more authoritarian or democratic, rule-bound or informal, innovative or resistant to change, accepting of or hostile toward diversity, or may have generally friendly or unfriendly atmospheres.

However, the recent interest in organizational culture reflected the spectacular global success of Japanese business in the 1970s–1980s. American corporations during the 1920s used policies collectively known as *welfare capitalism* to encourage employees to identify with the company and avoid unions. These policies included employment security, fringe benefits such as health care, company-sponsored unions, grievance mechanisms, suggestion systems, picnics and company-sponsored athletics, even company songs and other techniques, but only a few plans such as IBM's policies survived the Depression (Edwards 1979; Jacoby 1997). Japanese enterprises, which developed and maintained such paternalist policies and "family" atmosphere to a much greater degree, seemed to have intensely loyal and dedicated employees. Employee commitment and conscientious work attitudes became widely viewed as one of the secrets of Japanese business success. The recent interest in organizational culture among managers and some organizational researchers reflected a desire to improve morale, organizational commitment, and, hopefully, productivity.

The potential advantages of the Japanese approach are illustrated by a typology of organizational control techniques developed by Amitai Etzioni (1964). Some organizations, such as prisons and involuntary mental institutions, use physical sanctions or *coercion* to control their members. Others, such as most business organizations, use material or *utilitarian incentives* to induce members to behave in the desired ways. Still other organizations, such as churches or political parties, use *normative controls*, such as higher ideals or group acceptance, to persuade members to identify with and internalize the organization's goals,