

# **A Century of Social Transformation— Emergence of Knowledge Society**

From: [\*Managing in a Time of Great Change\*](#) by [Peter F. Drucker](#).

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## **Introduction**

No century in human history has experienced so many social transformations and such radical ones as the twentieth century. They, I submit, shall turn out to be the most significant events of this our century, and shall be its lasting legacy. In the developed free-market countries—only one-fifth of the earth's population, but the model for the rest—work and work-force, society and polity are all, in the last decade of this century, *qualitatively* and *quantitatively* different both from those of the first years of this century and from anything ever experienced before in human

history: different in their configurations, in their processes, in their problems, and in their structures.

Far smaller and far slower social changes in earlier periods triggered violent intellectual and spiritual crises, rebellions, and civil wars. The extreme social transformations of this century have hardly caused any stir. They proceeded with a minimum of friction, with a minimum of upheavals, and indeed with altogether a minimum of attention from scholars, politicians, the press, and the public. To be sure, this century of ours may well have been the cruelest and most violent century in human history, with its world wars and civil wars, its mass torturers, ethnic cleansings, and genocides. But all these killings, all these horrors inflicted on the human race by this century's *Weltbeglucker* (refers to those who establish paradise on earth by killing off nonconformists, dissidents, resisters, and innocent bystanders, whether Jews, the bourgeoisie, kulaks, or intellectuals—an untranslatable German term, alas). hindsight clearly shows, were just that: senseless killings, senseless horrors. Hitler, Stalin, and Mao, the three evil geniuses of this century, destroyed. But they created nothing.

Indeed, if this century proves anything, it is the futility of politics. Even the most dogmatic believer in historical determinism would have a hard time explaining the social transformations of this century as caused by the headline-making political events, or explaining the headline-making political events as caused by the social transformations. But it is the social transformations, running like ocean currents deep below the hurricane-tormented surface of the sea, that have had the lasting, indeed the permanent, effect. They—rather than all the violence of the political surface—have transformed the society and the economy, the community, the polity we live in.

## **I. The Social Structure and Its Transformations**

Before World War I, the largest single group in every country

were farmers. They were then no longer the population everywhere, as they had been since the dawn of history and as they had still been in every country at the end of the Napoleonic Wars, a hundred years earlier. But except in England and Belgium, farmers were still a near majority in every developed country—in Germany, in France, in Japan, in the United States—and, of course, in all developing and Third World countries too.

Eighty years ago, at the eve of World War I, it was considered axiomatic that developed countries—North America being the only exception—would increasingly become unable to feed themselves and would increasingly have to rely on food imports from non-industrial, non-developed areas. England and Belgium had already become massive food importers. Germany, Holland, and Switzerland were barely breaking even in their food accounts. And the fear of becoming dependent on food imports was emerging in Meiji Japan, after 1890, as a keynote of Japanese politics, as the justification for Japan's annexing food-surplus territories like Taiwan and Korea, and as the psychological force behind Japan's nascent imperialism.

Today, only Japan, among major, developed, free-market countries is a heavy importer of food. (Unnecessarily so—its weakness as a food producer is largely the result of an obsolete rice-subsidy policy that prevents the country from developing a modern, productive agriculture.) All other developed free-market countries have become surplus food producers despite burgeoning urban populations. In all these countries food production is today many times what it was eighty years ago—in the United States, eight to ten times as much.

But in all developed free-market countries—including Japan—farmers today are at most 5 percent of the population and the workforce, that is, one-tenth of what they were eighty years ago. Actually, *productive* farmers are less than half of the total farm population, or no more than 2 percent of the workforce. And these agricultural producers are not "farmers" in any sense of the word; they are "agribusinesses" and constitute arguably the most capital intensive, most technology-intensive, and most information-intensive industry around. Traditional farmers are

close to extinction, even in Japan. And those still around have become a protected species kept alive only by enormous subsidies.

The second-largest group in population and workforce in every developed country around 1900 were live-in servants. They were considered as much a "law of nature" as farmers were. The British census of 1910 defined "lower middle class" as a household employing fewer than three servants. And while farmers as a proportion of population and workforce had been steadily shrinking throughout the nineteenth century, the numbers of domestic servants, both absolutely and as a percentage, were steadily growing right up to World War I. (And nowhere faster than in the United States, with its enormous influx of immigrants. With free land largely gone by 1900, a job as domestic servant was, for many newcomers, the only work available.) Eighty years later, live-in domestic servants in developed countries have become practically extinct. Few people born since the Second World War, that is, few people under fifty, have even seen any except on the stage or in old movies.

Farmers and domestic servants were not only the *largest* social groups, they were the oldest social groups, too. Together they were, through the ages, the foundation of economy and society, the foundation altogether of "civilization." Servants, whether slaves, indentured servants, or hired hands, actually antedate farmers by several millennia. The patriarchs of the Old Testament were still nomadic pastoralists, rather than settled farmers. But they had large numbers of servants of all kinds.

Big cities are nothing new. Nineveh and Babylon were very big cities, and so were the capital of the Han emperor in China two hundred years before Christ and the Rome of the Caesars. But these big cities were islets in a rural sea. This was still largely true for the social world of 1900, despite the visibility and glamour of a Paris, a London, a New York, a Boston, a Tokyo. It was then still generally accepted, as it had been in the Hellas of Hesiod's *Erga kai Hemera* (*Works and Days*) written in the eighth century B.C., or in the Rome of Virgil's *Georgics*, written in the

first century B.C., that cities are "parasites" and farmers the "real nation." The technology of the society of 1900 was already much closer to that of the year 2000 than to that of 1800. It had steamships, railroads, quite a few automobiles, and, by 1903, the airplane. It had electricity, telephone, wireless telegraphy, and the first movies. But socially 1900 was still closer to 1800 and indeed to antiquity than to us, that is, to 1994. It was still organized around farmers and domestic servants, both still largely living the life their ancestors had lived at the time of Hesiod and Virgil, doing the same work and with very much the same tools.

In the developed society of 2000, farmers are little but nostalgia, and domestic servants are not even that.

Yet these enormous transformations in all free-market developed countries were accomplished without civil war, and, in fact, in almost total silence. Only now that their farm population has shrunk to near zero do the totally urban French loudly assert that theirs should be a "rural country" with a "rural civilization."

## **The Rise and Fall of the Blue-Collar Worker**

One reason, indeed the main reason, why the transformation caused so little stir was that by 1900 a new class, the blue-collar worker in manufacturing industry—Marx's "proletarian"—had become socially dominant. Farmers—and not only in Kansas—were loudly adjured to "raise more hell and less corn," but not even the farmers paid much attention. Domestic servants were clearly the most exploited class around. But when people before World War I talked or wrote about the "social question," they meant blue-collar industrial workers. These workers were still a fairly small minority of population and workforce—right up to World War I at most an eighth or a sixth of the total—and still vastly outnumbered by the traditional "lower" classes of farmers and domestic servants. But early twentieth century society was obsessed with blue-collar workers, fixated on them, bewitched by them.

Farmers and domestic servants were everywhere. But as a "class," they were invisible. Domestic servants lived and worked in small and isolated groups of two or three, inside individual homes or on individual farms. And farmers too were dispersed. Above all, these traditional lower classes were not organized. Indeed, they could not be organized. Slaves employed in mining or in producing goods had revolted frequently in the ancient world—though always unsuccessfully. But there is no record of a single demonstration or of a single protest march of domestic servants anyplace and at any time. There were peasant revolts galore no place more frequently than in Tokugawa Japan from 1700 on, or in imperial China, also beginning in 1700. But except for two Chinese revolts in the nineteenth century—the Taiping Rebellion in mid-century and the Boxer Rebellion at the century's end, both of which lasted for years and came close to destroying the regime—all peasant rebellions in history have fizzled out after a few bloody weeks. Peasants, history shows, are very hard to organize and do not stay organized—which was the reason why they earned Marx's contempt.

The new class, the blue-collar workers in manufacturing industry, were extremely visible. This is what made them a "class." They lived perforce in dense population clusters and in cities—in St.-Denis outside Paris, in Berlin's Wedding and Vienna's Ottakring, in the textile towns of Lancashire, the steel towns of America's Monongahela Valley, and in Japan's Kobe. And they soon proved eminently organizable, with the first strikes occurring almost as soon as there were factory workers. Charles Dickens's harrowing tale of a murderous labor conflict at a cotton textile mill, *Hard Times*, was published in 1854, only six years after Marx and Engels wrote *The Communist Manifesto*.

By 1900 it had become quite clear that industrial blue-collar workers would not become the majority as Marx had predicted only a few decades earlier. They therefore would not overwhelm the capitalists by their sheer numbers. Yet the most influential radical writer of the period before World War I, the French ex-Marxist and revolutionary syndicalist Georges Sorel, found widespread acceptance for his 1906 thesis that the proletarians

would overturn the existing order and take power by their organization and in and through the violence of the general strike. It was not only Lenin who made Sorel's thesis the foundation of his revision of Marxism and built around it his strategy in 1917 and 1918; both Mussolini and Hitler—and Mao, ten years later—equally built their strategies on Sorel's thesis. Mao's "power grows out of the barrel of a gun" is almost a straight quote from Sorel. The blue-collar worker became the "social question" of 1900 because he was the first "lower class" in history that could be organized and stay organized.

No class in history has ever risen faster than the blue-collar worker. And no class in history has ever fallen faster.

In 1883, the year of Marx's death, "proletarians" were still a minority of industrial workers. The majority were then skilled workers employed in small craft shops each containing twenty or thirty workers at most. Of the antiheroes of the nineteenth century's best "proletarian" novel, *The Princess Casamassima*, by Henry James—published in 1886, only three years after Marx's death (and surely only Henry James could have given such a title to a story of working-class terrorists!)—one is a highly skilled bookbinder, the other one an equally skilled pharmacist. Similarly, the protagonists of Gerhart Hauptmann's *Die Weber* (*The Weavers*)—written in 1892 and the only successful "proletarian" play (its author eventually received the Nobel Prize for Literature for it) are skilled men still working in their homes rather than in a factory.

By 1900, *industrial worker* had become synonymous with *machine operator* in a factory employing hundreds, if not thousands, of people. These factory workers were indeed Marx's proletarians, without social position, without political power, without economic or purchasing power.

Popular myth has it that Henry Ford's 1907 Model T was so cheap that workers could afford it. But at \$750 its price was equal to more than three times the entire annual income of an American machine operator—seventy or eighty cents was a good

daily wage. Yet American machine operators were then already the world's most highly paid industrial workers.

The workers of 1900—and even of 1913—had no pension; no paid vacation; no overtime pay; no extra pay for Sunday or night work; no health insurance (except in Germany); no unemployment compensation; no job security whatever. One of the earliest laws to limit working hours for adult males enacted in Austria in 1884—set the working day at *eleven* hours, six days a week. Industrial workers, in 1913—the last year before World War I—everywhere worked a minimum of three thousand hours a year. Their unions were still officially proscribed or at best barely tolerated. But the workers had shown their capacity to be organized. They had shown their capacity to act as a “class.”

In the 1950s, industrial blue-collar workers had become the largest single group in every developed country, including the Communist ones, though they were an actual majority only during war times. They had become eminently respectable. In all developed free-market countries they had economically become “middle class.” In the United States, in fact—and soon in non-Communist Europe, too—unionized industrial workers in mass-production industry (which then was dominant everywhere) had attained and sometimes even exceeded near-upper-class income levels, with annual incomes including benefits reaching \$50,000—and with automobile industry (e.g., at Ford) exceeding \$100,000. They had extensive job security; pensions; long, paid vacations; comprehensive unemployment insurance or “lifetime employment.” Above all, they had achieved political power. It was not only in Britain that the labor unions were considered to be the “real government,” with greater power than prime minister and Parliament. In the United States, too, and equally in Germany, France, and Italy, the labor unions had emerged as the country's most powerful and best-organized political forces. And in Japan they had come very close, in the 1948 Toyota and the 1954 Nissan strikes, to overturning the “system” and to taking over power themselves.

In 1990, however, both the blue-collar worker and his union were in total and irreversible retreat. They had become marginal



in numbers. Whereas blue-collar workers who made or moved things had accounted for two-fifths of the American workforce in the 1950s, they accounted for less than one fifth of the workforce in the early 1990s—that is, for no more than they had accounted for in 1900, when their meteoric rise had begun. In the other developed free-market countries the decline was slower at first; but after 1980 it began to accelerate everywhere. By the year 2000 or 2010, in every developed free-market country, blue-collar industrial workers will account for no more than one-tenth or, at most, one-eighth of the workforce. Union power has been going down equally fast. Where in the 1950s and 1960s the Coal Miners' Union in the United Kingdom broke prime ministers as if they were matchwood, Margaret Thatcher, in the 1980s, won election after election by being openly contemptuous of organized labor and by whittling down its political power and its privileges. The blue-collar worker in manufacturing industry and his union are going the way of the farmer.

Unlike domestic servants, blue-collar workers will not disappear—no more than producers on the land have disappeared or will disappear. But just as the traditional small “farmer” has become a recipient of subsidies rather than a “producer,” so will the traditional blue-collar worker largely become an auxiliary force. His place is already being taken by a “technologist,” that is, by people who work both with their hands and their theoretical knowledge. (Examples are computer technicians or paramedical technicians such as X-ray technicians, physical therapists, medical-lab technicians, pulmonary technicians, and so on, who have been the fastest-growing group in the U.S. labor force since 1980.)

And instead of a “class,” that is, a coherent, recognizable, defined, and self-conscious group, the blue-collar worker in manufacturing industry may soon be just another “pressure group.”

Chroniclers of the rise of the industrial worker tend to highlight the violent episodes—the clashes between strikers and police especially, such as America's Pullman Strike. The reason is

probably that the theoreticians and propagandists of socialism, anarchism, and communism—beginning with Marx and down to Herbert Marcuse in the 1960s—incessantly wrote and talked of “revolution” and “violence.” Actually, the rise of the industrial worker was remarkably *nonviolent*. The enormous violences of this century—the world wars, civil wars, genocides, ethnic cleansings, and so on—were all violences from above rather than violences from below; and they were unconnected with the transformations of society, whether the shrinking of the number of farmers, the disappearance of the domestic servant, or the rise of the industrial worker. In fact, no one anymore even tries to explain these great convulsions with “the crisis of capitalism,” as was standard Marxist rhetoric only thirty years ago.

Contrary to Marxist and syndicalist predictions, the rise of the industrial worker did not destabilize society. On the contrary, it emerges as the century’s most *stabilizing social development*. It explains why the disappearance of farmer and domestic servant produced no social crises.

The “enclosures” in seventeenth- and eighteenth-century England, which drove farmers off the land, were quite limited locally; but they produced serious and often very violent reactions. They also were widely noticed and hotly discussed—by writers, poets, politicians, and the public, one example being Oliver Goldsmith’s great 1770 poem “The Deserted Village,” perhaps the best-known and most-quoted poem in the England of 1800. Similarly, the early-nineteenth century *Bauernlegen* in East Prussia, in which tenant farmers were pushed off the land to make way for large-scale agriculture, had profound political and cultural reverberations. But the far more massive “flight from the land” that began in the closing decades of the nineteenth century and has continued unabated has gone almost unnoticed except by statisticians. The equally massive “flight from service” that began after World War I, even the statisticians have barely noticed.

Both the flight from the land and the flight from service were voluntary. Farmers and maids were not “pushed off” or “displaced.” They went into industrial employment as fast as

they could. Industrial jobs required no skills they did not already possess, and no additional knowledge. On the contrary farmers on the whole had a good deal more skill than was required to be a machine operator in the mass-production plant—and so had many domestic servants. To be sure, industrial work paid poorly until World War I. But it paid better than farming or household work. Industrial workers, until 1913—and until World War II in some countries, such as Japan—worked long hours. But they worked shorter hours than farmers and domestic servants. What's more, they worked *specified* hours; the rest of the day was their own, which was true of neither work on the farm nor of work as a servant in a household.

The history books record the squalor of early industry, the poverty of the industrial workers, and the exploitation of them. They did indeed work in squalor and live in poverty, and they were indeed exploited. But they lived better than they would either on a farm or in an employer's household, and they were treated better.

Proof of this is that infant mortality dropped as soon as farmers and domestic servants moved into industrial work in the factory. Historically, cities never reproduced themselves. They depended for their perpetuation on a constant influx of people from the countryside. This was still true in the mid-nineteenth century. But with the spread of factory employment, the city became the center of population growth. In part this was the result of the new public health measures: provision of clean water; collection and treatment of wastes; quarantine and inoculation against epidemics. These measures—and they were effective mostly in the city—counteracted, or at least contained, the hazards of crowding that had made the traditional city the breeding ground for pestilence. But the largest single factor in the exponential drop in infant mortality as industrialization spread was surely the improvement in living conditions brought about by the advent of the factory—better housing, better nutrition, lighter workloads, and fewer accidents. The drop in infant mortality—and with it the explosive growth in population—correlates with only one development: industrialization. The early factory was indeed the

“satanic mill” of William Blake’s great poem. But the countryside was not the “Green and Pleasant Land” of which Blake sang; it was (I have said so before) a picturesque but even more satanic slum.

For farmer and domestic servant, industrial work was an opportunity. It was in fact the first opportunity in social history to substantially better oneself without having to emigrate. In the developed, free-market countries, every generation in the last 100 or 150 years could expect to do substantially better than the generation preceding it. The main reason was that farmers and domestic servants could and did become industrial workers.

Because industrial workers were concentrated in groups, that is, because they worked in a large factory rather than in a small shop or in their homes, there could be systematic work on their *productivity*. Beginning in 1881—two years before Marx’s death—the systematic study of work, tasks, and tools has raised the productivity of the manual making and moving of things by 3 to 4 percent, compounded each year, for a total fifty fold increase in output per worker over a hundred years. On this rest all the economic and social gains during that time. And contrary to what “everybody knew” in the nineteenth century—not only Marx but all the “conservatives” as well, such as J. P. Morgan, Bismarck, and Disraeli—practically all these gains have accrued to the blue-collar worker, half of the gains in the form of sharply reduced working hours (with the cuts ranging from 40 percent in Japan to 50 percent in Germany), half of them in the form of a twenty-five-fold increase in the real wages of blue-collar workers making or moving things.

There were thus very good reasons why the *rise* of blue-collar workers was peaceful rather than violent, let alone “revolutionary.” But what explains that the *fall* of the blue-collar worker has been equally peaceful and almost entirely free of social protest, of upheaval, of serious dislocation, at least in the USA?

## **The Rise of the Knowledge Worker**

The rise of the “class” succeeding the industrial blue-collar worker is not an opportunity to him. It is a challenge. The newly emerging dominant group is “knowledge workers. The very term was unknown forty years ago—I first coined it in a 1959 book (*The Landmarks of Tomorrow*). By the end of this century, knowledge workers will amount to a third or more of the workforce in the United States, that is to as large a proportion as industrial blue-collar workers ever were, except in wartime. The majority of knowledge workers will be paid at least as well as blue-collar workers ever were or better. And the new jobs offer much greater opportunities to the individual.

But—and it is a big but—the new jobs require, in the great majority, qualifications the blue-collar worker does not possess and is poorly equipped to acquire. The new jobs require a good deal of formal education and the ability to acquire and to apply theoretical and analytical knowledge. They require a different approach to work and a different mind-set. Above all they require a habit of continuous learning.

Farmers, domestic servants, machine operators have learned everything they need for their life’s work and jobs after a fairly short apprenticeship—a year or two for farmers and domestic servants, a few weeks for machine operators.

But knowledge work—and a good deal of service work, such as direct selling—is not *experience*-based, as all manual work has always been. It is *learning*-based. Access to it requires formal education, or at least formal training. Industrial work as a machine operator was, in its work characteristics, still traditional work. Knowledge work and most of services work, in *their* work characteristics, are nontraditional. Displaced industrial workers thus cannot simply move into knowledge work or services work the way displaced farmers and displaced domestic workers moved into industrial work. At the very least they have to make a major change in their basic attitudes, values, and beliefs.

In the United States the industrial workforce has shrunk faster and further in the closing decades of this century than in any other developed country. At the same time, industrial production

has grown faster than in any other developed country, excepting only Japan.

The shift aggravated America's oldest and least tractable problem: the position of the Blacks. In the forty years since World War II, the economic position of the Negro in America improved faster than that of any group in American social history—or in the social history of any country. Three-fifths of America's Blacks rose into middle-class incomes—before World War II the figure was one-twentieth. But half of that group rose into middle-class *incomes* and not into middleclass *jobs*. Since World War II, more and more Blacks have moved into blue-collar, unionized' mass-production industry, that is, into jobs paying middle-class and upper-middle-class wages while requiring neither education nor skill. These are precisely the jobs, however, that are disappearing the fastest. What is amazing is not that so many Blacks did not acquire an education but that so many did. For the economically rational thing to do for a young Black in America from 1945 to 1980 was *not* to stay in school and to learn. It was to leave school as early as possible and to get one of the plentiful mass-production jobs. As a result, the fall of the industrial worker hits America's Blacks disproportionately hard—quantitatively, but qualitatively even more. It denigrates what has been the most potent role model in the Black community in America: the well-paid industrial worker with high job security, full health insurance, and a guaranteed retirement pension—yet possessing neither skill nor much education.

That half of that group of newly middle-class Blacks advanced because they used the opportunities education offers and successfully moved into knowledge work, does not, it seems, compensate for the loss of the opportunity blue-collar industrial work offered uneducated Blacks. Black youngsters aged ten or eleven in the inner city could and did identify with the cousin who, only seven or eight years older, had a well-paying job in the automobile plant. They could not easily identify with cousins who were dentists, accountants, lawyers—which meant that they were *twenty* years older and had sat in schools for at least

sixteen years. And thus the fall of the industrial blue-collar worker has been a traumatic shock for the Black community in America. It explains in large measure not only the growing defeatism, despair, and rage of inner-city Blacks. It explains their growing alienation from, and rage against, their achieving brothers and sisters, that is, the large and growing number of Blacks who are moving into the new "middle class," as knowledge workers.

But, of course, the Blacks are a small minority of the population and workforce in the United States. For the rest—Whites but also Latinos and Asians—the fall of the industrial blue-collar worker has caused amazingly little disruption and nothing that could be called an upheaval. Even in communities that were totally dependent on one or two mass production plants that have gone out of business or have cut employment by two-thirds—steel cities in western Pennsylvania or eastern Ohio, for instance, or automobile cities like Flint, Michigan—unemployment rates for adult, non-Black men and women fell within a few short years to levels barely higher than the U.S. average. And that means to levels barely higher than the U.S. "full-employment" rate. Yet there has been no radicalization of America's blue-collar workers.

The only explanation is that for the non-Black, blue-collar community the development came as no surprise, however unwelcome, painful, and threatening to individual worker and individual family. Psychologically—in terms of values perhaps, rather than in terms of emotions—America's industrial blue-collar workers must have been prepared to accept as right and proper the shift to jobs that require formal education and that pay for knowledge rather than for manual work, whether skilled or unskilled.

One possible factor may be the GI Bill of Rights after World War II, which by offering a college education to every returning American veteran established advanced education as the "norm" and everything less as "substandard." Another factor may have been the draft the United States introduced in World War II and maintained for thirty-five years afterwards, as a result of which the great majority of American male adults born between 1920

and 1950—and that means the majority of American adults alive today—served in the military for several years where they were *forced* to acquire a high school education if they did not already have one. But whatever the explanation, in the United States the shift *to* knowledge work *from* blue-collar manual work making and moving things has largely been accepted (except in the Black community) as appropriate or, at least, as inevitable.

In the United States the shift, by 1990 or so, had largely been accomplished. But so far only in the United States. In the other developed free-market countries, in western and northern Europe and in Japan, it is just beginning in the 1990s. It is, however, certain to proceed rapidly in these countries from now on, and perhaps to proceed there faster than it originally did in the United States. Will it then also proceed, as it did by and large in the United States, with a minimum of social upheaval, of social dislocation, of social unrest? Or will the American development turn out to be another example of “American exceptionalism” (as has so much of American social history and especially of American labor history)? In Japan, the superiority of formal education and of the formally educated person is generally accepted so that the fall of the industrial worker—still a fairly recent class in Japan and outnumbering farmers and domestic servants only since well after World War II—may well be accepted as appropriate as it has been in the United States, and perhaps even more so. But what about industrialized Europe—the United Kingdom, Germany, France, Belgium, northern Italy, and so on, where there has been a “working-class culture” and a “self-respecting working class” for well over a century, and where, despite all evidence to the contrary, the belief is still deeply ingrained that industrial, blue-collar work, rather than knowledge, is the creator of all wealth? Will Europe react the way the American Black has reacted? This surely is a key question, the answer to which will largely determine the social as well as the economic future of the developed free-market countries of Europe. And the answer will be given within the next decade or so.



The fall of the industrial blue-collar worker in the developed, free-market countries will also have major impacts outside of the developed world. It means that developing countries can no longer expect to base their development on their comparative labor advantage, that is, on cheap industrial labor.

It is widely believed, especially, of course, by labor union officials, that the fall of the blue-collar industrial worker in the developed countries was largely, if not entirely, caused by moving production "offshore" to countries of abundant supply of unskilled labor and low wage. But this is not true.

There was something to the belief thirty years ago, that is, before 1965 or 1970. Japan, Taiwan, and, later on, South Korea did indeed (as explained in some detail in my 1993 book *Post-Capitalist Society*) gain their initial advantage in the world market by combining America's invention of training for full productivity almost overnight with wage costs that were still those of a pre-industrial country. They thereby created a workforce that had the productivity and quality of a developed country and the labor costs of a developing one. But this worked only for some twenty or thirty years. It has not worked at all since 1970 or 1975.

In the 1990s, only an insignificant percentage of manufactured goods imported into the United States is based on low labor costs. While total imports in 1990 accounted for about 12 percent of American gross national product, imports into the United States from countries with wage costs that are significantly lower than U.S. wage costs accounted for less than 3 percent—and only half of those, that is, only 1 or 1 1/2 percent of the gross domestic product, were imports of *manufactured* products. (See Robert Lawrence and Mark Slaughter, International Trade and American Wages in the 1980s Brookings Institute paper on economic activity, 1993). Of the decline in American blue-collar industrial employment from some 30 or 35 percent to 15 to 18 percent of the workforce, practically nothing can therefore be blamed on moving work to low-wage countries. The main competition for American manufacturing industry—in automobiles, for instance, in steel, in machine tools—has come

from countries such as Japan or Germany, where wage costs have long been equal to U.S. wage costs, if not higher than them. The comparative advantage that now counts is in the application of knowledge—for example, in Japan's total quality management, lean manufacturing, just-in-time delivery, and price-based costing, or in the customer service of the medium-sized German or Swiss engineering company. This means, however, that *developing* countries can no longer expect to base their development on low wages. They, too, must learn to base it on applying knowledge just at the time when most of them (e.g., China, India, and most of Latin America, let alone Black Africa) will have to find jobs for millions of uneducated and unskilled young people qualified for little except yesterday's blue-collar industrial jobs.

But for the developed countries, too, the shift poses major social challenge. Blue-collar workers are *manual* workers, as were farmers and domestic servants. They still "earn their bread by the sweat of their brow." Marx proclaimed that blue-collar industrial workers were something totally new and totally different. Yes, they worked in a factory. But otherwise they were traditional workers. Most earlier workers were similarly not independent but dependent—as hired hands and landless laborers on the land; as domestic servants whether free or unfree; as apprentices and journeymen in the craftsman's shop. That the blue-collar industrial worker did not own "the tools of production" (as Marx asserted) was also not new. Even tenant farmers did not, let alone the far more numerous hired hands. Nor did domestic servants or the craftsmen's apprentices and journeymen. Despite the factory, industrial society was still, essentially, a traditional society in its basic social relationships of production.

But the emerging society, the one based on knowledge and knowledge worker, is not. It is the first society in which ordinary, common people and that means most people do not earn their daily bread by the sweat of their brow. It is the first society in which "honest work" does not mean a callused hand. It is also the first society in which everybody does not the same work, as

was the case when the huge majority were farmers or were, as seemed likely only forty or thirty years ago, going to be machine operators.

This is far more than a social change. It is a change in the *human condition*. What it means—what the values are of this society, what its commitments are, what its problems are—we do not know. But we do know that they will be different. We do know that the twenty-first century will be different—as regards politics and society, but above all, as regards humans.

## **II. The Emerging Knowledge Society**

Knowledge workers will not be the majority in the knowledge society, but in many countries, if not most developed countries, they will be the largest single group in the population and the workforce. And even if outnumbered by other groups, knowledge workers will be the group that gives the emerging knowledge society its character, its leadership, its social profile. They may not be the *ruling* class of the knowledge society, but they already are its *leading* class. And in their characteristics, their social position, their values, and their expectations, they differ fundamentally from any group in history that has ever occupied the leading, let alone the dominant, position.

In the first place, the knowledge worker gains access to work, job, and social position through *formal education*.

A great deal of knowledge work will require high manual skill and substantial work with one's hands. An extreme example is neurosurgery. The neurosurgeon's performance capacity rests on formal education and theoretical knowledge.

Absence of manual skill disqualifies for work as a neurosurgeon, but manual skill alone, no matter how advanced, will never enable anyone to be a neurosurgeon. The formal education that is required for knowledge work is education that can only be acquired in and through formal schooling. It cannot be acquired

through apprenticeship.

In the amount and kind of formal knowledge required, knowledge work will vary tremendously from one occupation to the next. Some will have fairly low requirements, others will require the kind of knowledge the neurosurgeon has to possess. But even if the knowledge itself is quite primitive, it is knowledge that only formal education can provide. Filing is hardly advanced knowledge work. But it is based on a knowledge of the alphabet—or in Japan on a knowledge of Chinese ideograms—which can be acquired only in and through systematic learning, that is, in and through formal schooling.

The first implication of this is that education will become the center of the knowledge society, and schooling its key institution. What knowledge is required for everybody? What mix of knowledges is required for everybody? What is “quality” in learning and teaching? All these will, of necessity, become central concerns of the knowledge society, and central political issues. In fact, it may not be too fanciful to anticipate that the acquisition and distribution of formal knowledge will come to occupy the place in the politics of the knowledge society that acquisition and distribution of property and income have occupied in the two or three centuries that we have come to call the Age of Capitalism.

Paradoxically, this may not necessarily mean that the school as we know it will become more important. For in the knowledge society clearly more and more of knowledge, and especially of advanced knowledge, will be acquired well past the age of formal schooling, and increasingly, perhaps, in and through educational processes that do not center on the traditional school—for example, systematic continuing education offered at the place of employment. But at the same time, there is very little doubt that the performance of the schools and the basic values of the schools will increasingly become of concern to society as a whole, rather than be considered “professional” matters that can safely be left to the “educator.”

We can also predict with high probability that we will redefine

what it means to be an “educated person.” Traditionally, and especially during the last two hundred or three hundred years, at least in the West (and since about that time in Japan, as well), an educated person was somebody who shared a common stock of formal knowledge—someone who had what the Germans called an *Allgemein Bildung* (a general education) and the English (and following them, the nineteenth-century Americans) called a “*liberal* education.” Increasingly, an “educated person” will be somebody who has learned how to learn and who throughout his or her lifetime continues learning, and especially learning in and through formal education.

There are obvious dangers to this. Such a society can easily degenerate into one in which the emphasis is on formal degrees rather than on performance capacity. It can easily degenerate into one of totally sterile, Confucian—type mandarins—a danger to which the American university, particularly, is singularly susceptible. It can, on the other hand, also fall prey to overvaluing immediately usable, “practical” knowledge, and underrate the importance of fundamentals, and of wisdom altogether.

This society in which knowledge workers dominate is in danger of a new “class conflict”: the conflict between the large minority of knowledge workers and the majority of people who will make their living through traditional ways, either by manual work, whether skilled or unskilled, or by services work, whether skilled or unskilled. The productivity of knowledge work—still abysmally low—will predictably become the *economic* challenge of the knowledge society. On it will depend the competitive position of every single country, every single industry, every single institution within society. The productivity of the non-knowledge services worker will increasingly become the *social* challenge of the knowledge society. On it will depend the ability of the knowledge society to give decent incomes, and with them dignity and status, to non-knowledge people.

No society in history has faced these challenges. But equally new are the opportunities of the knowledge society. In the knowledge society, for the first time in history, access to leadership is open

to all. Equally, access to the acquisition of knowledge will no longer be dependent on obtaining a prescribed education at any given age. Learning will become the tool of the individual—available to him or her at any point in life—if only because so much of skill and knowledge can be acquired by means of the new learning technologies.

Another implication is that the performance of an individual, an organization, an industry, a country, in acquiring and applying knowledge will increasingly become the key competitive factor—for career and earnings opportunities of the individuals; for the performance, perhaps even the survival, of the individual organization; for an industry; and for a country. The knowledge society will inevitably become *far more competitive* than any society we have yet known—for the simple reason that with knowledge being universally accessible, there are no excuses for non-performance. There will be no “poor” countries. There will only be ignorant countries. And the same will be true for individual companies, individual industries, and individual organizations of any kind. It will be true for the individual, too. In fact, developed societies that already become infinitely more competitive for the individual than were the societies of the early twentieth century—let alone earlier societies, those of the nineteenth or eighteenth centuries. Then, most people had no opportunity to rise out of the “class” into which they were born, with most individuals following their fathers in their work and in their station in life.

I have been speaking of knowledge. But the proper term is knowledges. For the knowledge of the knowledge society is fundamentally different from what was considered knowledge in earlier societies, and in fact, from what is still widely considered knowledge. The knowledge of the German *Allgemein Bildung* or of the Anglo-American liberal education had little to do with one’s life’s work. It focused on the person and the person’s development rather than on any application—and often even prided itself on having no utility whatever. In the knowledge society, however, knowledge basically exists only in application.

And knowledge in application is, by definition, highly specialized—which was the reason why Plato’s Socrates, twenty-five hundred years ago, refused to accept it as knowledge and considered it mere *techné*, that is, mere skill.

Some knowledge work requires a fairly limited amount of knowledge—examples are some paramedical technologists, such as the X-ray technologist, the technologist in the clinical laboratory, or the pulmonary technologist. Other knowledge work requires far more advanced theoretical knowledge: for example, most of the knowledge work required in business, whether in market research; in product planning; in designing manufacturing systems; in advertising and promotion; in purchasing. In some areas the knowledge base is vast indeed, as in neurosurgery and in a good many areas of management, such as managing a major hospital, a big and complex university, or a multinational enterprise.

Whatever the base, knowledge in application is specialized. It is always specific, and therefore, not applicable to anything else. Nothing the X-ray technician needs to know can be applied to market research, for instance, or to teaching medieval history.

The central workforce in the knowledge society will, therefore, consist of highly specialized people. In fact, it is a mistake to speak of “generalists.” Those whom we refer to by that term will increasingly be those who have learned how to acquire additional specialties and especially to acquire rapidly the specialized knowledge needed for them to move from one kind of work or job to another, such as from being a market researcher to being in general management, or from being a nurse in the hospital to being a hospital administrator. But “generalists” in the sense in which we used to talk of them are becoming dilettantes rather than educated people.

This too is new. Historically, workers were generalists. They did whatever had to be done—on the farm, in the household, in the craftsman’s shop. This was also true of the industrial worker. Manufacturing industry only expanded and became dominant when it learned to take the specialized skill out of the work, that

is, when it converted the skilled craftsmen of preindustrial times into the semiskilled or unskilled machine operator of the nineteenth and twentieth centuries.

But knowledge workers, whether their knowledge is primitive or advanced, whether they possess a little of it or a great deal, will, by definition, be specialized. Knowledge in application is effective only when it is specialized. Indeed, it is more effective the more highly specialized it is. This goes for the technicians, such as the person who services a computer, an X-ray machine, or the engine of a fighter plane.\* (\*See *The Five Pillars of TQM: How to Make Total Quality Management Work for You*, by General Bill Creech, former commanding general of the U.S. Tactical Air Force (New York: Truman Talley Books/Dutton, 1994), which brilliantly recounts the conversion of a skill-based organization, that is, the U. S. Tactical Air Force, into a knowledge-based organization.) But it equally applies to work that requires the most advanced knowledge, whether research into genetics or astrophysics or putting on the first performance of a new opera.

As said before, the shift from knowledge to knowledges offers tremendous opportunities to the individual. It makes possible a “career” as a knowledge worker. But it equally presents a great many new problems and challenges. It demands for the first time in history that people with knowledge take responsibility for making themselves understood by people who do not have the same knowledge base. It requires that people learn—and preferably early—how to assimilate into their own work-specialized knowledges from other areas and other disciplines.

This is particularly important, as innovation in any one knowledge area tends to originate outside the area itself. This is true in respect to products and processes—where, in sharp contrast to the way it was in the nineteenth and early twentieth centuries, innovations now tend to arise outside the industry or process itself. It is true just as much in scientific knowledge and in scholarship. The new approaches to the study of history have, for instance, come out of economics, psychology, and archaeology—all disciplines which historians never considered relevant to their field and to which historical research had rarely



before been exposed.

## How Knowledges Work

That knowledge in the knowledge society has to be highly specialized to be productive implies two new requirements:

1. Knowledge workers work in *teams*.
2. Knowledge workers have to have access to an *organization*. If not *employees* they, at least, have to be affiliated with an organization.

There is a great deal of talk these days about “teams” and “teamwork.” Most of it starts out with the wrong assumption, namely, that we never before worked in teams. Actually, people have always worked in teams—very few people ever could work effectively by themselves. The farmer had to have a wife, and the farmwife had to have a husband. The two worked as a team. And both worked as a team with their employees, the hired hands. The craftsman also had to have a wife, with whom he worked as a team—he took care of the craft work, she took care of the customers, the apprentices, and the business altogether. And both worked as a team with journeymen and apprentices. The present discussion also assumes as self-evident that there is only one kind of team. Actually there are quite a few.\* (\*On this see the discussion in my book *Post-Capitalist Society* (New York HarperCollins, 1993), especially pages 85-90.) But until now the emphasis has been on the individual worker and not on the team. With knowledge work being the more effective the more specialized it is, teams become the actual work unit rather than the individual himself.

But the team that is being touted now as *the* team—I call it the “jazz-combo” team—is only one kind of team. Jazz-combo teamwork is actually the most difficult kind to master: it is the team that requires the longest time to gain performance capacity.

We will have to learn to use different kinds of teams for different purposes. We will have to learn to *understand* teams—and this is something to which, so far, very little attention has been paid. The understanding of the performance capacities of different kinds of teams, their strengths, their limitations, the trade-offs between various kinds of teams—these considerations will increasingly become central concerns in the management of people.

The individual knowledge worker will also have to learn something that today practically no one has learned: how to switch from one kind of team to another; how to integrate himself or herself into teams; what to expect of a team; and, in turn, what to contribute to a team.

The ability to diagnose what kind of team a certain kind of knowledge work requires for full effectiveness, and the ability, then, to organize such a team and integrate oneself into it, will increasingly become a requirement for effectiveness as a knowledge worker. So far, it is not taught or learned anywhere (except in a few research labs). So far, very few executives in any kind of organization even realize that it is their job, to a large extent, to decide what kind of team is needed for a given situation, how to organize it, and how to make it effective. We are not even in the very early stages of work on teams, their characteristics, their specifications, their performance characteristics, and their appraisal.

Equally important is the second implication of the fact that knowledge workers are, of necessity, specialists: the need for them to work as members of an organization. It is only the organization that can provide the basic continuity that knowledge workers need to be effective. It is only the organization that can convert the specialized knowledge of the knowledge worker into performance.

By itself, specialized knowledge yields no performance. The surgeon is not effective unless there is a diagnosis, which, by and large, is not the surgeon's task and not even within the

surgeon's competence. Market researchers, by themselves, produce only data. To convert the data into information, let alone to make them effective in knowledge action, requires marketing people, sales people, production people, service people. As a loner in his or her own research and writing, the historian can be very effective. But to produce the education of students, a great many other specialists have to contribute—people whose specialty may be literature, or mathematics, or other areas of history. And this requires that the specialist have access to an organization.

This access may be as a consultant. It may be as a provider of specialized services. But for the majority of knowledge workers it will be as employees of an organization—full-time or part-time—whether a government agency, a hospital, a university, a business, a labor union, any of hundreds of others. In the knowledge society, it is not the individual who performs. The individual is a cost center rather than a performance center. It is the organization that performs. The individual physician may have a great deal of knowledge. But the physician is impotent without the knowledge provided by a host of scientific disciplines, including physics, chemistry, genetics, and so on. The physician is impotent without the test results produced by a host of diagnosticians, running imaging machines, whether X-ray or ultrasound; making and interpreting blood tests; administering brain scans; and so on. And the physician is impotent without the services of the hospital, which administers intravenous solutions and care for the critically sick patients, and which also provides the physical and/or psychiatric rehabilitation without which there is no full recovery. To provide any of these services, whether the electrocardiogram, the analysis of the blood samples, the magnetic resonance imaging, or the exercises of the physical therapist, physicians need access to the organization of the hospital, that is, to a highly structured enterprise, organized to operate in perpetuity.

## **The Employee Society**

The knowledge society is an *employee* society.

Traditional society, that is, society before the rise of the manufacturing enterprise and the blue-collar manufacturing worker, was not a society of independents. Thomas Jefferson's society of independent small farmers, each being the owner of his own family farm and farming it without any help except for that of his wife and his children, was never much more than fantasy. Most people in history were dependents. But they did not work for an organization. They were working for an owner, as slaves, as serfs, as hired hands on the farm; as journeymen and apprentices in the craftsman's shops; as shop assistants and salespeople for a merchant; as domestic servants, free or unfree; and so on. They worked for a "master." When blue-collar work in manufacturing first arose, they still worked for a "master."

In Dickens's great 1854 novel *Hard Times*, the workers worked for an "owner." They did not work for the "factory." Only late in the nineteenth century did the factory rather than the owner become the employer. And only in the twentieth century did the corporation, rather than the factory, then become the employer. Only in this century has the "master" been replaced by a "boss," who, himself, ninety-nine times out of a hundred, is an employee and has a boss himself.

Knowledge workers will be both "employees" who have a "boss" and "bosses" who have "employees." Organizations were not known to yesterday's social science, and are, by and large, not yet known to today's social science. The great German sociologist Ferdinand Tönnies (1855-1936), in his 1888 book *"Gemeinschaft und Gesellschaft"* (*Community and Society*), classified the known forms of human organization as being either "community," which is "organic," and "fate"; or "society," which is a "structure" and very largely under social control. He never talked of "organization." Nor did any of the other sociologists of the nineteenth or early twentieth centuries. But organization is neither community nor society, although it partakes of some characteristics of each. Membership in an organization is not "fate." It is always freely chosen. One joins a company or a

government agency or the teaching staff of a university. One is not born into it. And one can always leave—traditional communities one could only emigrate from. It is not society, either, especially as it does not embrace the totality of its members. The director of market research in a company is also a member of half a dozen other organizations. She may belong to a church, to a tennis club, and may well spend especially if an American—five hours a week as a volunteer for a local nonprofit organization, for example as a leader of a Girl Scout troop. Organizations, in other words, are not true collectives. They are tools, that is, a means to an end.

There have been earlier organizations. The professional military as it arose after the seventeenth century was an “organization”; it was neither a society nor a community. The modern university, as it emerged after the foundation of the University of Berlin in 1809, was an organization Faculty members freely joined and could always leave. The same can be said for the civil service as it arose in the eighteenth century, first in France, then in the rest of the Continent, and finally in late nineteenth century in Great Britain and Meiji Japan (though in the United States not until 1933 or World War II). But these earlier organizations were still seen as exceptions. The first “organization” in the modern sense, the first that was seen as being prototypical rather than exceptional, was surely the modern business enterprise as it emerged after 1870—which is the reason why, to this day, most people think of “management,” that is, of the organization’s specific organ, as being “business management.”

With the emergence of the knowledge society, society has become a society of organizations. Most of us work in and for an organization, are dependent for our effectiveness and equally for our living on access to an organization, whether as an organization’s employee or as provider of services to an organization—as a lawyer, for instance, or a freight forwarder. And more and more of these supporting services to organizations are, themselves, organized as organizations. The first law firm was organized in the United States a little over a century ago—until then lawyers practiced as individuals. In Europe there were

no law firms to speak of until after World War II. Today, the practice of law is increasingly done in larger and larger partnerships. But that is also true, especially in the United States, of the practice of medicine. The knowledge society is a society of organizations in which practically every single social task is being performed in and through an organization.

## **What Is an Employee?**

Most knowledge workers will spend most if not all of their working life as “employees.” But the meaning of the term is different from what it has been traditionally—and not only in English but in German, Spanish, and Japanese as well.

Individually, knowledge workers are dependent on the job. They receive a wage or salary. They are being hired and can be fired. Legally, each is an “employee.” But collectively, they are the only “capitalists”; increasingly, through their pension funds and through their other savings (e.g., in the United States through mutual funds), the employees own the means of production. In traditional economics (and by no means only in Marxist economics), there is a sharp distinction between the “wage fund”—all of which went into consumption—and the “capital fund.” And most social theory of industrial society is based, one way or another, on the relationship between the two, whether in conflict or in necessary and beneficial cooperation and balance. In the knowledge society, the two merge. The pension fund is “deferred wage” and, as such, wage fund. But it is also increasingly the main source of capital, if not the only source of capital, for the knowledge society.

Equally important, and perhaps more important, is that in the knowledge society the employees, that is, knowledge workers, again own the tools of production. Marx’s great insight was the realization that the factory worker does not and cannot own the tools of production and, therefore, has to be “alienated.” There was no way, Marx pointed out, for the worker to own the steam engine and to be able to take the steam engine with himself when moving from one job to another. The capitalist had to own

the steam engine and had to control it. Increasingly, the true investment in the knowledge society is not in machines and tools. It is in the knowledge of the knowledge worker. Without it, the machines, no matter how advanced and sophisticated, are unproductive.

The market researcher needs a computer. But increasingly this is the researcher's own personal computer, and a cheap tool the market researcher takes along wherever he or she goes. And the true "capital equipment" of market research is the knowledge of markets, of statistics, and of the application of market research to business strategy, which is lodged between the researchers' ears and is their exclusive and inalienable property. The surgeon needs the operating room of the hospital and all of its expensive capital equipment. But the surgeon's true capital investment are the twelve or fifteen years of training and the resulting knowledge which the surgeon takes from one hospital to the next. Without that knowledge, the hospital's expensive operating rooms are so much waste and scrap.

This is true whether the knowledge worker commands advanced knowledge, like the surgeon, or simple and fairly elementary knowledge, like the junior accountant. In either case, it is the knowledge investment that determines whether the employee is productive or not, rather than the tools, machines, and capital the organization furnishes. The industrial worker needed the capitalist infinitely more than the capitalist needed the industrial worker—the basis for Marx's assertion that there would always be a surplus of industrial workers, and an "industrial reserve army" that would make sure that wages could not possibly rise above the subsistence level (probably Marx's more egregious error). In the knowledge society the most probable assumption—and certainly the assumption on which all organizations have to conduct their affairs—is that they need the knowledge worker far more than the knowledge worker needs them. It is the organization's job to market its knowledge jobs so as to obtain knowledge workers in adequate quantity and superior quality. The relationship increasingly is one of interdependence with the knowledge worker having to learn what the organization needs,

but with the organization also having to learn what the knowledge worker needs, requires, and expects.

Because its work is based on knowledge, the knowledge organization is altogether not one of superiors and subordinates.\* (\*On this see again the book by General Bill Creech cited above, which makes it clear that even a military organization like the Tactical Air Force becomes a collegial organization when it becomes a knowledge organization—despite all military rank and protocol. The colonel commanding a maintenance unit is a colleague of the sergeant doing the maintenance work. He is accountable for the sergeant's work, but is not the sergeant's superior.) The prototype is the symphony orchestra. The first violin may be the most important instrument in the orchestra. But the first violinist is not the "superior" of the harp player. He is a colleague. And the harp part is the harp player's part and not delegated to her by either the conductor or the first violinist.

There was endless debate in the Middle Ages about the hierarchy of knowledges, with philosophy claiming to be the "queen" of the knowledges. We long ago gave up that moot argument. There is no higher knowledge and no lower knowledge. When the patient's complaint is an ingrown toenail, the podiatrist's knowledge controls, and not that of the brain surgeon—even though the brain surgeon represents many more years of training and gets a much larger fee. Conversely, if an executive is posted to a foreign country, the knowledge he or she needs, and in a hurry, is the fairly low skill of acquiring fluency in a foreign language—a language that every native of that country has mastered by age two and without any great investment. The knowledge of the knowledge society, precisely because it is knowledge only when applied in action, derives its rank and standing from the situation and not from its knowledge content. What is knowledge, in other words, in one situation, such as the knowledge of Korean for the American executive posted to Seoul, is only information, and not very relevant information at that, when the same executive a few years later has to think through his company's market strategy for Korea. This, too, is



new. Knowledges were always seen as fixed stars, so to speak, each occupying its own position in the universe of knowledge. In the knowledge society, knowledges are tools and, as such, dependent for their importance and position on the task to be performed.

One additional conclusion: Because the knowledge society perforce has to be a society of organizations, its central and distinctive organ is *management*.

When we first began to talk of management, the term meant "business management"—since large-scale business was the first of the new organizations to become visible. But we have learned this last half-century that management is the distinctive organ of all organizations. All of them require management—whether they use the term or not. All managers do the same things whatever the business of their organization. All of them have to bring people—each of them possessing a different knowledge—together for joint performance. All of them have to make human strengths productive in performance and human weaknesses irrelevant. All of them have to think through what are "results" in the organization—and have then to define objectives. All of them are responsible to think through what I call the "theory of the business," that is, the assumptions on which the organization bases its performance and actions, and equally, the assumptions which organizations make to decide what things not to do. All of them require an organ that thinks through strategies, that is, the means through which the goals of the organization become performance. All of them have to define the values of the organization, its system of rewards and punishments, and with its spirit and its culture. In all of them, managers need both the knowledge of management as work and discipline, and the knowledge and understanding of the organization itself, its purposes, its values, its environment and markets, its core competencies.

Management as a *practice* is very old. The most successful executive in all history was surely that Egyptian who, 4700 years or more ago, first conceived the pyramid—without any

precedent—designed it and built it, and did so in record time. Unlike any other work of man built at that time that first pyramid still stands. But as a *discipline*, management is barely fifty years old. It was first dimly perceived around the time of World War I. It did not emerge until World War II, and then primarily in the United States. Since then, it has been the fastest-growing new function, and its study the fastest-growing new discipline. No function in history has emerged as fast as management and managers have in the last fifty to sixty years, and surely none has had such worldwide sweep in such a short period.

Management, in most business schools, is still taught as a bundle of techniques, such as the technique of budgeting. To be sure, management, like any other work, has its own tools and its own techniques. But just as the essence of medicine is not the urinalysis, important though it is, the essence of management is not techniques and procedures. The essence of management is to make knowledges productive. Management, in other words, is a social function. And in its practice, management is truly a “liberal art.”

## **The Social Sector**

The old communities—family, village, parish, and so on—have all but disappeared in the knowledge society. Their place has largely been taken by the new unit of social integration: the organization. Where community membership was seen as fate, organization membership is voluntary. Where community claimed the entire person, organization is a means to a person’s ends, a tool. For two hundred years, a hot debate has been raging, especially in the West: are communities “organic” or are they simply extensions of the person? Nobody would claim that the new organization is “organic.” It is clearly an artifact, a creation of Man, a social technology.

But who, then, does the social tasks? Two hundred years ago, whatever social tasks were being done in all societies by a local community—primarily, of course, by the family. Very few, if any, of these tasks are being done by the old communities anymore.

Nor would they be capable of doing them, considering that they no longer have control of their members or even a firm hold over them. People no longer stay where they were born, neither in terms of geography, nor in terms of social position and status. By definition, a knowledge society is a society of mobility. And all the social functions of the old communities, whether performed well or poorly (and most were performed very poorly, indeed), presupposed that the individual and the family would stay put. "The family is where they have to take you in," said a nineteenth-century adage; and community, to repeat, was fate. To leave the community meant becoming an outcast, perhaps even an outlaw. But the essence of a knowledge society is mobility in terms of where one lives, mobility in terms of what one does, mobility in terms of one's affiliation.

This very mobility means that in the knowledge society, social challenges and social tasks multiply. People no longer have "roots." People no longer have a "neighborhood" that controls where they live, what they do, and indeed, what their "problems" are allowed to be. The knowledge society, by definition, is a competitive society; with knowledge accessible to everyone, everyone is expected to place himself or herself, to improve himself or herself, and to have aspirations. It is a society in which many more people than ever before can be successful. But it is therefore, by definition, also a society in which many more people than ever before can fail, or at least can come in second. And if only because the application of knowledge to work has made developed societies so much richer than any earlier society could even dream of becoming, the failures, whether poverty or alcoholism, battered women or juvenile delinquents, are seen as failures of society. In traditional society they were taken for granted. In the knowledge society they are an affront, not just to the sense of justice, but equally to the competence of society and its self-respect.

Who then, in the knowledge society, takes care of the social tasks? We can no longer ignore them. But traditional community is incapable of tackling them.

Two answers have emerged in this century—a majority answer and a dissenting opinion. Both have been proven to be the wrong answers.\* (\*For the discussion in this section, see also Part Three of my 1993 book *Post-Capitalist Society* (New York: HarperCollins), especially Chapter 6, “From Nation State to Mega-State,” and Chapter 9, “Citizenship Through the Social Sector.”)

The majority answer goes back more than a hundred years, to the 1880s, when Bismarck’s Germany took the first faltering steps toward the welfare state. The answer: the problems of the social sector can, should, and must be solved by government. It is still probably the answer that most people accept, especially in the developed countries of the West— even though most people probably no longer fully believe it. But it has been totally disproven. Modern government, especially since World War II, has become a huge welfare bureaucracy everywhere. And the bulk of the budget in every developed country today is devoted to “entitlements,” that is, to payments for all kinds of social services. And yet, in every developed country, society is becoming sicker rather than healthier, and social problems are multiplying. Government has a big role to play in social tasks—the role of policy maker, of standard setter, and, to a substantial extent, the role of paymaster. But as the agency to run social services, it has proven itself almost totally incompetent—and we now know why.

The second dissenting opinion was first formulated by me in my 1942 book *The Future of Industrial Man*. I argued then that the new organization—and fifty years ago that meant the large business enterprise—would have to be the community in which the individual would find status and function, with the plant community, I argued, becoming the place in and through which the social tasks would be organized. In Japan (though quite independently and without any debt to me) the large employer—government agency or business—has indeed increasingly attempted to become a “community” for its employees. “Lifetime employment” is only one affirmation of this. Company housing, company health plans, company vacations, and so on, all

emphasize for the Japanese employee that the employer, and especially the big corporation, is the community and the successor to yesterday's village and to yesterday's family. But this, too, has not worked.

There is need indeed, especially in the West, to bring the employee increasingly into the government of the plant community. What is now called "empowerment" is very similar to the things I talked about more than fifty years ago. But it does not create a community. And it does not create the structure through which the social tasks of the knowledge society can be tackled. In fact, practically all these tasks, whether providing education or health care; addressing the anomies and diseases of a developed and, especially, of a rich society, such as alcohol and drug abuse; or tackling the problems of incompetence and irresponsibility such as those of the "underclass" in the American city—all lie outside the employing institution.

The employing institution is, and will remain, an "organization." The relationship between it and the individual is not that of "membership" in a "community," that is, an unbreakable, two-way bond. Even in Japan, lifetime employment has proven not to be tenable except, perhaps, for government employees (as it is in the West, as well).

We may need more employment security than the United States traditionally offers. But in no society, in an increasingly competitive world economy, can the employing institution, whether a business, a university, or a hospital, become a cocoon of security. To survive, it needs employment flexibility. But increasingly, also, knowledge workers, and especially people of advanced knowledge, see the organization as the tool for the accomplishment of their own purposes and, therefore, resent—increasingly even in Japan—any attempt to subject them to the organization as a community, that is, to the control of the organization; to the demand of the organization that they commit themselves to lifetime membership; and to the demand that they subordinate their own aspirations to the goals and values of the organization. The young knowledge people in Japan still sing the company song. They still expect the company to

provide them job security. However, not only do they refuse, increasingly, to sacrifice their family life to the company, but they increasingly are as ready as their Western counterparts to change jobs if there is a better one available. For blue-collar workers in Japan who are employed by a major business corporation, a change in jobs is still exceedingly painful. If possible at all, it imposes a huge penalty in terms of income and social standing. But the turnover rate among young engineers in the 1990s in big Japanese corporations is rapidly approaching the turnover rate of Western companies and in some areas actually exceeds it.

This is inevitable because the possessor of knowledge, as said before, owns his "tools of production" and has the freedom to move to wherever opportunities for effectiveness, for accomplishment, and for advancement seem greatest.

The right answer to the question "Who takes care of the social challenges of the knowledge society?" is thus neither "the government" nor "the employing organization." It is a separate and new *social sector*.

It is less than fifty years, I believe, since we first talked in the United States of the "two sectors" of a modern society: the "public sector," that is, government, and the "private sector," that is, business. In the last twenty years the United States has begun to talk of a "third sector," the "nonprofit sector": the organizations that take care of the social challenges of a modern society.

In the United States, with its tradition of independent and competitive churches, such a sector has always existed. Even now, churches are the largest single part of the social sector in the United States, accounting for almost half of the money given to nonprofit, charitable institutions, and for somewhat less than half of the time given to nonprofit volunteer work by individuals. But the nonchurch part of the social sector has been the growth sector in the United States. In the 1990s, about one million organizations were registered in the United States as nonprofit or charitable organizations doing social sector work. The

overwhelming majority of these, some 70 percent, have come into existence in the last thirty years. And most are community services concerned with what goes on this earth rather than with the Kingdom of Heaven. Quite a few of the new organizations are, of course, religious in their orientation. But even of these, few are "churches." They are "parachurches" engaged in a specific social task, for example, rehabilitation of alcohol and drug addicts, the rehabilitation of criminals, or the education of young children. Even within the church segment of the social sector, the organizations that have shown the capacity to grow are radically new. They are the fast-growing "pastoral" churches, which focus on the spiritual needs of individuals, and especially, of educated knowledge workers, and which then put the spiritual energies of their members to work on the social challenges and social problems of the community and especially, of course, of the urban community.

We still talk of these organizations as "nonprofits." But this is a legal term. It means nothing except that under American law these organizations do not pay taxes. Whether they are organized as "nonprofit" or not is actually irrelevant to their function and behavior. Many American hospitals since 1960 or 1970 have become "for-profits" and are organized in what legally are business corporations. They function exactly the same way as traditional "nonprofit" hospitals. What matters is thus not the legal basis. What matters is that the social sector institutions have a different purpose. Government demands compliance. It makes rules and enforces them. Business expects to be paid; it supplies. The social sector institutions aim at *changing the human being*. The "product" of the school is the student who has learned something. The "product" of the hospital is a cured patient. The "product" of the church is a church-goer whose life is being changed. *The task of the social sector organizations is to create human health.*

Increasingly, these organizations of the social sector serve a second and equally important purpose. *They create citizenship.* Modern society and modern polity have become so big and complex that citizenship, that is, responsible participation, is no

longer possible. All we can do as citizens is to vote once every few years and to pay taxes all the time.

As a volunteer in the social sector institution, the individual can again make a difference. In the United States, where there has been a volunteer tradition all along, because of the old independence of the churches, almost every other adult in the 1990s worked at least three—and often five—hours a week as a volunteer in a social sector organization. Only in Britain is there something like this tradition, although on a very much lower basis (in part because the welfare state is far more embracing, but in much larger part because of the tradition of an established church that is paid for by the state and run as a civil service). Outside of the English-speaking countries, there is not much volunteer tradition. In fact, the modern state in Europe and Japan has been openly hostile to anything that smacks of volunteerism—most so in France and Japan. It is *ancien régime* and fundamentally suspected of being subversive.

But even in these countries—Japan is perhaps the main example—things are changing. For the knowledge society needs the social sector, and the social sector needs the volunteer. But knowledge workers also need a sphere in which they can act as citizens, that is, a sphere in which they create a community. Organization does not give it to them.

Nothing has been disproven faster than the concept of the “organization man,” which was almost generally accepted forty years ago. In fact, the more satisfying one’s knowledge work is, the more one needs a separate sphere of community activity. The volunteer who works in an American church as a counselor to young marrieds; who works in a local school with learning-impaired children as a tutor; who works with normal children as a scout leader—and there are thousands of such volunteer activities—creates a sphere of personal achievement but also a community in which people sharing their values work together for a common good.

Many social sector organizations will become partners with government—as is the case in a great many “privatizations,”



where for instance a city pays for street cleaning and an outside contractor then does the work. In American education, predictably, within the next twenty years there will be more and more government-paid "vouchers," which enable parents to put their children into a variety of different schools, some public and tax-supported, some private and largely dependent on the income from the parents' vouchers. These social sector organizations, while partners with government, also clearly compete with government. The relationship between the two has yet to be worked out—and there is practically no precedent for it. (Or, rather, the one precedent we have, the relationship between a government agency, for example the Department of Defense of the United States, and independent defense contractors shows that the relationship is complicated and requires both interdependence and mutual trust, and profound mutual distrust and constant guerrilla warfare.)

But equally what is "performance" for social sector organizations, and especially for those which, being "nonprofit" and "charitable," do not have the discipline of a financial "bottom line," has yet to be worked out (On this, see my 1992 book *Managing the NonProfit Organization* [New York: HarperCollins]). That social sector organizations need management, we know. But what management precisely means for the social sector organization is just beginning to be studied. In many ways we are, in respect to the management of the nonprofit organization, pretty much where we were fifty or sixty years ago in respect to the management of the business enterprise—and the work at that time was only beginning.

But one thing is already clear. The knowledge society has to be a society of *three sectors*: a public sector, that is, government; a private sector, that is, business; and a social sector. And it is also, I submit, becoming increasingly clear that it is in and through the social sector that a modern developed society can again create responsible and achieving citizenship, can again give individuals—and especially knowledge people—a sphere in which they can make a difference in society, and a sphere in which they re-create community.

### **III. Knowledge Economy and Knowledge Polity**

The emergence of knowledge society and of the society of organizations has profound political implications:

- it creates a new center of policy
- it totally changes economic policy
- it challenges the capacity of government to function

#### **School and Education as Society's Center**

Knowledge has become the key resource—for a nation's military strength as well as for a nation's economic strength. And it is knowledge that can be acquired only in a formal process, that is, through schooling.

Knowledge as the key resource is fundamentally different from any of the traditional key resources, that is, from land and labor, and even from capital. It is not tied to any country. It is transnational. It is portable. It can be created everywhere, fast, and cheaply. Finally, it is, by definition, changing. Knowledge always makes itself obsolete within a short period of time. The one thing that is predictable about a competitive advantage based on knowledge—whether the advantage be that of a country, of an industry, of an institution (whether a business or a university), or of an individual—is that the advantage will soon be challenged, and probably by a total newcomer.

For that reason alone the acquisition of knowledge, that is, learning, can no longer stop at any age. "Life-long learning"—the now-fashionable term—may be hyperbole; a good many people stop learning when they stop working and retire. But continuous learning during one's working life will increasingly be a requirement for any knowledge worker.

The school can no longer be content to be a place that takes care of juveniles not old enough to work. It will increasingly be

the *partner* of adults as well as the partner of their employing organizations. And in respect to their employees, organizations, in turn—business and government agencies—social sector nonprofits in respect to their volunteers will increasingly have to become both partners with the schools and themselves teaching and learning institutions.

But also schools and education are bound to become central political issues. Of course, every existing educational system expresses basic political and social values (on this see the discussion “Education as Social Purpose” in my 1989 book *The New Realities*). But neither the content nor the quality nor the productivity and yield of schools and schooling were major *public* issues in earlier times. They were concerns primarily of the educator. Now, increasingly, they will become political issues—in the United States we are already moving there, and quite fast.

## **The Competitive Knowledge Economy**

That knowledge has become the key resource means that there is a world economy. It means that the world economy rather than the national economy, controls. Every country, every industry, and every business will be in an increasingly competitive environment. Every country, every industry, and every business will, in its decisions, have to take into serious consideration its competitive standing in the world economy and the competitiveness of its knowledge competencies.

That knowledge creates a world economy, and a highly competitive one, already underlay the transformation of the world economy after World War II. The rise of Japan was based on applying knowledge, primarily management and training as it had been developed by the Americans during World War II. The process began no earlier than 1950 or 1952. But by 1960 it had created a Japanese economy capable of attacking the world’s leading manufacturing companies on their own ground. And Korea, a few years later, trod the same path.

It is no longer possible to do what the Japanese and the Koreans

did. Low manufacturing wages, even combined with high productivity, no longer give enough of a competitive advantage to build a major economy on. But the same process applied to advanced knowledge—whether in engineering, in marketing, or in research—can lead to very much the same results, and in fairly short time.

At least this is what Singapore's experience indicates. In 1965, when the city seceded from Malaysia and became independent, it was still dependent on the unskilled manual labor of dockworkers. A dozen years later it had pushed itself into the world economy as an exporter of low-skill manufactured goods made with cheap but well-trained labor. But Singapore at the same time heavily promoted and financed advanced education. The Singapore of 1994 is no longer a low-wage producer. It has become producer and exporter of high-value added and highly engineered products—pharmaceuticals, electronics, computers, telecommunication equipment, optics—turned out by well-educated' young knowledge people. In fact, within less than fifteen years Singapore has even acquired the capacity to *design* such knowledge-intensive products.

And now the Singaporeans are using this recently acquired knowledge competence to become the leaders in mainland China's new "capitalism"—as bankers, industrialists, and mass merchants.

Politics and policies still center in domestic issues in every single country. Few, if any, politicians, journalists or civil servants look beyond the boundaries of their own country when a new measure is being discussed, whether taxes regulations of business, or social spending. Even in West Germany—Europe's most export—conscious and export dependent major country—almost no one even asked in 1990 what the government's unbridled spending in the East would do to the country's competitiveness.

This will no longer do. Every country and every industry will have to learn that the first question is not, "Is this desirable?" The first

question is, "What will be the impact on the country's (or the industry's) competitive position in the world economy?" We need to develop in politics something similar to the environmental impact statement, which, in the United States, is now required for any political action: we need a "competitive impact statement." The impact on one's competitive position in the world economy should not be the main, let alone the only, factor in a decision. But to make a decision without considering it has become irresponsible.

Altogether, the fact that knowledge has become the key resource means that the standing of a country in the world economy will increasingly determine its domestic prosperity.\* (\*On this see my article "Trade Lessons from the World Economy," in the January-February 1995 issue of *Foreign Affairs*.) Since 1950, the ability to improve a country's position in the world economy has been the main, and indeed, perhaps, the sole, determinant of economic performance in the *domestic* economy. Domestic economic policies have been practically irrelevant, both for better and, very largely, even for worse (with the single exception of governmental policies creating inflation, which very rapidly both undermine a country's competitive standing in the world economy and its domestic stability and ability to grow).

The "primacy of foreign affairs" is an old political precept going back in European politics to the seventeenth century. Since World War II, it has also been accepted in American politics—though only grudgingly so, and as "temporary emergency." It always meant that military security had to be given priority over domestic policies—and in all likelihood this will continue, Cold War or no Cold War. But the "primary of foreign affairs" is now acquiring a different dimension. It asserts that a country's competitive position in the world economy—and equally that of an industry or an organization—has to be the first consideration in its domestic policies and its strategies. This is just as true for a country that is only marginally involved in the world economy—should there still be such a one as it is for a business that is only marginally involved in the world economy, or for a university that sees itself as totally domestic. Knowledge knows

no boundaries. There is no “domestic knowledge” and no “international knowledge.” There is only knowledge. And with knowledge becoming the key resource, there is only a world economy, even though the individual organization in its daily activities operates within a national, regional, or even a local setting.

## **How Can Government Function?**

The emergence of the society of organizations altogether challenges the function of government. All social tasks in the society of organizations are increasingly being done by individual organizations, each created for one, and only one, social task, whether education, health care, or street cleaning.

Society, therefore, is rapidly becoming pluralist. Yet our social and political theories still assume a society in which there are no power centers except government. To destroy or at least to render impotent all other power centers was, in fact, the thrust of Western history and Western politics for five hundred years, from the fourteenth century on. It culminated in the eighteenth and nineteenth centuries when (except in the United States) such original institutions as still survived—for example, the universities or the established churches—all became organs of the state, with their functionaries becoming civil servants. But then, immediately beginning in the mid-nineteenth century, new centers arose—the first one, the modern business enterprise, emerged around 1870. And since then one new organization after another has come into being.

This is not a new “Feudalism.” Feudalism meant “public power in private hands.”\* (\*The phrase is that of the American medievalist J. R. Strayer ( 1904-1987).) Whether land-owning aristocracy or abbeys or free cities or trading companies like the English East India Company, these traditional bodies wanted to be governments. Within their sphere they indeed wanted to be sovereign. They demanded control of jurisdiction over their members. They aimed at having their own coinage. They tried to regulate trade and commerce within their boundaries And in

many cases they formed and ran their own armies.

The new institutions of the society of organizations have no interest in 'public power.' They do not want to be governments. But they demand—and, indeed, need—autonomy with respect to their function. Even at the extreme of Stalinism the managers of major industrial enterprises were largely masters within their enterprise, and the individual industry was largely autonomous. So was the university and the research lab, let alone the military.

In the pluralism of yesterday, the feudalism of Europe's Middle Ages, or of Edo Japan in the seventeenth and eighteenth centuries, all pluralist organizations, whether a feudal baron in the England of the War of the Roses or the *daimyo*—the local lord—in Edo Japan, tried to be in control of whatever went on in their community. At least they tried to prevent anybody else from having control of any community concern or community institution within their domain.

But in the society of organizations, each of the new institutions is concerned only with its own purpose and mission. It does not claim power over anything else. But it also does not assume responsibility for anything else. *Who then is concerned with the common good?*

This has always been a central problem of pluralism. No earlier pluralism solved it. The problem is coming back now, but in a different guise. So far it has been seen as imposing limits on these institutions, that is, forbidding them to do things in the pursuit of their own mission, function, and interest, which encroach upon the public domain or violate public policy. The laws against discrimination—by race, sex, age, education, health, and so on—which have proliferated in the United States in the last forty years all forbid socially undesirable behavior. But we are increasingly raising the question of the "social responsibility" of these institutions: "What do these institutions have *to do*—in addition to discharging their own functions—to *advance* the public good?" This, however—though nobody seems to realize it—is a demand to return to the old pluralism, the pluralism of feudalism. It is a demand that "private hands

assume public power.”

That this could seriously threaten the functioning of the new organizations the example of the school in the United States makes abundantly clear. One of the major reasons for the steady decline in its capacity to do its own job, that is, to teach children elementary knowledge skills, is surely that, beginning in the 1950s, the United States has made the school increasingly the carrier of all kinds of social policies, beginning with the elimination of racial discrimination, the elimination of discrimination against all other kinds of “minorities,” against the “handicapped,” and so on. Whether we have actually made any progress in assuaging social ills is highly debatable; so far the school has not proven a particularly effective tool for social reform. But making the school the organ of social policies has, without any doubt, severely impaired its capacity to do its own job.

The new pluralism has the old problem of pluralism, namely, who takes care of the common good when the dominant institutions of society are single—purpose institutions? It has a new problem: how to maintain the performance capacity of the new institutions and yet maintain the cohesion of society? This makes doubly important the emergence of a strong and functioning social sector. It is an additional reason why the social sector will increasingly be crucial to the performance, if not to the cohesion, of the knowledge society.

The first new organization to arise, a hundred and twenty-five years ago, was the business enterprise. It was only natural, therefore, that the problem of the emerging society of organizations was first seen as the relationship of “government and business.” It was also natural that the new “interests” were first seen as “economic interests.”

The first attempt to come to grips with the politics of the emerging society of organizations aimed, therefore, at making economic interests serve the political process. The first to tackle this was an American, Mark Hanna, the restorer of the



Republican Party in the 1890s and, in many ways, the founding father of twentieth-century American politics. His definition of politics as being a dynamic disequilibrium between the major economic interests—farmers, business, labor—remained the foundation of American politics until World War II. In fact, Franklin D. Roosevelt restored the Democratic Party by reformulating Hanna. And the basic political statement of this philosophy is the title of the most influential political book written during the New Deal years—in 1936—*Politics: Who Gets What, When, How*, by Harold D. Laswell.

Mark Hanna, in 1896, knew very well that there are plenty of concerns other than economic concerns. And yet it was obvious to him—as it was to Franklin D. Roosevelt, forty years later—that the economic interests had to be used to mitigate all the others. This is still the assumption underlying most analyses of American politics—and, in fact, of politics in all developed countries. But it is no longer a tenable assumption. Underlying the Mark Hanna formula of the “economic interests” is the view of the land, labor, and capital as the “resources.” But knowledge, the new resource for economic performance, is not in itself economic.

It cannot be bought or sold. The fruits of knowledge, such as the income from a patent, can be bought or sold. The knowledge that went into the patent cannot be conveyed at any price. No matter how much a medical student is willing to pay a neurosurgeon, the neurosurgeon cannot sell to him—and surely cannot convey to him—the knowledge that is the foundation for the neurosurgeon’s performance and for the neurosurgeon’s income. The acquisition of knowledge has a cost, as has the acquisition of anything. But the acquisition of knowledge has no price.

Economic interests can therefore no longer integrate all other concerns and interests. As soon as knowledge became the key economic resource, the integration of the interests—and with it the integration of the pluralism of a modern polity—began to fall apart. Increasingly, noneconomic interests are becoming the new pluralism, the “special interests,” the “single-cause” organizations, and so on. Increasingly, politics is not about “who

gets what, when, how" but about values, each of them considered to be an absolute. Politics is about "the right to life" of the embryo in the womb as against the right of a woman to control her own body and to abort an embryo. It is about the environment. It is about gaining equality for groups alleged to be oppressed and discriminated against. None of these issues is economic. All are fundamentally moral.

Economic interests can be compromised, which is the great strength of basing politics on economic interests. "Half a loaf is still bread" is a meaningful saying. But "half a baby," in the biblical story of the judgment of Solomon, is not half a child. Half a baby is a corpse and a chunk of meat. There IS no compromise possible. To an environmentalist "half an endangered species" is an extinct species.

This greatly aggravates the crisis of modern government. Newspapers and commentators still tend to report in economic terms what goes on in Washington, in London, in Bonn, or in Tokyo. But more and more of the lobbyists who determine governmental laws and governmental actions no longer are lobbyists for economic interests. They lobby for and against measures they—and their paymasters—see as moral, spiritual, cultural. And each of these new moral concerns, each represented by a new organization, claims to stand for an absolute. Dividing their loaf is not compromise. It is treason.

There is thus in the society of organizations no single integrating force that pulls individual organizations in society and community into coalition. The traditional parties—perhaps the most successful political creations of the nineteenth century—no longer can integrate divergent groups and divergent points of view into a common pursuit of power. Rather, they become battlefields between groups, each of them fighting for absolute victory and not content with anything but total surrender of the enemy.

This raises the question how government can be made to function again. In countries with a tradition of a strong independent bureaucracy, notably Japan, Germany, and France,

the civil service still tries to hold government together. But even in these countries the cohesion of government is increasingly being weakened by the special interests and, above all, by the noneconomic, the moral, special interests.

Since Machiavelli, almost five hundred years ago, political science has primarily concerned itself with power. Machiavelli—and political scientists and politicians since him—took it for granted that government can function once it has power. Now, increasingly, the questions to be tackled will be: “What are the functions that government and only government can discharge, and that government *must* discharge?” and “How can government be organized so that it can discharge these functions in a society of organizations?”

## **Conclusion: The Priority Tasks—The Need for Social and Political Innovations**

The twenty-first century will surely be one of continuing social, economic, and political turmoil and challenge, at least in its early decades. The Age of Social Transformations is not over yet. And the challenges looming ahead may be more serious and more daunting still than those posed by the social transformations that have already happened, the social transformations of the twentieth century.

Yet we will not even have a chance to resolve these new and looming problems of tomorrow unless we *first* address the challenges posed by the developments that are already accomplished facts, the developments reported in the earlier sections of this essay.

*They are the priority tasks.* For only if they are tackled can we, in the developed, democratic, free-market countries hope to have the social cohesion, the functioning economy, and the governmental capacity needed to tackle the new challenges. The first order of business—for sociologists, political scientists, and economists; for educators; for business executives; politicians

and nonprofit leaders; and for people in all walks of life, as parents, as employees, as citizens—is to work on these priority tasks for few of which we so far have a precedent, let alone tested solutions.

In sum, these **priority tasks** are as follows:

- We will have to think through *education*—its purpose, its values, its content. We will have to learn to define the *quality* of education and the *productivity* of education, to measure both and to manage both.
- We need systematic work on the *quality of knowledge* and the *productivity of knowledge*—neither even defined so far. On those two, the performance capacity, and perhaps even the survival, of any organization in the knowledge society, will increasingly come to depend. But so will also the performance capacity, and perhaps even the survival, of any individual in the knowledge society. And what *responsibility* does knowledge have? What are the responsibilities of the knowledge individual, and especially of people of high—and therefore highly specialized—knowledge?
- Increasingly, the *policy* of any country—and especially of any developed country—will have to give primacy to the country's competitive position in an increasingly competitive world economy. Any proposed domestic policy needs to be shaped so as to improve the country's competitive position in the world economy or, at the least, so as to minimize adverse impacts on it. The same holds true for policies and strategies of any institution within a nation, whether a local government, a business, a university, or a hospital.
- We need to develop an *economic theory* appropriate to the primacy of a world economy in which knowledge has become the key economic resource and the dominant—and perhaps even the only—source of comparative advantage.
- We are beginning to understand the new integrating mechanism: *organization*. But we still have to think through how to balance two apparently contradictory requirements.

Organizations must competently perform the *one* social function for the sake of which they exist—the school to teach; the hospital to cure the sick; the business to produce goods; services and the capital to provide for the risks of the future. They can do so only if they single-mindedly concentrate on their own specialized mission. But there is also the need of society for these organizations to take social responsibility, that is, to *work* on the problems and challenges of *the* community. Together these organizations are the community. The emergence of a strong, independent, performing *social sector*—neither public sector, that is, government, nor private sector, that is, business—is thus a central need of the society of organizations. But by itself it is not enough: the organization of both the public and the private sector must share in the work.

- The *function of government* and its *functioning* will increasingly become central to political thought and political action. The “megastate” in which this century indulged has not performed, either in its totalitarian or in its democratic version. It has not delivered on a single one of its promises. And *government by countervailing lobbyists* is neither particularly effective—in fact, it is paralysis—nor particularly attractive. Yet effective government has never been needed more than in this highly competitive and fast-changing world of ours in which the dangers created by the pollution of the physical environment are matched only by the dangers of worldwide armaments pollution.

And we do not have even the beginnings of political theory or the political institutions needed for effective government in the knowledge-based society of organizations.

If the twentieth century was one of social transformations, the twenty-first century needs to be one of **social and political innovations**.

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