

Cantigny Conference Series  
Special Report

**GLOBAL TRENDS 2005**  
**The Challenge of a New Millennium**

Michael J. Mazarr  
Center for Strategic and International Studies

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GLOBAL TRENDS 2005  
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## PREFACE

This report is a brief glimpse of the future. The pages that follow offer a condensed version of the major themes and conclusions of the Global Trends 2005 project, a multi-year effort undertaken by the Center for Strategic and International Studies in Washington, D.C. That project will be disseminating its findings in a variety of ways—a lengthy book, a multimedia briefing, a number of short essays and editorials, and, eventually, a series of country studies. It will also be a subject for discussion at an upcoming Cantigny Conference hosted by the McCormick Tribune Foundation. Many who have heard of the project have asked for a survey of its basic findings that is long enough to convey the full range of its thinking, yet short enough to be read and digested in a couple of hours. This report fills that need and will be used at our conference.

The framework outlined in this report is a sort of template for understanding current events. Equipped with the context of the larger trends of our time and the organizational scheme of the six interdisciplinary trend areas, readers should have a better sense of how the daily news fits into a larger picture. This, in the end, is the major purpose of the study as a whole—to improve understanding of the forces transforming the world on the cusp of a new millennium, and thereby to offer a deeper appreciation for the social, political, and economic events and technological developments of our time. We hope you enjoy it—and more than that, we hope that it might inspire you to pursue its themes through further reading. To that end, a "Further Reading" section can be found at the conclusion.

Michael J. Mazarr, the Director of The New Millennium Project for the Center for Strategic and International Studies, is the author of this report. We are deeply appreciative of his good work on behalf of CSIS and the foundation. CSIS would also like to extend its sincere thanks to The Amoco Foundation and The Korea Foundation for their generous support of the Global Trends 2005 project. We are also pleased to be in support of this work which is one of several important CSIS projects we have sponsored over the past five years.

Neal Creighton  
President & CEO  
Robert R. McCormick Tribune Foundation

## INTRODUCTION

*"Every few hundred years in Western history there occurs a sharp transformation. Within a few short decades, society rearranges itself--its worldview; its basic values; its social and political structure; its arts; its key institutions. Fifty years later, there is a new world."*

So wrote the eminent social theorist Peter Drucker in 1993. As he pointed out, most of the nations and peoples of the world are living through precisely such a transformation today. The shift from an age based on the industrial production of manufactured goods to one whose primary social good is knowledge is rewriting the nature of human society the world over, generating profound new challenges even as it opens up unprecedented vistas of possibility. This "age of social transformation" to the knowledge era, Drucker wrote, "will not come to an end with the year 2000--it will not even have peaked by then."

As Drucker suggests, rapid and accelerating advances in science and technology and the social and psychological processes that follow and complement them are changing society, economy, politics, and warfare in profound ways. At its core, this transformation represents a shift from an industrial age to a knowledge era, when the creation, application, and dissemination of knowledge--rather than the production of manufactured goods or agriculture--will become the central defining activity of modern society. This new age holds immense promise to empower human beings, to bring democracy to the globe and the workplace, and to create a sustainable relationship with the environment. But as the philosopher Alfred Whitehead emphasized, all major social transformations exact a price--as did the advent of the industrial era, which helped to spawn such evils as fascism and totalitarian socialism. We are undergoing precisely such a transformation in the 1990s, and we should expect turbulent social dislocations in the bargain.

This report represents a brief effort to capture the essence of this transformation, providing an integrative overview of its character, meaning, and implications for our lives. Through a concise survey of six major trends and review of six possible scenarios in global politics, the report tries to give the reader a snapshot of a world in transition, a thumbnail sketch of what we call an emerging "knowledge era."

Obviously, in roughly sixty pages we cannot reflect the stunning complexity, the incredible reach, or the dense interrelatedness of these trends. What we can do is to give the reader a template for understanding those trends, a framework of ideas and conclusions into which readers can fit daily events or additional perspectives, including those represented in the "Further Reading" sources cited at the conclusion of the report. This brief overview can be helpful, in other words, in its ability to convey the amazing sweep of the sea-change washing over our society, politics and economy as we enter a new era of human social organization. We hope, too, that in the process it can convey a few of the fascinating details of the trends it describes.

This report's approach to the subject of global trends is somewhat unique, for several reasons. First is its *interdisciplinary perspective*. Many existing studies focus on a single field such as economics or military affairs; this report takes insights from a host of fields—economics, sociology, political science, science, and others--and integrates them into a comprehensive view of the forces shaping the future. The report's second unique quality is its *time frame*: Most

other works in this field take a very long-term perspective, forecasting out 40 or 50 years, even a century or more. Our scope is much more limited: We are interested here in the next decade, roughly spanning the years 1995-2005, a period most relevant to long-range strategic planners in business and government.

Third, this report employs several somewhat unusual analytical tools in an effort to spice up the narrative and convey detailed information on several subjects. *Issue Features* are short, boxed essays that go into more depth on a subject or argument. *Surprise Scenarios* describe possible discontinuities--rapid, unexpected changes in direction--over the next decade. And *Scenarios for Global Politics*, which appear at the end of the report, outline a half-dozen directions world politics might take over the next decade. Each scenario includes a set of "indicators," signs that it might be emerging; and the section concludes with some rough policy recommendations designed to pursue the positive scenarios and avoid the catastrophic ones.

For readers interested in pursuing further subjects raised in the report, we have included at the end a list of some of the best books in the field, as well as information on how to get in touch with the report's author and order a copy of the full study volume. In the meantime, the report should provide plenty of food for thought.

Trend One:

## THE FOUNDATIONS

This trend surveys demographic, resource, environmental, and cultural factors that together establish the foundational context in which the other trends will unfold. In broad terms, we expect these areas to remain relatively constant, prices to remain relatively stable, and no major global discontinuities, at least during the next ten years.

Within that general model of stability, however, we stress two important overarching issues in this trend. One is the *growing need for long-range planning*--the existence of trends which, while they will not mature in the next decade, nonetheless demand action during that period. The second qualification to our portrait of stable prices is that a combination of factors--smaller held reserves, shrinking gaps between supply and demand, the growing role of perception in setting prices--may well conspire to produce a series of *recurrent and unpredictable price spikes* amid generally sufficient supply in major categories of natural resources.

### *A Story of Two Worlds*

The first story of this trend involves two issues--demography and the environment--each displaying sharp distinctions between the developed and developing worlds.

**Demography.** In demography, the global situation is simple--the developing world's population is growing fast; the developed world is demographically stagnant, aging, and ultimately even shrinking. Overall, additions to world population are occurring at a staggering rate. After spending almost two millennia reaching its first one billion people, the world added a second in just a century--and added its most recent billion in just over a decade. The world is now adding an increment of population equal to a new Pittsburgh or Boston every two days, a new Mexico every year, and very nearly a new India every decade.

And yet, because of such global forces as modernization, education, and the expansion of women's rights--all of which tend to suppress fertility--the world's population growth rate is declining. In short, world population growth is not out of control, and over the next half-century is expected to level off and perhaps even begin to decline at a level of somewhere between 8 and 12 billion people. (See Figure 1.)

But for the period examined in this report, between 1995 and 2005, world population will continue to grow at its highest annual rates in history, by roughly 800 to 900 million people to reach a total of about 6.6 billion. This means, first of all, massive population growth in the developing world. Ninety-five percent of population growth between 1990 and 1995 occurred in developing countries, and that percentage will inch higher in coming decades. The vast majority of that growth will take place in a relatively small handful of developing countries in what we call the "arc of crisis," stretching from Africa through the Middle East to South Asia. This disparity in population growth will produce accelerating inequities and will create intense new pressures for immigration and migration, both within and between states.

This trend will also inaugurate a period of rapid urbanization in the developing world--"a massive urban transition," in the words of the joint United Nations, World Bank, and World

Resources Institute publication World Resources 1996-1997, "unlike that of any other time in history." Fully 90 percent of growth in urban populations over the next decade will take place in developing nations--an explosive urbanization which carries problems of waste, water supplies, air pollution, and alienation.

Exploding population in the developing world will magnify an emphasis on youth. By 2005, almost 60 developing countries will experience "youth bulges" with 20 percent or more of their population ages 15 to 24. This includes two dozen states in Sub-Saharan Africa as well as many important Middle Eastern states such as Egypt, Iran and Iraq.

### **ISSUE FEATURE: JAPAN'S COLOSSAL PENSION CRISIS**

Japan's aging crisis is by far the worst in the developing world, and few people have thought through the massive implications of this fact for Japan's economy, society, and foreign policy. One of the few who has is Nomura Capital expert Milton Ezrati, whose May-June 1997 Foreign Affairs essay laid out the full scope of Japan's aging crisis.

Within five years, Japan will have a demographic profile similar to Florida's. By the year 2015, one in four Japanese will be 65 or older; by 2010, it will have only 2.5 workers for every retiree. The ramifications of this process will be immense.

- Japan's standard of living will decline. A smaller percentage of the population earning income will mean a lower national income. Ezrati estimates that "this demographic situation could ultimately cut the average Japanese standard of living by 18 percent." This equates, in Japan's slow-growth 1990s, to a decade of economic growth lost.
- Japan's savings rate will plummet. Japan's high rate of national savings has been critical to its economic strength, but it will not last. Retirees do not save, and Ezrati estimates a decline of 12-15 percent in Japan's personal savings rate. Meanwhile massive pension obligations will create a persistent government budget deficit of 5 percent or more. Together these effects will halve the country's savings rate.
- Exports will decline. As workers become scarce and wages rise, the trend of Japanese companies locating production offshore will accelerate. Lower production within Japan will cut into its trade surplus, already down to \$77 billion from a peak of \$130 billion in 1993. "It is likely," Ezrati concludes, "that within the next five years Japan will have a trade deficit"--an astounding reversal of fortune for the world's champion exporter.
- Japan's economy will open up. A retired population facing declining living standards will want cheaper imported goods, and thus Japan's policy of maximizing its trade surplus "will lose its rationale and eventually be reversed," writes Ezrati.

- Japan's foreign policy will become more active. With production facilities located throughout Asia, Japan will want projectable military power to protect them.

None of this is to suggest that Japan will become an economic weakling. Ezrati merely argues that Japan will become a more typical late-industrialization stage country, with a more open economy and a trade balance more in line with world averages.

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If soaring populations have ominous implications for developing countries, slowing population growth in industrialized nations will have the opposite effect. In brief, the developed world is growing older. Low birth rates and longer life-spans, combined with massive post-World War II generations followed by much smaller successor groups, mean that the balance of developed world populations is shifting heavily to older cohorts. In developed countries generally, the number of people in retirement age (over 65 years of age) will rise 60 percent by the year 2025 (see Figure 2). Between 1993 and 2000, Japan's labor force will grow just 0.2 percent per year, and Germany's will decline by that much. The Issue Feature above spells out some of the possible, dramatic implications of Japan's aging crisis.

In the United States, however, this trend will soon be matched, and then overtaken, by a very different one: America will begin to become young again. America is a nation, in fact, that is growing older and younger at the same time. A later Issue Feature will discuss the implications of this paradoxical phenomenon.

**The Environment.** As with demography, in environmental issues there is a substantial difference in outlook for the developed and developing world.

In the developed world, while total levels of pollution, greenhouse gas emissions and other forms of environmental damage continue to rise, pollution has been declining in per-dollar-of-GNP terms, and often in per-capita terms, for some years. These facts reflect an important trend: A knowledge economy is better for the environment than an industrial-era one, because it uses fewer resources. We are living through the initial stages of a dramatic transition to a social and industrial mode of production based on clean technology. Reflecting this new promise is the emerging field of industrial ecology, an effort to highlight the possibility of reconciling economic growth and environmental health.

But that transition will only have begun in the next decade. And in the meantime, pollution from the developing world will grow dramatically. Even by 1992, developing nations had overtaken the developed world in the emissions of carbon dioxide--carbon emissions of developing nations expanding three times as fast as those of developed nations. China alone, if its current growth patterns continue, will by the year 2025 emit more greenhouse gases than the United States, Japan and Canada combined.

Nonetheless, global warming will almost certainly not have catastrophic impacts during the period under consideration here. If global warming is a reality, however, what the next decade will bring is more severe weather--hurricanes, to Mados, snowstorms, and the like--on a more regular basis, a trend some climatologists say is underway already.

### *A Price Spike Economy*

Just as they are more environmentally-friendly than industrial economies, knowledge-era economies are also less dependent on natural resources. Creating knowledge demands fewer resources than manufacturing goods. Nonetheless, in selected areas, population growth and economic growth will put new pressure on certain categories of resources. Combined with "just in time" delivery techniques, this may produce recurrent price spikes amid generally stable resource prices.

Several reasons for optimism, for example, suggest themselves on the topic of food supplies over the next decade. World food output has more than doubled in the last three decades; food supplies per capita have grown by a quarter even in many areas of the developing world, where the quality of most diets continues to improve; and the real cost of most food items has declined. But there are also reasons for concern: continued yield increases must be earned with further research. More demand for cropland may reduce forests or fields available for animals and plants, thus accelerating species extinction; and intense modern farming and overfishing contribute to the loss of croplands through soil erosion, desertification, and overfarming, as well as a worldwide crisis of fisheries.

*The exception to the rule of ample food supplies will be the "arch of crisis," an area stretching from sub-Saharan Africa through North Africa and the Middle East into South Asia (see Figure 4). In these countries, exploding population and continuing poverty will make food shortage a way of life and create the need for numerous outside aid missions to the region.*

Alarm bells started going off in the 1990s as rising demand and static production reduced worldwide grain stocks from 77 days of consumption to under 50, driving up prices. But this process appears to reflect near-term adjustments to higher demand amid sufficient worldwide supply. Overall the problem is not one of inadequate global food supplies, but of the inability of many impoverished areas to afford food even amid relative global abundance, and the need for food aid from high-income countries.

Growing worldwide population will also place new pressures on world water supplies. Eighty countries, most in the arc of crisis, already face life-threatening water shortages--and by 2025, water available to those countries will fall 80 percent.

More people existing at a gradually higher standard of living will mean greater use of energy. Again, perhaps the most important part of this increase will not take place in the developed world, where knowledge-era economies are more efficient in their use of energy than industrial economies. In the United States, for example, energy use per dollar of GNP has declined almost 30 percent in the last 20 years. Instead, much of the new energy demand will be from growing developing countries. Still, energy prices should remain relatively stable through 2005, subject to periodic price spikes.

Oil prospects over the next decade involve a complex picture of long-term worries and a growing dependence on Middle East supplies beginning to intrude on a generally sanguine portrait of low prices and ready supply. The general baseline forecast would have oil supplies rise gradually to meet demand and prices remain under \$30 a barrel through 2005. But as in

almost no other energy source, major surprises are possible--a price spike up to that \$30 level occurred in 1996, for example--and we must understand the risks.

It may be too early, for example, to write off the threat of new oil shocks. For one thing, the next decade may represent the beginning of a reversal of the trend to more diverse suppliers. OPEC nations will represent the vast majority of new oil production through 2010. Moreover, beyond the immediate dependencies of the next decade, by early in the twenty-first century the end of the world's "oil era" may finally be in sight: Peak production could occur sometime between 2000 and 2015 and begin sloping downward after that. This exhaustion of known crude oil supplies will be accelerated by rapid economic growth in many developing countries, though some oil analysts believe that new discoveries and new usable sources of oil (such as oil shale) will keep the resource essentially unlimited in supply, at least for a half-century or more.

The next decade may well also be the beginning--the real beginning, after decades of fits and starts--of the age of renewable energy. Renewables will be the fastest growing energy source over the next decade. And technological advances could in a very short period of time render more widely-usable renewable energy sources (such as photovoltaic cells) cost-competitive with traditional energy sources.

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### **ISSUE FEATURE: A YOUNGER AMERICA**

The headline-grabbing demographic trend in the United States in recent years has been the aging of the population, and the attendant Social Security and Medicare crises. But this trend will soon be matched, and then overtaken, by a very different one: America will begin to become very young again. (A similar trend is emerging in Britain, the only other major developed country with an emerging "youth bulge.")

The aging of the population is produced by the juxtaposition of two generations: an enormous Baby Boom followed by a much smaller Baby Bust only slightly greater than half the size of the Boom. As the Boom ages, the population as a whole will skew in the same direction--and create a Social Security crisis. But look more closely and a stunning fact

**FIGURE 6**

*Changing Demographics: U.S. Generations, 1995-2025*  
As percentage of the overall U.S. population

	<u>PRE-BOOM</u>	<u>BABY BOOM</u>	<u>BABY BUST</u>	<u>BOOMLET</u>	<u>POST BOOMLET</u>
1995	26	29.5	17	27.5	---
2005	17.2	26.7	16.2	26.6	13.4
2015	9.8	23.4	15.1	25.2	26.5
2025	4.3	19.4	13.6	23.9	38.9

In 2005, the "Baby Boomlet" will be between 10 and 28 years of age; in 2015 it will be 20 to 38 years old. By 2015, there will be 82 million teenagers in the United States.

Source: American Demographics, January 1995.

emerges: behind the Baby Bust are two new generations, each expected to match the size of the Baby Boom.

This coming flood of youngsters has many implications. Trend Five will examine its impact on crime rates. Another may be overloaded schools: Between 1996 and 2006, enrollment in U.S. high schools will jump sharply--over a third in California, and roughly 25 percent in other states, including Virginia, North Carolina, New Jersey, and Maryland. Nationwide, elementary and secondary education enrollment will surge from 51.7 million--already an all-time record--to nearly 55 million. College admissions will become more competitive, with the number of applicants per opening growing from 10 to 12 or 13. "To maintain the same level of service" for the growing number of students, explains The Washington Post, "the United States will need 190,000 additional teachers, more than 6,000 new schools and about \$15 billion in additional operating expenditures by 2006."

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### *The Foundation of Human Perception: Culture*

A final foundation of the next decade's trends is culture--that amorphous combination of values, habits, religion, language, and other factors that differentiates one people from another. Some readers will wonder at the inclusion of culture alongside such apparently quantifiable, forecastable trends as energy and the environment. But if one is searching for the foundational issues on which the engines of history build their trends, culture must certainly rank among them. There can be little doubt that culture plays an important role in shaping the everyday thoughts, beliefs, commitments, and decisions of most human beings--and through them, helps to determine things like a nation's economic prospects.

In simple terms, the application of culture to the trends examined here merely involves appreciating the basic insight of sociology: that, as phrased by Peter Berger in his classic *Invitation to Sociology*, people are not "also" social beings but are "social in every aspect of

[their] being that is open to empirical investigation." Our specific society (and culture) "not only controls our movements, but shapes our identity, our thought and our emotions. The structures of society become the structures of our own consciousness."

This basic connection between national culture and national success establishes a baseline for many national forecasts offered later in this study. As we shall see, some cultures may be better equipped than others to succeed in the fast-paced, decentralized, flexible world of a knowledge era. Culture also has profound effects on relations among countries and other large groups or institutions; many trade disputes can be chalked up to cultural differences in economic planning, for example. and at least one theorist sees the next decade as a period that will witness a massive "clash of civilizations."

In dozens of ways, social, economic, political and military culture will exercise an important influence on world politics during the next decade. Trends which might otherwise run in one direction might be bent or skewed by cultural institutions, practices, or preconceptions. But one thing cultural identity is not is static, exercising a predictable, unchanging influence on the members of its societies. In fact the engines of history outlined in Trend Two are reshaping world cultures more profoundly and rapidly than at any time in human history--with both hopeful and dangerous results.

## Trend Two

## THE ENGINES OF HISTORY

In this trend our attention turns to the forces that will produce global change during the next decade, the engines of history that will impel the emergence of the knowledge era. We first examine the engines themselves--science and technology as well as social and economic processes. The trend then looks at new sciences that can help us to understand those engines (complexity theory), and finally note the directions in which they are taking us.

One major theme of this trend is that instability over the next decade will occur largely in those areas where these inexorable forces for change confront governments and societies that have yet to make the transitions these engines will require. Authoritarian governments (China, Cuba, Vietnam), closed markets and statist economies (Japan, Western Europe), and unreformed corporations face a precarious decade.

*The Engines: Science and Technology*

Science and technology are perhaps the most fundamental authors of knowledge-era history. Three areas of scientific advance--biotechnology, renewable energy and information technology--are of special importance.

"The February 1997 announcement that scientists had successfully cloned adult sheep in Scotland was just the most recent watershed in a field whose exploding research and potential will transform the human environment over the next decade: biotechnology. The Human Genome Project is scheduled to complete its work mapping the entire human genetic code before the year 2005. This information--combined with the evolving capability to manipulate human and animal genetic codes--will lead to genetic testing for illness and, eventually, genetic engineering for medical purposes.

U.S. companies are now seeking approval for some 300 biotech medicines, some of which may someday offer the hope of treatment or cures for such illnesses as AIDS, multiple sclerosis, Huntington's, Alzheimer's and Parkinson's diseases, and various forms of cancer. Genetically-engineered animals--the primary goal of the sheep-cloning experiment--will yield both medicine (such as insulin) and even human replacement organs. The U.S. Department of Commerce estimates that "life patents" will be worth \$60 billion by 2010.

Continued progress in genetic testing will raise profound ethical questions--perhaps the most important and powerful ethical issues of the next ten years. Our ability to make reasoned moral choices about our actions will be tested as never before, because we will gain unprecedented control over the natural environment. The Surprise Scenario on the next page discusses a few implications of the rapid emergence of genetic testing.

Such moral dilemmas do not apply to our second area of technology, renewable energy. Most forecasts do not expect a major advance of renewable energy sources such as solar, wind and hydroelectric, largely because their price per kilowatt-hour is not expected to become competitive with fossil fuels in that period. Thus the U.S. Department of Energy forecasts that renewables will comprise just 14 percent of global non-oil energy production by the year 2010--only 9 percent of the overall total. While it will not see the complete emergence of renewable

energy, we think that the next decade will witness the developments that make such a transition inevitable.

In our time frame, supplies of major fossil fuels should remain relatively plentiful, forestalling a major shift in the direction of renewables. And yet we highlight this area of technology for three reasons: first, its eventual emergence as the world's dominant energy source is all but inevitable; second, the next decade will represent the true beginning (but only the beginning) of this process; and third, renewables are now close enough to being cost-competitive that one major surprise--such as a sudden technological breakthrough to improve the efficiency of solar collectors--could push them to the forefront of worldwide energy policy. And this category will be more diffuse than currently assumed. Combining solar cells and wind farms with cleaner fossil fuels like natural gas and a host of new renewable technologies like hydrogen-burning "fuel cells" and even fusion energy.

### Surprise Scenario: The Rapid Emergence of Genetic Testing

Many analyses of biotechnology have recognized the profound ethical issues raised by this expanding field of science. Most also recognize that all societies must begin thinking these issues through well before they actually emerge--to have some handle, for example, on how the society intends to treat information available from genetic screening for disease before such screening becomes widespread.

Unfortunately, science looks more and more like it will overtake philosophical and political thinking. Thus this scenario posited the relatively sudden development--over a period of just a few years--of fairly reliable and inexpensive tests for a number of major genetically-induced illnesses. For example, what if doctors suddenly had at their disposal an effective screen for Alzheimer's disease?

When it occurs--and especially if it occurs quickly, which seems more and more probable--this new era of genetic screening will have profound results.

- Most importantly, **it would force us to rethink the whole character of the activity we now know as "insurance."** Whether insurance companies gain access to the information will be a major social question; presuming that they do, the idea of insuring against risk will become anachronistic--and so will current ways of providing for it.
- Genetic testing will **intensively magnify the abortion debate** by providing people with information that might tempt them not to carry a fetus to term.
- **A sudden risk of a "genetic stratification"** would emerge. Companies that provide health insurance might attempt to discriminate on the basis of the information, young people might focus their search for mates on individuals who could "prove" their likely future health, and schoolyard taunts might isolate children who "fail" the tests.

- At a different level, **genetic testing could come to symbolize existing socioeconomic divisions within and between countries** if only a few select people in a number of rich countries could afford it.
  - Such tests would also create demand for **a massive new effort at psychological counseling** for individuals and families whose tests indicate an inevitable tragedy.
- 

The final, in terms of its economic and popular impact dominant, key area of technological advance over the next decade is information technology. In the next few years, for example, massive supercomputers of astounding power will be coming into service. Other developments in this area--miniaturization, better wireless communications, natural synergies between what remain different forms of information processing--will produce what we describe as a "Pervasive Knowledge Network." By the year 2005, if not well before, people will have anytime/anywhere access to voice or video communications, the Internet or other networked computer systems, and an immense variety of entertainment options. Information channels we now think of as separate will merge, creating powerful and pervasive new networks of information.

This process will receive a strong boost from the proliferation of new global satellite networks; in the next decade alone, 1,700 new communications satellites are scheduled to be launched--ten times the number that currently orbit the Earth--carrying television, wireless telephone, and Internet signals.

### *The Engines: Social and Psychological*

The decade to 2005 will also be propelled ahead by a number of social and psychological forces that will continue to rewrite the character of governments and societies around the world. They include socioeconomic modernization, human needs, and social construction.

A second engine of history, and a direct product of technological advance, is *socioeconomic modernization*--a slow convergence of social and economic structures toward modern, technological, open societies. To remain economically prosperous and competitive, states are driven toward similar forms of social and political organization; states are drawn towards free markets and democratic governments. This process helps to produce a growing homogenization of human societies all over the world.

But the process is hardly straightforward or easy. Progress always has its doubters and victims, and the tendency is for major social transformations to create instability and alienation and to generate reactionary movements. The next decade will witness major reactions to this dramatic, cross-cultural requirement for modernization and reform. Trend Four will suggest that the e merging global-local nexus, and the tensions it generates, is perhaps the single most powerful image and theme of the coming decade.

**FIGURE 9***Basic Human Needs: Categories of Need*

1. **Security:** survival, order, certainty, hope
2. **Relationships:** affection, love, community
3. **Identify:** dignity, self-esteem, achievement

A third engine of history is human nature--the needs, desires and aspirations of human beings. Classical theories of international relations or history have generally relied on two fairly simplistic formulas of human nature: it is either aggressive and warlike, or peaceful and cooperative. A more sophisticated view is available in the form of "human needs theory," which looks at how fundamental human needs, such as those outlined in Figure 9, influence history in both positive and negative directions. In particular, the human need for recognition and the instinct for seeking security in relationships of reciprocal altruism push world affairs toward democracy and cooperation.

Our fourth engine of history is social construction. Human beings are social animals, and we exist within the contexts of our societies. The insight of social construction theory is just that--our understanding of ideas and events is shaped by social context. If we are raised in America to believe liberty is a good thing, we are more likely to think that way than if we are raised in China to think something very different. The lesson is that progress can build on itself. Human beings and human institutions like governments experience the world; they draw conclusions from it and modify their perceptions from them. In short, they learn. The speed with which this process can work is strikingly evident in the European Union process today, where peoples and governments have learned from a series of wars the need for stronger joint norms and institutions.

*Complexity Theory*

In order to increase our appreciation for the more nonlinear, unpredictable and complex ways in which the engines of history can operate, it is helpful to consider the ideas of complexity theory, important new sciences that are transforming our understanding of the natural and human worlds. Complexity theory is not itself an engine so much as it is a means of understanding how the "complex adaptive system" of history works.

It is impossible to convey the true richness and detail of these new sciences in this tiny space. In essence, the sciences of complexity study how the actions of micro-level actors--genes, molecules, birds, human beings--add up to macro-level effects. In other words, the focus of these sciences is how complex systems can emerge from the self-directed behavior of lots of individual actors. And their critical insight is the fact that the systems can exhibit characteristics one would never expect, or be able to predict, from looking at the behavior of individuals alone.

The science writer Mitchell Waldrop puts it this way in his 1992 book *Complexity*. The basic focus of complexity would be "a system that is complex, in the sense that a great many independent agents are interacting with each other in a great many ways." He offers examples such as quadrillions of proteins, lipids, and nucleic acids that comprise a living cell, or billions of neurons in a brain, or millions of people that make up a society.

Complexity is most powerfully on display in so-called "complex adaptive systems," evolutionary engines that transform data into theories and then behavior. And their behavior is creative: As Mitchell Waldrop explains, the richness of interactions in complex systems "allows the system as a whole to undergo spontaneous self-organization." Flying birds, for example, "adapt to the actions of their neighbors," producing a graceful flocking action that no bird had individually planned.

Apart from providing a new, nonlinear framework for appreciating all hard and social science issues, complexity theory has a number of specific lessons. It magnifies the importance of grassroots analysis, to understand all the tiny forces and actions that make up a complex adaptive system. It points to the value of randomness, which is one engine of progress, and thus to the advantages of free political and economic systems that allow innovation. And they offer a model of social change--coevolution--that suggests a more sophisticated portrait of life than "competitive" or "cooperative" models alone.

### *Where Are They Taking Us?*

In what direction are the engines of history pushing us in the decade ahead? Briefly, they are pushing us toward three things: liberalization, democracy, and declining major war.

One direction history will take under the influence of the engines will be movement away from state-planned economies in favor of generally free-market, open, liberalized systems. The last decade represented an immense step in this direction--the collapse of the Soviet Union and sweeping reforms throughout Latin America and elsewhere propelled over three billion people into the world capitalist economy in just a handful of years. This process will continue, albeit at a slower pace, over the next decade. In some places in the world, this process involves the rejection of whole social systems, as with the sudden collapse of communism in the Soviet Bloc and the slow chipping away at socialism in China. But in many other places it demands a more subtle process of reform to clear away the barriers to progress and competition created by slow-moving, bureaucratic state structures.

Despite the power of the forces pressing for homogenization, its actual achievement will entail immense transitional costs over the next decade--so much so that, along with socioeconomic inequities, "counterglobalism" will be one of the basic themes of that period. It means a period of social and political discord, of psychological stress, of fertile ground for movements that express cultural identity in the face of onrushing globalism.

The engines of history surveyed here also push the world further in the direction of increased freedom and democracy (see Figure 11). Expanded freedom is partly a product of the economic liberalization described above. Free markets generally produce free polities; socioeconomic convergence and rising world per-capita incomes will help to "speed us on our

journey toward more human freedom," in the words of Walter Wriston, former Citibank President.

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### **ISSUE FEATURE: DEMOCRACY IN CHINA**

Whether or not modernization leads directly and inevitably to democracy, a wide variety of reasons exist to believe that the connection is real in China today.

Arguably the most important single law of the twentieth century was passed in Beijing in 1987. In that year, the Chinese government approved a decree allowing local villages to elect their own headmen and governing committees. This law began a process of local democratization that is sowing the still-fragile seeds of democracy in mainland China. Three-quarters of China's 1.3 billion people live in its 900,000 small villages; by 1997, the number of Chinese villages having held at least one election will reach 95 percent. The majority of those elected are not even Communist Party members. China's village democratization is an outgrowth of its economic reforms. Determined to increase efficiencies in farms and other village enterprises, officials in Beijing realized that local Communist Party hacks were often incompetent. "Villagers have a much better notion of village talent than the higher authorities," says one official. "If you allow the county government to choose a stupid idiot of a village chief, the whole economy will be ruined." The same rationale would justify democracy throughout China, of course.

The victory of democratically-elected representatives in Chinese villages is tentative, far from complete, and subject to reversal. Because of the process' role in promoting economic growth, however, the central government is pushing it; lagging provinces "are getting a tongue-lashing from Beijing," *The Economist* reported in 1997, while "local governments are being 'educated' to surrender power." And a number of recent reports have catalogued a host of other indications of expanded freedom in China, from the expanded rule of law to the liberalization of Chinese mass media to more broadly available communications like satellite television. If these processes, along with the village democracy movement, inculcate the spirit of democracy from the grassroots in China, they will help bring the global democratic revolution to the world's most populous nation--and continue disproving the idea that "Chinese culture" is inhospitable to freedom.

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Yet in his instant classic *The End of History and the Last Man*, Francis Fukuyama argues that a highly successful technological society need not be democratic. "The progressive unfolding of modern natural science," Fukuyama writes, "could just as well lead us to Max Weber's nightmare of a rational and bureaucratized tyranny, rather than to an open, creative, and liberal society." The mechanism of history, then, "needs to be extended." So Fukuyama draws in elements of human needs theory, as first articulated by the philosopher Georg Hegel. For Hegel, what human beings seek above all is "to be wanted by others or to be recognized." The human animal "was from the start a social being: his own sense of self-worth and identity is intimately connected with the value that other people place on him." And in modern times, the ultimate

source of recognition, the one political system that best allows individuals to seek recognition, is democracy. The preceding Issue Feature describes how democracy has begun to flower in China.

Finally, it is worth pointing out the effect of socioeconomic convergence on the likelihood of war among the converging powers. In brief, it makes war less likely. In a world of free-market economies, free trade will generally prevail; in a world of free trade, many of the things nations desire--prosperity, goods, capital--can be acquired without resort to force. The expansion of democracy tends to have the same result: By addressing peoples' recognition needs without external conquest, democracies tend to reduce the incentive for war. Empirical studies reinforce the lesson that democracies seldom, if ever, fight wars with other democracies. More fundamentally, the human instinct to create reciprocal cooperative agreements to preserve their security--the instinct that underlies the social contract within nations--can be extended to a lesser extent among them. The emergence of a "global social contract" will create new mechanisms of harmony.

### Trend Three

#### A HUMAN RESOURCES ECONOMY

The thesis of this trend is that, driven by the stunning advances of the twentieth century, the nature of economic activity--the character of what we know as an "economy"--is changing. The basic trend is toward the increasing role of knowledge, as opposed to agriculture, manufacturing, or non-information-based service activities, as the core of the economy and particularly to the dominance of the high-tech sector of the economy. "Economic progress," notes Walter Wriston, "is now largely a process of increasing the relative contribution of knowledge in the creation of wealth." Most of the new economy's workers deal in knowledge--discovering, applying, or distributing it in such fields as computers, telecommunications, science, education, media and entertainment, publishing, health, finance, social services, and law. And because knowledge ultimately derives from people, this new economy is based on a foundation of human resources.

Two well-understood implications of a human resource economy are its declining use (in per-capita or per-dollar-of-GDP terms) of raw materials and its bias toward the service sector. Figure 12 traces the growth of the service sector worldwide over the last three decades; the U.S. Bureau of Labor expects 23 million out of the 24.6 million new jobs created between 1990 and 2005 to be in the service sector. But the knowledge era is producing more comprehensive, networked entities that might be termed "Elaborated Services"--companies that service a whole spectrum of needs--such as auto companies becoming involved in financing, travel, repair, fuel, and related activities.

Increasingly, too, the human resources economy is leading to the internationalization of services, which will impose on service industries in the United States the same wrenching pressures of efficiency and downsizing that have already affected manufacturing industries. But a human resources economy also leads to a number of new and less well-understood results, several of which are summarized briefly below.

#### *The Reorganization of Work*

The first implication is a radical transformation in the nature of work, a change that will encompass every aspect of business and labor, from the organization of corporations to the character of the workplace.

The knowledge era's dominant institutional form is that of "virtual" organizations. These are organizations that exist only on paper--employees who work independently and communicate by e-mail, phone and fax, but who don't always (or ever) share the same work space. Few organizations are defined by their physical workspace; most are groups of people performing various functions, for which their offices may be irrelevant--and increasingly so in a human resources age.

The key factor driving this process is the way the various elements of the knowledge economy work together. Information technology encourages companies to automate and do business on-line. Gradually the core offices and personnel groups shrink away as efficiency dictates increasing elements of electronic business. In particular, the idea of virtual corporations

may shatter the traditional distinction between big and small companies: Smaller corporations can now work together, marshaling their forces as if they were one institution.

Yet while they offer new opportunities, virtual organizations also have important--and vexing--implications for the concepts of trust and responsibility. How will businesses trust employees they rarely see? Not all cultures, moreover, will take equally well to these ideas, particularly those accustomed to hierarchical social structures. This process asks companies to consider what elements of virtuality would improve their efficiency and urges them to look at new ways of improving trust in their ranks.

### **ISSUE FEATURE: D'AVENI'S CONCEPT OF "HYPERCOMPETITION"**

Hypercompetition, Dartmouth Business School Professor Richard D'Aveni contends in his 1994 book of the same name, is "a condition of rapidly escalating competition" in which the "frequency, boldness, and aggressiveness of dynamic movement by the players accelerates to create a condition of constant disequilibrium and change."

D'Aveni's model is on display in computer software: a series of rapid competitive moves and countermoves that create temporary advantages. "Product life cycles and design cycles have been compressed," he writes, "and the pace of technological innovation has increased." As a result, "instead of seeking sustainable advantage, strategy. . . now focuses on developing a series of temporary advantages."

Later D'Aveni says "disrupting the status quo" should be the top corporate goal. In a hypercompetitive world, he writes, there will only be two kinds of companies: "the disruptive and the dead." In such a world, chaos theory may depict the way business competition occurs. D'Aveni's insightful approach has a number of powerful implications:

- Leapfrog or transformative strategies become more important than ever as companies leave behind current advantages and strike out for new ones.
- Businesses will achieve smaller profit margins under the pressure of price wars.
- Trust will come under new pressure--and "once trust is lost, it's very hard to recapture," especially in international markets where companies are dealing with partners from different cultures and a different side of the earth.
- A "logical approach is to be unpredictable and irrational" in some business decisions to distract competitors' attention from your real intentions.
- Using the old strategy of attacking competitors' weaknesses "can be a mistake"-because those weaknesses won't last long, and you're shooting at a moving target.
- Antitrust laws badly need revising, because hypercompetition naturally produces actions and alliances that today would represent violations of those laws.
- London Business School professor Gary Hamel stresses two others--for strategy to be revolutionary, it must be democratic (good ideas come from everywhere) and accepting of off-the-wall ideas.

The nature of business competition will also change in this new era. When corporations are fragmented among dozens of smaller sub-entities, bits and pieces of different and competing virtual companies can cooperate on specific projects. A world of virtual or networked corporations is increasingly a world of alliance projects, and the behavior and strategies of businesses in this era will differ dramatically from the more individualistic competitive models of the industrial era. Cooperation will become second nature--interdependence will mandate it--but competition will not simply give way to cooperation, only to cooperative alliances vying for increasingly competitive markets. This trend points to the growing prevalence of cooperative and disruptive new alliances in all industries--from partnerships between hotel and restaurant chains to ventures between traditional competitors like Apple and Microsoft.

The principles of the knowledge era, principles such as speed, flexibility, decentralization, and empowerment, will also change the workplace in fundamental ways.

This rapidly changing nature of employment has already produced much greater turnover and career shifts and thus demanded greater flexibility on the part of workers. The idea of a single career-for-life with a major corporation is a thing of the past. Shifting career paths, serial careers, and less loyalty on both sides of the relationship are the norm. Peoples' affiliation with their employers will be far more tenuous in such a world. Forms of work--for some decades a relatively rigid 40-hour, five-day week--have become much less stable, uniform, and centralized: In 1993, more than 34 million Americans were part-timers or contractors--more than 25 percent of the workforce.

These new, more flexible forms of work will require new kinds of workers: more educated, more accustomed to rapid change, more willing and able to take responsibility for running important elements of the company. "Increasingly," writes management expert Don Tapscott, "work and learning are becoming the same thing." Successful companies will become perpetual teaming environments.

Another major work-related trend in the years ahead will be the decline of retirement. The combination of low savings by current workers, a reduction of Social Security benefits, and greater flexibility in part-time, consulting, and telecommuting options will make traditional retirement both less possible and less necessary or desirable for the majority of the older populations. In many ways, retirement as currently understood is a relatively new phenomenon: Before the current century, passage into old age did not mean an end to work--merely a shift in roles. This pattern will reemerge.

### *A Networked Economy*

Another major new development in the knowledge era is the growing dominance of networked organizational forms. No longer can we think of an economy as a fragmented portrait of individual companies and people going about their independent projects. As virtual companies seek out cooperative ventures with their counterparts, as information highways and superhighways tie economic activity closer together, as finance becomes a truly global enterprise, the metaphor for the new economic arrangement is the network.

James Moore's recent book *The Death of Competition* draws these themes together into a compelling vision of the future. Moore's basic argument is that businesses are not independent

entities competing against other unique industries, but actors coevolving with competitors and allies alike in a complex soup--in other words, comprehensively networked entities. The issue is not that "competition is vanishing," he says. "In fact it is intensifying. But competition as most of us have routinely thought of it is dead." The "traditional way to think about competition is in terms of offers and markets. Your product or service goes up against that of your competitor, and one wins." But this model "ignores the context--the environment--within which the business lies, and it ignores the need for coevolution with others in that environment, a process that involves cooperation as well as conflict." We are in fact seeing "the end of industry"--the end of a time when businesspeople could think of their industries as unique, separate things. The trick in the new economy is to break out of industry boundaries and "hasten the coming together of disparate business elements into new economic wholes." Knowledge era-companies must reconsider the boundaries of their "industry," and to imagine new markets gained by shattering those boundaries.

### *Finance and Capital*

In the developing world, we find the same process. Inasmuch as money is basically an information product, a form of information, it should come as no surprise that the role of finance and capital markets has reached an unprecedented level in the human resources economy. Even the stark numbers in this area--over \$1.3 trillion in foreign exchange traded every day in world currency markets, up from \$10 or \$20 billion in the early 1980s, and another quarter trillion dollars in daily bond and equity transactions--do not do justice to the critical role of finance in the new economy.

For one thing, it serves as an enforcer and ratifier of the socioeconomic convergence described above: Only countries that reform and liberalize get the investment they need to remain prosperous and keep growing. New York Times columnist Thomas Friedman calls this coercive result "Me Paradigm," an international model of social and economic organization demanded by capital markets.

But perhaps the most important trend in this area is the fact that the nature of finance is in the midst of a dramatic revolution, eliminating the middlemen (stock brokers) and allowing individuals to manage their financial affairs online, a process that will accelerate the emerging transition to "e-cash." Within ten years, we may no longer think of money as a tangible object; it will exist only in cyberspace, shuffled rapidly between bank accounts, virtual mutual funds, insurance, loans, and dozens of other applications. We are, to some extent, entering a world of "virtual economics," in which the strength of an economy will be judged as much in perceptual as in real terms; and virtual economies could be more prone to sudden peaks and valleys, more susceptible to boom-and-bust cycles than industrial era economies.

### *Worsening Income Distribution*

A globalized human resources economy threatens to expand the gap between haves and have-nots in both developed and developing countries. Several factors have this result: a new division between high-paying, high-tech jobs and low-paying service jobs; the social divisions

fostered by the demand for highly-educated workers in many new positions; the stratifying effects of a global economy imposing global wage standards on developed economies; and the stark divisions created by the decline of full-scale employment itself.

Evidence supporting this concern is widespread (see Figure 14). In the 1980s, an astounding 62 percent of new national wealth went to the top one percent of the population; 37 percent went to the next 19 percent; and the remaining 80 percent of Americans acquired just one percent of new wealth. Worldwide, the story is the same--between 1960 and 1990, the incomes of the richest 20 percent grew three times faster than those of the poorest 20 percent. In 1960, the richest fifth held three-quarters of the world's income, the poorest fifth just 2.3 percent; by 1990, the richest fifth held 85 percent of global income, the poorest fifth an astonishingly small 1.4 percent.

An especially disturbing pattern is the immense disparity in college degrees acquired by children of wealthy and middle-class families in the United States. Families with incomes of \$67,000 or greater see 80 percent of their children attend and graduate from college. The corresponding figure for families with incomes between \$20,000 and \$67,000 is just 20 percent; for poorer families, under 10 percent. This situation cannot persist if America is to retain its egalitarian nature in a knowledge era.

Clearly, an age that emphasizes specialized knowledge, education, and high-technology skills carries the potential to drive a new social and economic wedge between the knowledge-proficient and the knowledge-deprived. At the same time, by reaffirming the superiority of market-based solutions and sapping the authority of governments (as Trend Five will suggest), the knowledge era makes it much more difficult to uncover effective solutions to the problem of socioeconomic inequity.

### *The Future of Trade and Investment: Services and Ideas, Not Goods*

In a human resources economy whose core activities have moved away from manufacturing physical products, it makes little sense to focus on trade balances of merchandise goods. The future is likely to demand something very different--a focus on trade in knowledge and information, rather than in goods. As it is today, this new kind of trade will be very difficult to measure except in one aspect: foreign direct investment--trade in money--which is a form of knowledge-based trade. As one would expect, an international economy based more on knowledge than goods has seen a rapid growth in the relative importance of service trade and foreign investment, as noted in Figure 15--and this despite the fact that existing means of gathering statistics tend to underestimate the true scope of service trade. Examples of services that are increasingly traded globally include software programming, back-office services, product design, research and development, and customer service. If outsourcing is a growing trend for businesses, it is increasingly taking on the character of international outsourcing. Corporations will have to consider what this trend means for them--what existing activities might be threatened, and what new opportunities might open up to market global, elaborated services.

### *Shift to the Developing World*

The broad trends under consideration here will also promote a relative shift of power, especially economic power, to the developing world, with the emerging markets in Asia as the centerpiece of the transition. The most basic reason for this change is differences in economic growth rates--just 2 percent in the developed countries compared to between 4 and 7 percent in many parts of the developing world. Figure 16 notes the results.

Such a transfer of power clearly represents a tectonic shift in the foundations of world politics. Power is being redistributed from the advanced nations to developing ones, and the world community will become more multipolar as a result. This will not happen overnight; some developing nations, such as China, will continue to have per capita incomes under \$1,000 even by 2005. Even according to traditional measures, however--rather than the "purchasing power parity" measures that inflates their economic importance--developing nations are growing in importance: By the year 2010, they will account for 30 percent of world imports and 22 percent of exports (versus 24 and 17 percent today). As the World Bank concludes, the rise of the developing world means that "By 2010 more than one billion consumers in developing countries could have per capita incomes exceeding those of Greece or Spain today." Within a decade or so, U.S. exports to emerging market countries will outpace exports to Europe and Japan combined. Successful knowledge-era companies will find ways to reach this immense new market with goods and services.

### *A New "Economics"*

A change in the fundamental nature of an economy requires a reform in the economic theory used to analyze it. "We have an economic theory that can help us to understand and hence to manage the production and exchange of tangible objects like cornflakes and houses," writes Max Boisot, "but, as yet, no satisfactory economic theory to help us manage the production and exchange of intangible objects like knowledge."

Such a new theory would, as suggested by the industrial ecology movement, broaden its definition of the term "costs" to be more cognizant of social concerns besides profit. It would also rethink classical economics' assumption of "diminishing returns," arguing that corporate growth will eventually hit limits and be overtaken by others. Economist Brian Arthur has argued in the *Harvard Business Review* that a knowledge economy is characterized by increasing returns--"the tendency for that which is ahead to get further ahead, for that which loses advantage to lose further advantage. They are mechanisms of positive feedback which operate--within markets, businesses, and industries--to reinforce that which gains success or aggravate that which suffers loss."

The key to success in this world is predicting the Next Big Thing, not optimizing production techniques--not sustaining current advantage but building future advantage. Rewards, Arthur explains, "go to the players who are first to make sense of the new games looming out of the technological fog." These new approaches to economics stress the crucial role of innovation: In a rapidly changing environment, innovation, rather than defending

established market shares through price competition or other means, takes on unprecedented importance.

### *Conflict in the Knowledge Era*

Finally, the advent of a knowledge economy is transforming the nature of conflict. Where previously armies attempted to concentrate force and mass, today's most advanced militaries attempt to concentrate information. In traditional military terms, this means battlefield operations directed more than ever at denying the enemy access to timely information. But it also points to new ways of fighting wars via computer and modem.

The potential impact of knowledge or electronic warfare are profound. One U.S. Air Force investigator concluded that, "We could not wage war without unclassified [computer] systems. We could not move people, food or anything without computers." A U.S. Marine Corps analyst argued similarly that "our reliance on commercial satellites and ground switching stations leaves us wide open to total shutdown of our communications . . . by any skilled hacker." The advent of information warfare thus signals a profound diffusion of the means of war: Developing nations without billions of dollars to purchase high-tech aircraft or ships could easily invest a few million dollars in computer scientists and software, taking an indirect route to neutralizing U.S. military power.

## Trend Four: AN ERA OF GLOBAL TRIBES

The knowledge era is a time of paradox and contradiction, a time when theses and antitheses join together to produce unprecedentedly powerful engines of social change. Conflicting trends gain speed simultaneously, wrenching knowledge-era societies in two or more directions at the same time. Simple, straightforward ideas are rendered complex by our age's amazing pace of change and the growing interdependence of its trends.

Nowhere is this more apparent than in perhaps the most fundamental paradox of our time--the simultaneous acceleration of both globalism and pluralism, which we refer to here as an era of "global tribes." The world is becoming more cosmopolitan and more insular at the same time; accelerating dynamics of global trade, awareness, and travel coincide with growing emphases on local, national, ethnic, and religious identity. This trend examines this explosive intersection between the forces of globalism and the local, tribal, national and individual reactions to it.

### *The Process of Globalization*

"Globalization" is one of the most overused phrases of our time, a compelling notion for the accelerating convergence of world economies and societies. But globalization is not a uniform phenomenon; it is more advanced in some issues, less in others. It is not a single trend--it is many complementary trends running parallel to one another. In order to have a sense of the overall Phenomenon, one must have a sense of its distinctions.

To begin with, the world economy is becoming increasingly globalized. Trade in merchandise and services is growing faster than worldwide economic growth, for example, as documented in Figure 17--which means that the world economy is becoming more dependent upon trade, and thus more globalized, all the time. The World Bank forecasts that this trend will continue over the next decade, so that, by the year 2004, global trade levels will be equivalent to just under half the world's GNP.

In many ways, however, this economic activity retains a highly regional flavor. The fact is that the vast majority of world trade--an increasing majority--goes on within the three major trading blocs of Europe, the Americas, and East Asia rather than between them (see Figure 18). Between 1985 and 1993, U.S. exports and imports from North America grew relative to trade in other areas; EU trade within Europe grew relative to other trade; and Japanese trade within East Asia rose relative to other trade. In Europe intraregional trade accounts for almost 70 percent of the total. The trends are similar for foreign investment: From 1986 to 1992, 80 to 90 percent of FDI outflows from any given region stayed within that region--investment from Germany went to France, from the United States to Mexico, from Japan to Southeast Asia.

A second major avenue of globalization, over the next decade as it has been during the last two or three, is global awareness. There is an emerging fund of global consciousness--a shorthand description of one implication of the knowledge era, and one that builds on the engines of global homogenization discussed in Trend Two. Peter Drucker reminds us that "Knowledge knows no boundaries. There is no domestic knowledge and no international knowledge. There is only knowledge." This global mentality is on display in increasingly specialized professions

whose members may have more in common with colleagues half a world away than with their neighbors.

Third and perhaps most importantly over the next decade, globalization will accelerate as a result of advances in communications. The Economist magazine recently summarized the clear direction of global communications technologies. "Over the next few years," it concluded, "the price of making a long-distance call in and between some countries will fall to the point where it costs little more to telephone from Hollywood to Glasgow than to nearby Beverly Hills. At the same time, telephone companies will begin to switch the basis of charging their customers from the length of time for which they talk to a flat subscription. Within a decade or two, most ordinary telephone conversations will cost nothing extra, whatever their duration or distance." This process will revolutionize service activities and recalibrate domestic-versus-international cost calculations.

Fourth, an increasingly globalized world is one characterized by increasingly global production--the rise of multinational corporations. By the early 1990s there were 37,000 parent multinationals controlling 206,000 foreign affiliate corporations. The world's largest multinationals, not including banks and finance institutions, had \$3.4 trillion in global assets in 1993, \$1.3 trillion of it held outside their home countries. Amazingly, as long ago as 1992, the total sales of foreign affiliates operated by MNCs were \$5.5 trillion, more than five times the value of world exports that year--a fact suggesting that MNCs may at this stage be a much more powerful engine of globalization than traditional trade in manufactured goods and services. In sum, an important economic development of the last ten years is that firms have moved beyond purchasing independent subsidiaries abroad to becoming more globally integrated, though the process is far from complete.

Other aspects of the knowledge era, however, are working to break down the distinction between global and local companies. In a world of more virtual companies and networked alliances distributed around the globe, each doing its business with intense local and niche focus but coordinated and trading globally, the emerging model is a paradoxical one. As Percy Barnevik of ABB has put it, "We are not a global business. We are a collection of local businesses with intense global coordination."

### *Tribalism, Fragmentation and Pluralism*

If a knowledge era is a time of globalism, it is also, paradoxically, an era of pluralism--of fragmentation and diversity in social organization, careers, politics, and religion, of renewed search for identity in local, tribal, and national form. The knowledge era is pluralistic for a number of reasons. It draws on and expands the natural pluralism of modern industrial society, and its hundreds of careers and millions of products. The difference is that we now have access, through information, globalism and marketing, to this dizzying array of options all at once. Examples of such tribalism are all around us, a few of which are summarized in the Issue Feature.

### **ISSUE FEATURE: Examples of Pluralism**

***Self-identification.*** A recent survey by U.S. News and World Report found that the political attitudes of Americans had broken down into seven "tribes," including populist traditionalists, stewards, dowagers, liberal activists, and agnostics.

***The multicultural movement.*** One of the most important social trends of our time, multiculturalism—which rejects a universal lifestyle in favor of regional or ethnic distinctions—is tribalism on display.

***The fragmentation of business.*** The decentralization and "virtualization" of business is also a form of pluralism.

***The diversification of education and justice.*** Both institutions display a bewildering array of specialized schools, subjects, classes, style of law enforcement, and forms of punishment and rehabilitation.

***Government decentralization.*** The movement in the United States, Western Europe and elsewhere toward devolving government affairs to lower levels of authority is an example of pluralism.

***The fragmenting effects of media.*** As Marshal McLuhan recognized three decades ago, in a world of 150-channel cable television and almost unlimited online, print and broadcast media options, the public becomes a "segmented, differentiated audience," no longer "a mass audience in terms of simultaneity and uniformity of the message it receives."

***A pluralism of religions.*** In a time of diversity, religious forces become less monolithic and encompassing, more local and diverse.

The business world is fragmenting as well. In a fast-moving, pluralistic era, it hardly seems surprising that smaller and more decentralized corporations would have an edge in flexibility and innovation. And recent statistics seem to bear out this argument: Companies with between 100 and 1,000 workers will generate 40 percent of all new jobs over the next decade; by 2000, companies numbering under 500 will employ more than 70 percent of the workforce.

But the story is not that simple. In important sectors of the economy, massive size and scope, not fragmentation, is the rule. That such a trend toward bigness should emerge alongside continued growth in small business's importance is another paradoxical symptom of a paradoxical time. The central message for businesses, then, is not so much big versus small, but the paradox of trying to be both at the same time. The corporate challenge today, says Louis Gerstner of IBM, is "how to incorporate small-company attributes--nimbleness, speed and

customer responsiveness--with the advantages of size." Successful businesses will combine, either within their own organization or through alliances or networks, small- and big-company attributes, just as they will combine characteristics of global and local businesses.

### *\Tribalism within Globalism*

Reviewing the various facts and trends previously outlined, one might think that the two ideas surveyed here--pluralism and universalism, tribalism and globalism--are independently critical. And so they are. But what is even more important is their interaction, the complex and profound dialectic produced by a world that is not merely global, but plurally global; not merely plural, but globally plural. Having now understood a little of what each of those two trends means, we can grasp some of the major ramifications of their blending.

The writer Patrick Glynn describes a coming clash between "ethnic (and other types of) particularism" and "what might be called democratic universalism," a conflict that "seems to be replacing the old Left-Right and class polarities that have governed political life for nearly a century." This new clash of pluralism and globalism "has every appearance of becoming the new bipolarity of global politics, the new dialectic of a new age."

This explosive interaction will have a number of major ramifications. One is social instability and tension in many areas of the world as the requirements of globalism and the counteracting claims of local identity meet in social stress or outright conflict. This process, after all, is the engine of the kinds of culture clash described by Samuel Huntington: "The forces of integration in the world are real," he writes, "and are precisely what are generating counterforces of cultural assertion." But at the same time, globalism enhances interdependence among and within nations, both economically and politically.

## Trend Five: A TRANSFORMATION OF AUTHORITY

The trends we have reviewed so far have dramatic implications for a key concept of political and social life: authority. Under the influence of the knowledge era, the extent and nature of authority in all of its guises is undergoing a profound change. Not only is this process affecting the social institutions which wield authority, but it is also changing the very character of authority itself.

This change involves something far more complex than a mere "decline of authority," a trend examined for decades. Instead, what we are seeing today is the transformation of authority--not merely the downfall of traditional authorities, but their replacement with different, knowledge-era ideas and institutions that exercise influence over people. Sometimes these new institutions are modified versions of traditional authorities--the partial replacement of monolithic religions, for example, with more diverse and diffuse churches, cults, and self-help gurus. In other cases, such as the mass media, their influence is entirely new, at least as compared with earlier centuries. But old authorities will not give way to new ones overnight, and the hiatus between the two ages offers a powerful challenge.

### *Phase One: The Decline of Hierarchical Authorities*

The knowledge era is characterized by a decline in the strength of major social institutions, or a crisis of authority. In a world of fragmentation and diversity, a world of widely-available information and expanded personal autonomy, and a world of relative moral values, ruling groups face unprecedented challenges. The monopolies on information, capital, force and ideology that once underpinned absolute rulers are fading away.

The sociologist Richard Sennett points out that "authority is not a thing. It is an interpretive process which seeks for itself the solidity of a thing." And that interpretive process has begun to move in a new direction: The knowledge era, by radically expanding the ability of individuals to participate in that interpretive process, renders authorities unable to preserve a solid front. The weakening of four major social authorities--the family, community (including the nation-state), the church, and tradition--exemplifies the scope of this change. And as the next Issue Feature makes clear, these effects are not unique to the United States or the West--Asia is undergoing the same sort of social stress.

The decline of the American family, with dramatically higher rates of divorce and single-parent families than before, is well-known. What is not as widely appreciated is that this family decay is global--in many developing countries, divorce rates doubled between the 1970s and 1990s.

These same pressures have conspired to undermine communities, both local and national, around the world. As social mobility and remote forms of interaction have emerged, the strength of civil society has waned. Weaker community institutions contribute to higher levels of crime and corruption, indeed the next decade could continue to witness a rise in global corruption of epidemic proportions (see Figure 19). A later Surprise Scenario discusses the potential for a new explosion of crime of all sorts, both in the United States and globally, over the next decade, spurred by a variety of demographic and social factors.

Finally, knowledge era forces tend to reduce the strength of centralized, hierarchical religions as well as tradition. This does not imply a decline of spirituality or faith--far from it: The next decade could well be a time of intensifying religious belief, in part as a reaction against the alienating trends of our transitional era. But it does imply that these expanding forms of faith will be more plural, decentralized and flexible. And the force of tradition inevitably declines in time of rapid change, when it no longer makes sense--or no longer appears to make sense--to copy one's elders.

### **ISSUE FEATURE: DECLINING AUTHORITY--EVIDENCE FROM ASIA**

No set of peoples seems more concerned with the knowledge era's threat to existing authorities than the countries of Asia, where strict social control has been a hallmark of many cultures for hundreds or thousands of years. Center for Strategic and International Studies researcher David Hitchcock has conducted hundreds of interviews with scholars, government officials, and businesspeople in over a dozen Asian countries, and his findings reinforce the conclusion that the crisis of hierarchical authority is a global phenomenon.

Thai intellectuals, Hitchcock reports, worry that "there is no moral compass" governing the rapid modernization and democratization of their country. He relays the plaintive words of a popular Chinese rock musician, Cui Jian, noted at left. He notes that undemocratic governments throughout the region confront a growing sense of popular empowerment and demands for more participation in decision-making. He catalogues the declining hold on popular imaginations of old moral value systems such as Confucianism, and the disturbing sense that no new values are emerging to take their place. The family is also under assault in Asia, with divorce rates growing rapidly.

A number of Asian nations have begun to reconsider the value of a hierarchical approach to social organization in an era that seems to demand the opposite. A senior official with Japan's NHK network worries that "Japan needs an entirely different approach politically, economically and socially," in part because "there is a sense of dissatisfaction, a lack of something, a stagnation, that maybe we've reached the end of the tunnel and found no visible light." This urge to reform extends, especially in Japan, to educational systems built on rote memorization and obedience to authority.

In short, Hitchcock reports, "Governance is a central issue everywhere" in Asia. Governments, businesses, and other social institutions hold increasingly tenuous power, while individualism and the demand for popular empowerment are on the rise. How to accommodate these elements of the knowledge era without sacrificing its bonds of social and family responsibility may be East Asia's most pressing challenge over the next decade.

The most immediate and profound effect of the decline of old authorities is social instability. Old, hierarchical authorities decline before new ones have fully risen, and the result is a weakening of social bonds. One obvious result of this complex instability is the growth of ethnic strife and conflict. Such tension is growing both within societies--in the form of racial

tensions, for example, in the United States and Europe--and between them, in the form of ethnic and cultural debates over land or values or trade practices. Like globalism and tribalism, the decline of old authorities and the rise of new ones causes people to intensify their natural search for identity; and people often turn to national or ethnic membership to fill that need. And this same process, when combined with the rapid change and uncertainty of the knowledge era, can produce dangerous levels of personal alienation.

*Phase Two: The Rise of New Authorities*

The story of authority in the knowledge era is not one of simple decline or deterioration, nor of the permanent victory of alienation. New authorities rise up to replace the ones that have declined--new authorities, in many cases, more empowering and reflecting more freedom than the ones they are superseding. Figure 20 outlines their characteristics.

One is the virtual state. At the most fundamental level of authority--the nation-state--the existing version will give way to a less centralized, more flexible and adaptable institution. Nation-states will not disappear or decline into irrelevance; the virtual state will simply share the stage of

**FIGURE 20**

*Characteristics of Knowledge Era Authorities*

- 1.) In their organization they will be decentralized, small, and flexible--most often specialized, single-issue groups. In an age of micromarketing and diversity, few broad-based institutions will succeed.
- 2.) In many cases their physical structure will be virtual instead of concrete; many will consist of far-flung, pluralistic conglomerations working together.
- 3.) Their approach to power is not coercive; it seeks influence rather than control or outright power. These new institutions are centers of information and knowledge competing for allegiance rather than rigid authorities as we have known them.
- 4.) Their method of acquiring influence is through performance, competence, and effectiveness rather than brute force or tradition.

authority with more actors, and accomplish its required tasks with more efficiency and frugality. It does this partly by contracting out many functions better performed by others--the process of privatization, which is sweeping the developed and developing world alike and may eventually

encompass such core state functions as education, welfare, and even some elements of national defense. The virtual state's main purpose is to make itself an attractive area for investment, with highly-educated populations, modern infrastructures, and moderate tax rates and regulatory schemes.

Peter Drucker suggests that this process of privatization will produce a second and related new authority of the knowledge era, which he calls the social sector--organizations that perform services previously held to be government responsibilities. Recent numbers do indeed show the dramatic growth of the social sector: The United States alone boasts almost a million and a half nonprofit groups, whose economic activity, at roughly 7 percent of U.S. GNP, exceeds the GNP of all but seven nations in the world. Elsewhere, 54,000 private voluntary associations were formed in France in 1987 alone, the United Kingdom has well over a quarter of a million charities.

But the effectiveness of the social sector will be impaired--at least in the United States--as long as the pattern of charitable giving continues to be weaker and more narrowly focused than it ultimately must become in an era of the virtual state and the corresponding requirement for greater non-state social action. The richest Americans, for example, give the least, as a percentage of their income, to charity. And much of what they do give goes to universities: Of *Slate* magazine's list of the 60 top charitable donors in America for 1996, more than two-thirds gave their money entirely or almost entirely to universities--an area where the country already excels. Precisely zero members of the "Slate 60" gave any money to social service or welfare organizations, where the need is arguably greatest.

Another "new authority" of sorts in the knowledge era is a new set of dominant business strategies, symbolized here by London Business School professor Gary Hamel's notion of "strategy as revolution." Hamel argues that many firms "are reaching the limits of incrementalism;" pursuing "incremental improvements while rivals reinvent the industry is like fiddling while Rome burns." Never before "has the world been more hospitable to industry revolutionaries and more hostile to industry incumbents." One implication is that "Senior managers should be less worried about getting off-the-wall suggestions, and more concerned about failing to unearth the ideas that will allow their company to escape the curse of incrementalism." The knowledge era thus demands an "innovation-rich economy," writes former Citibank president Walter Wriston. "Nations that wish to flourish . . . will have to foster a climate of innovation."

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#### Surprise Scenario: A Dramatic Increase in Crime

Contrary to popular perceptions, U.S. crime rates have been declining for several years. Some observers, however, do not expect this to remain true for long. They look at the huge Baby Boomlet and Post-Boomlet generations described in Trend One, which will add 500,000 new males ages 14 to 17 to the population by the year 2000. They recall evidence that younger people, especially young males, are more likely to commit crimes than older ones. And they become very worried.

This scenario examines the possible implications of a massive surge in crime, especially violent crime, beginning just before the turn of the century and extending for a decade or more beyond it. Juvenile arrests would grow from 125,000 annually to 250,000 or more. Homicides might jump from roughly 23,000 today to 30,000.

Such a nationwide crisis of law enforcement would carry a number of implications:

- Enormous new social costs as state, local and federal governments rush to build more prisons, hire more prosecutors and put more police on the street.
- An accelerated decline of urban areas and reversal of urban renewal efforts as new waves of violent crime sweep through the nation's major cities.
- Because personal security is so closely correlated with perceived standard of living, surging crime rates would spark a new sense of social crisis and decline that might support the rise of law-and-order demagogues who restrict individual liberty.

Similar crises of public order could also arise in many other parts of the world. Reform efforts in Russia and China are already producing wealthy criminal classes; either of those societies could collapse into violence and chaos, undermining economic growth and democracy and turning both into less reliable members of the world community. Modernization in emerging market countries will bring higher crime rates around the world. And increased criminal activity in developing nations of Latin America and the arc of crisis would discourage foreign investment and destabilize governments.

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The principles of new business strategies lead directly to another form of new business authority: new management styles. Modern management theories aim at placing more and more control in the hands of workers at the expense of middle management. "Sick of it or not," writes management consultant Frederick Harmon, "empowerment of workers will change the form of every organization in the twenty-first century. Empowerment is not a fad that failed. It is a core idea of the future that forces antiquated organizational forms to adjust to both societal change and the expansion of workers' attitudes." Companies will renew strategies for empowering their workers, asking whether those strategies are as bold, far-reaching, and effective as they could be.

Direct democracy constitutes the major political expression of new authority in the knowledge era. The combination of television, telephone, and computer lines that is taking shape under the rubric of "the information superhighway" is changing the way Americans can participate in politics. Public opinion polling, referenda, ballot initiatives--all someday conducted via voting boxes attached to televisions--are bringing politics closer to the people. Lawrence Grossman, the former head of PBS and NBC News, argues that "A new political system is taking shape in the United States." New elements of "direct democracy are being grafted on to our traditional representative form of government, transforming the nature of the political process."

The character of businesses will also change in the knowledge era--they will accept new roles beyond merely profit-making. "Ten years from now," writes James Moore, "I am firmly convinced, business leaders will be actively and daily addressing social and environmental issues." The reasons do not presume altruism: the corporate need for a well-trained workforce; the competition to attract mobile workers; efforts to increase retention and productivity and concerns for public image and trust. Companies which express broader social responsibilities will reap rewards, both internally and externally.

Finally, the ultimate authority in the knowledge era is the most decentralized of all--the individual human being. As two commentators recently put it, our era is one of the "Sovereign Individual," the empowered human being with more freedom, choice and opportunity than at any time in human history. This new age calls for self-sufficient, self-motivated, self-navigating people--and ones who express the new degrees of social and personal responsibility that are so necessary in an era of rapid change.

One result is anxiety--expressed as often as not these days in the form of cynicism and apathy rather than rebellion. What is "qualitatively new in our scene," writes Roger Holmes, is that "The hallmark of our age is not revolt, which has happened often enough in the past, but sheer indifference. In this sense, the society of use really has gone further than ever before. Authority is no longer even attacked; this is the crucial development, this is the qualitative jump of recent times." The current phenomenon "is not that of the revolt against the Establishment: it is the disappearance of the Establishment into irrelevance and absurdity"--precisely the sort of process described in Trend Five. The solution to this problem is as straightforward as it is difficult: the exercise of will through self-empowerment, something that the knowledge era may now allow us to undertake by enhancing the level of meaning and self-control available in the lives of individuals--in short, by empowering people.

### *A Habit of Alienation*

But on the road to transcendence and empowerment, a second major psychological challenge of the knowledge era crops up, a natural complement to anxiety: alienation.

Perhaps the dominant psychological reaction to the transition to a knowledge era is a growing sense of alienation, in both the developed and developing countries. Stripped of familiar moral, social and political landmarks, caught up in the swift current of the knowledge era (or left stumbling in its wake), people in both the developed and developing worlds are experiencing new kinds and intensities of personal and group alienation.

A moment's reflection should suggest why a fragmented society of relative values, the sort of world described in Trend Four, is an alienated one. For one thing, the death of ideologies has put an end to many of the unifying themes we use to combat estrangement. Many observers have commented on the decline of the sacred, of national and religious myth, even of the socialist ideal as ideas that stand against the void.

An equally powerful cause of alienation has to do with the challenge of coping with a knowledge-rich age--information overload, and the lack of context for the information we can process. People feel alone and helpless in the midst of a bewildering array of information. One specific result of this surfeit of information is to imbue the knowledge era with an unprecedented

degree of social complexity--a third route to alienation. Social issues, their characteristics as well as causes and cures, seem more complicated than ever before.

Trend Six:

## A TEST OF HUMAN PSYCHOLOGY

It should be abundantly clear by now that the advent of a knowledge era, and the associated social and economic transformations implied in that transition, will place individuals under immense strain. Coping with change is never easy; coping with the sort of accelerated, comprehensive change that we face today could turn out to be the severest test that history has ever imposed on human psychology. This trend examines the character of that test, the social and personal implications of it, and the requirements for meeting it.

### *Anxiety and The Psychological Challenge*

"We have reached a moment in history," argues self-esteem guru Nathaniel Branden, "when self-esteem, which has always been a supremely important psychological need, has become an urgent economic need." The new global economy is "characterized by rapid change, accelerating scientific and technological breakthroughs, and an unprecedented level of competitiveness." While everyone in business understands that this fact magnifies the importance of education, Branden writes, what is not so well understood is that these facts "also create new demands on our psychological resources," asking for "a greater capacity for innovation, self-management, personal responsibility, and self-direction."

As citizens of the knowledge era, we are expected to understand our own career and life choices well enough to make them intelligently. We are expected to master dozens of kinds of advanced technology, from computers to automobiles to the infamous video-tape recorder. We have to manage a lifelong process of education in support of our careers (or interests) and its substance as well as its finance. We must pay our bills and complete complicated tax forms and manage a portfolio of insurance, retirement savings, and other investments. We must provide for our health care, wending our way through a maze of complicated insurance options and care restrictions and regulations.

Such complexity is exacerbated by the immense and frightening speed and degree of change in the knowledge era, and by the pervasiveness of abstract realities. Abstraction may well be the governing principle of a knowledge era: Knowledge, which represents ideas rather than things, is inherently abstract; an era in which society and economy revolve around knowledge and information is bound to become more and more abstract--a process accelerated by fragmentation, relativism and the crisis of authority.

A global media age also alienates people from perhaps the most important measure of psychological stability and personal grounding: a firm sense of place, physical as well as social. Joshua Meyrowitz discussed this phenomenon in his insightful 1985 book *No Sense of Place*. "At one time," he wrote, "physical presence was a prerequisite for first-hand experience. To see and hear a president speak in his office, for example, you had to be with him in his office." This, of course, is no longer the case. "The evolution of media has decreased the significance of physical presence in the experience of people and events." The very context in which human psychology operates is being changed, for better or worse. Our ability to locate ourselves in the world may be weakened by electronic media's constant assault on our sense of personal and

social place. And as the Surprise Scenario indicates, some may turn to demagogic leaders for reassurance.

The forces of alienation in our age are therefore manifold, but as we have said, the knowledge era is double-edged. It offers, not merely the risk of an alienation at least as profound as that of the industrial era, but at the same time the prospect of an escape from alienation of a degree unprecedented in the modern world. The knowledge era is one which seems likely to impel the further spread of economic and political freedom throughout the world: which provides individuals with stunning educational and entertainment options; and which, in the final analysis, through its effect on the workplace and other social institutions, can and should be about the empowerment of individual human beings. In the process, human alienation--from nature, from society, from self--would give way to new levels of connectedness and satisfaction. But it will not happen on its own; and companies, for example, must keep firmly in mind the psychological pressures of the knowledge era, pressures affecting their employees, and help to create empowered workers who can better navigate them--workers who will be more productive, efficient and loyal as a result.

#### Surprise Scenario: An Alienation-Based Demagogue

Among the dangers posed by the knowledge era, one of the most disturbing is its potential to generate new kinds of demagogues who take advantage of the global flow of information and the disenchantment produced by globalization, rapid change, economic uncertainty, risk, and general alienation to promote agendas of hatred, scapegoating, and coercion.

In this scenario we posit the emergence of a knowledge era demagogue in the West. A knowledge era provocateur could break the bounds of industrial era demagogues: He could appeal to a regional or global rather than local or national audience; represent a high-tech rather than backward constituency and ideology; make sophisticated use of 21st century propaganda techniques; and take advantage of the pluralism of views and relativism of modern societies to legitimize his ideas.

Much of the dissatisfaction to which a new demagogue would appeal already fuels pseudo-demagogues on national stages, like Buchanan, Le Pen and Zhirinovskiy, and thorough-going local demagogues. What is missing is a trigger--a precipitating spark for the spread of such views. The most likely trigger is the emergence of serious and persistent bad economic times. A severe recession might expand the would-be demagogues' base of support, and produce a number of chilling results. Their influence would be felt both within the countries in which they came to power and throughout the world community. Any of the following are a real possibility:

- Discrimination against and persecution of minority and immigrant groups as scapegoats for economic decline.
- Resulting ethnic wars within states that quickly get out of the control of the demagogues themselves and become more decentralized--and violent.

- A return to wide-ranging state economic planning, protectionism, and mercantilism as demagogues seek answers to economic problems.
  - International conflict as competitive states headed by demagogues turn their scapegoating beyond their own borders.
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### *The Pessimism Syndrome*

A particular danger emerges in our age because of the naturally pessimistic bias of an increasingly prevalent and important media. The media have a broad tendency to report negative or pessimistic stories for their shock value and ratings. At the same time, in a knowledge era, the relative balance between knowledge we acquire through personal knowledge or contact and that we obtain through external accounts is thrown off balance. Our personal observation seems to count for little against the vast wave of information sweeping over us each day in a dozen forms, swamping our perceptions and washing away the familiar landmarks of our experience.

Together, these phenomena produce the Pessimism Syndrome: the pervasive tendency to think things are getting precipitously worse when they are not.

People have always sought to understand the world around them. In an information age, that understanding comes primarily from news outlets, whether print or broadcast. And people who listen exclusively to the press may well believe that the world is going under. "Television is now, indisputably, the primary source of news for most Americans," argued David Shaw in the Los Angeles Times. "It may also be the primary source of the cynicism that increasingly pervades the news media and society at large." Shaw continued with a neat summary of our hypothesis: "Just as studies have shown that viewers who see crime-dominated local TV news shows are likely to think that crime is much more prevalent than it really is, so viewers who watch national news shows, magazine shows and the weekend political talk shows are likely to think that the world in general, and politicians in particular, are much worse than they really are."

Confronted with such an overwhelming diet of pessimism, it is no wonder that Americans, as well as the citizens of many other industrialized nations, become depressed at both the state of their societies and their future prospects, even as they see little evidence of such unrelieved catastrophe around them. The broad message delivered to most Americans is simple: Things are bad; the future holds enormous peril. Robert Samuelson phrases it this way: "When surveyed, about four fifths of us say we are satisfied with our own lives. But when asked about the country--whether it's 'moving in the right direction'--Americans are routinely glum." This perceptual gap has been true for at least two decades. Somehow, a society that satisfies most of us most of the time has also convinced many of us that it's rolling inexorably toward the edge of a cliff." Figure 21 summarizes one recent poll showing the vast gulf between perceived and actual economic reality.

Partly, then, this phenomenon involves a divergence in confidence about the present and the future, a creeping suspicion that even if things look good for the moment, they will soon turn for the worse. But it also implies a pervasive fear that general social trends are running in negative directions, even when evidence from people's own personal lives suggests otherwise. Polls and studies suggest that the media diet of pessimism is so powerful that it overwhelms

personal experience to the contrary. Even if their own jobs and lives are going well, people are taught by the media to believe both that their success probably won't last and that it is the exception rather than the rule in society at large.

The result of this process may be a growing and pervasive belief that the general social situation, and in particular the economic situation, is bad and getting worse. The Pessimism Syndrome's prevalence calls into question whether we can safely make the transition to a new era of human affairs; it cannot help but contribute to personal stress and depression. Figure 22 offers disturbing trends in Americans' general sense of satisfaction with the "way things are going in the country"--statistics strongly supported by an August 1997 Washington Post-ABC News poll that found nearly two-thirds of Americans thinking that the country is heading in the wrong direction.

The Syndrome could have broader social effects. It might stifle entrepreneurship and progress, as well as undermine faith in the ability of social institutions to address problems. It could feed anxieties about the future that could help undermine future proposals for free trade. And ultimately, it could drive Americans into the arms of politicians promising quick and easy solutions to perceived problems that do not exist, or at least not to the degree people think. The dangers of the Pessimism Syndrome, in short, are very real.

### *Culture and Human Psychology*

The effect on human psychology of the knowledge era will vary from one culture to the next. Culture, as we suggested in previous trends, shapes peoples' perception of their environment; we should therefore expect cultural predispositions and values to play a major role in shaping the thought processes and reactions of individuals. And so they shall.

One decisive effect will be culture's role in directing the course people take, whether through appeal to institutions or belief systems, to deal with the dislocations of a transitional era. In some cases, the strains of this transition might lead to a reassertion of cultural values, sometimes of a violent nature. Already we see a resurgence of Islamic faith in the Middle East; rekindlings of Hindu nationalism in India; national-cum-cultural affinities on the rise in Japan and Korea. Cultural expressions manifest themselves between nations, but especially within them--minority groups expressing their unique identity against the majority group or groups.

But the relationship between human psychology and culture in the knowledge era is, like all of our trends, complex and, in important ways, paradoxical. For culture is changing and evolving in many parts of the world, when people turn back from globalism to reach for the familiar walking-stick of culture, they often find that it has been transformed into something quite different. It is after all the intersection of globalism and tribalism that is producing the growing interest in distinct cultures. Managing this intersection--making the transition to a more unified global culture while retaining elements of distinct ones--is another major task for human psychology.

## Geopolitical Implications: SIX GLOBAL SCENARIOS

The final endeavor of this report is to apply the trends it has identified as driving world politics over the next decade to international politics, and thereby develop several representative scenarios that could emerge. The purpose of these scenarios is not to forecast the future, but to provide a range of potential outcomes--to furnish the reader with a rough sense of the range of possible worlds that could emerge from the transition to a knowledge era in human society, politics and economy.

No one scenario from the following list is identified as the "most likely" global system. Such predictions would be fruitless; any number of "surprise scenarios" could emerge to push the global system off in one direction or another. Trying to find the most likely or plausible scenario risks the "fallacy of the best estimate," the creation of a scenario that unconsciously forces out consideration of alternatives. We can say this, however: On balance, we are guardedly optimistic--with a strong emphasis on the word "guardedly"--about global prospects over the next decade. A number of major trends, such as the expansion of democracy and the emergence of environmentally-friendly technologies, partly account for our optimism. But what makes us especially hopeful is that, empowered as we are by the technologies and information of the new era, we have the ability to influence which scenario occurs. In the knowledge era more than ever before, we are no longer the prisoners of trends, but their authors.

### *Scenario One: The End of History*

This scenario borrows from the ideas of Francis Fukuyama and depicts a world of expanding free trade, triumphant liberal democracy, continued worldwide economic growth, and the absence of war. It presumes an end to global and regional "predator states" and a decline of social instability in the form of civil wars, insurgencies, and terrorism.

The underlying theory behind this scenario could perhaps be summarized this way: It is the tendency of natural human ambition and competition to become, over time and within certain limits, more regulated and controlled and to shift into increasingly non-violent areas of endeavor. Such an evolution has already occurred within states which have managed to overcome the "state of nature," establish a secure order and advance to create free markets and democratic polities. It is now underway, this scenario holds, more slowly and (for a long time) more unevenly, in the world community.

*Major Features:* **THE END OF HISTORY**

- Triumph of liberal democracy and free-market economics
- Steady global economic growth, regional and global trade pacts
- Warm relations among the great powers; no major wars
- Worldwide enforcement of norms--human rights, peacekeeping

*Key indicators*--signs that this scenario is on the way--include stabilization of democratic and free-market reforms in Russia, progress toward representation in China, stability and growth in major developing areas like India and Latin America, admission of Chile into NAFTA, accord on a single currency in the European Union, and progress on addressing social challenges (wages, jobs, family breakdown) in industrialized nations.

In many ways, the End of History scenario embodies a victory over the forces of reaction against the knowledge era. Previous chapters outlined the dozens of forceful challenges, from social inequities to knowledge-era cyber-terrorism to psychological alienation, that characterize our transitional era. In order for this scenario fully to emerge, democratic, free-market nations would have to meet those challenges sufficiently to prevent major backsliding on the areas of progress assumed by the scenario. Nonetheless, the scenario does not presume that the next decade will be a smooth ride. It may be very bumpy, as the transition to the End of History--the establishment of democracy in China, for example--continues.

*Scenario Two: A New Medievalism*

Our second scenario examines the possibility that the basic actor in world affairs today--the nation-state--will wither and give way to a much more complex mixture of public and private authorities. The resulting social system might echo in some ways the medieval system of multiple loyalties and competing authorities.

The political theorist Hedley Bull defined such a scenario two decades ago. "All authority in mediaeval Christendom," Bull explained, "was thought to derive ultimately from God;" the political system of the time was ". . . basically theocratic. It might therefore seem fanciful to contemplate a return to the mediaeval model, but it is not fanciful to imagine that there might develop a modern and secular counterpart of it that embodies its central characteristic: a system of overlapping authority and multiple loyalty."

In order to conceive of such an arrangement, this scenario first posits the decline, and in some cases near-collapse, of the nation-state system. The New Medievalism scenario considers another mode of governance--a much more complex, diffuse array of public and private social actors that share power. In Trends Four and Five, we offered a view of the "decline of the nation-state" thesis which suggested that, at least in the next decade, it might be slightly overblown. This scenario assumes that the view of the nation-state's collapse is not only valid, but an understatement, and it posits a rapid fragmentation of authority.

Adding a special element of violence and terror to this cocktail of multiple loyalties are the sub-national groups that may have the upper hand in contending for power amid the decline of states--criminal and terrorist organizations. Ranging from mafias in the United States and abroad to drug cartels to cybercriminals to anti-knowledge era partisans like Germany's skinheads or America's militias, these groups rush into the breach of declining institutions to seize power and make profits. They draw growing power and influence from the diffusion of power in the knowledge era through such means as information warfare. In so doing, they make it harder for legitimate knowledge era authorities to gain power.

*Major Features: A NEW MEDIEVALISM*

- Decline of nation-state into position as "one among equals"
- Rise of competing social institutions and authorities
- Thorough localization of economics amid global marketplace
- Much higher social instability, unpredictability, fragmentation

*Key indicators* of this scenario include the rapid decline of national authority in the developed and developing worlds; the strengthening of alternate authorities in society such as private educational and policing organizations; growing poll data about a rising sense of multiple loyalty among citizens of advanced and developing nations; and increasing power in the hands of organized criminal groups.

*Scenario Three: Depression Demagogues*

The third scenario posits a combination of two developments. Its fundamental trigger is a global financial catastrophe, the extension worldwide of the sort of sudden collapse that hit Barings Bank when one of its young traders lost billions of dollars on unreported deals.

We use the financial crash as the triggering device after a long period of economic decline, characterized by slow or no growth in the developed world, developing world recessions without growing developed-world markets to absorb their products, high unemployment, pension crises, budgets thrown into new imbalance, and so on. In a broader sense, this scenario examines the potential for a major economic collapse over the next decade, sparked by a financial event but years in the making.

That crash itself could be the result of cyber-terrorism, with computer-literate political or criminal organizations deciding to undermine the financial foundations of the international system. Apart from attacks on central financial institutions like Wall Street, such groups could also go after financial information in thousands of dispersed sites, from local banks to credit card electronic networks to companies which do electronic payroll. As Trend Three noted, the vulnerability of developed nations to cyber-terrorism is growing.

*Major Features:* **DEPRESSION DEMAGOGUES**

- Global economic slowdown--unemployment, recessions
- Triggering event of global financial crash over a year or less
- Collapse of world trading system and many regional ones
- Rise of demagogues in developed and developing world
- Civil and international wars; mercantilism; depression

*Key indicators* of the emergence of such a period would include worsening of major worldwide economic indicators, signs of emergent instability in financial markets, a growing chorus of predictions that such markets are overvalued and likely to drop, and increasing success at polls of demagogic candidates in developed and developing nations.

*Scenario Four: The Return of the Great Powers*

This scenario posits the emergence of realist assumptions about the future of world politics. Out of the rubble of the cold war and the brief international harmony that will follow its conclusion, realists contend, a new order will arise of essentially self-interested great powers pursuing geopolitical and geoeconomic rivalry in a basically anarchic world system.

Realist writers have outlined the dynamics that could produce such a world. In an anarchic international system, states are left to fend for themselves and provide for their own security. As a result, they tend to view other states as natural competitors. In the process of providing for their own security, states naturally spark worries on the part of others, and the resulting "security dilemmas"--in which one state's attempts to secure itself are perceived by others as preparations for aggression--can lead to spirals of misunderstanding and hostility that produce war.

*Major Features:* **RETURN OF THE GREAT POWERS**

- Rivalry among six or more great powers governed by realism
- Economic cooperation/world trade progress slows and reverses
- Cold war alliances--NATO, U.S.-Japan, and so on--decay
- Potential for major war returns to international relations

*Key indicators* would include worsening relations among former allies such as the United States and Japan or Germany, Japan and South Korea, or Germany and France; others include heightened economic espionage or trade friction, a deterioration of cohesion in NATO or the European Union, or an actual military conflict between two great powers.

Applied to the world community of today, this model forecasts declining trust and increasing hostility among the major powers. Thus Germany and Japan are likely to express themselves militarily and eventually sever their alliances with the United States; the European Union process will grind to a halt and begin a slow and steady reversal, with Europe's major powers again expressing their independence; and relations between the United States and both China and Russia, and between those two powers and their neighbors, will erode.

*Scenario Five: Ecocatastrophe*

This scenario posits the occurrence of a major environmental disaster somewhere in the world over the next decade. As we suggested in Trend One, we do not expect such a disaster, at least in the next decade, from known sources such as global warming. Even in those cases, however, a surprise cannot be ruled out; and in the cases of far less predictable events we will discuss in this scenario, such as infectious disease outbreaks and asteroid strikes, accurate forecasting is simply impossible. They could hit, so to speak, at any time. And their immense implications for human society, economy, and governance would transform the world in profound ways.

*Major Features: ECOCATASTROPHE*

- Major environmental disaster strikes world community
- Economic ramifications severe--depression or worse
- Major international health emergency; many deaths
- Social institutions called into question; order decays

*Key indicators* of this trend include additional evidence of the validity of global warming or ozone holes. Some versions of this scenario, however, may arrive without indicators. In particular, besides global warming, three other classes of events find a home here as "environmental" issues because of their effect on the earth's ecology. One is an asteroid strike: utterly disastrous to big portions of the earth's surface if the rock is big enough, and today virtually impossible to defend against. A second form of sudden ecocatastrophe would be the outbreak of a deadly infectious disease, a sort of global ebola virus or an airborne AIDS. Third, a nuclear accident involving either a civilian nuclear power plant or a mishandled nuclear weapon could create immense local and regional devastation. Taken together, these scenarios suggest the possibility of a major, quite possibly unpredictable upheaval in economic and social life over the next decade sparked by an environmental catastrophe of human or natural making.

### *Scenario Six: A Concert of Powers*

In this scenario we consider something of a middle-ground between the End of History and the Return of the Great Powers. Here we find major and secondary powers still engaged in rivalry, but cooperating on a host of issues; occasionally engaging in political or economic conflict, but seldom or ever allowing it to spill over into warfare; the progress of free trade slowing but not reversing, and advancing in small increments. This scenario envisions the emergence of a form of collective security among the major powers, which may differ more in ideology and internal structure than assumed by the End of History scenario but are agreed on the general rules of nonaggression and broadly free trade. These rules have three basic elements, as spelled out by the political scientist Richard Rosecrance: "involvement of all; ideological agreement; and renunciation of war and territorial expansion." The Concert of Powers of the world's leading states would enforce these rules even amid continuing competition.

#### *Major Features: A CONCERT OF POWERS*

- Reasonably like-minded major powers pursue economic rivalry
- Transitions in Russia and China not resolved
- Key countries like Turkey, Mexico, Indonesia still on edge
- World trading system plateaus but does not reverse itself

*Major indicators* of such a world include the preservation but not expansion or deepening of EU and NAFTA, continued fair relations between the West and both Russia and China without major breakthroughs or regime changes, slow growth but no transformation of the power of international organizations like the United Nations, and continued adherence to a central set of "rules of the road" for members of the concert.

#### *Scenario Conclusions and Policy Recommendations*

Together the scenarios have a number of clear policy implications. Again, no one emerges as the most likely, although the Concert of Powers may represent the most feasible of the optimistic scenarios to achieve in the decade to 2005. Regardless of which is most likely, however, several of the steps outlined as important to achieve positive scenarios and necessary to avoid bad ones are the same among a number of different scenarios, suggesting their transcendent importance.

In the broadest terms, five categories of policies are important in bringing about hopeful scenarios and avoiding dangerous ones, and they are summarized in Figure 23. These areas are obviously interrelated, and each of them carries a number of important subordinate tasks critical to its achievement. One could imagine a reorientation of U.S. foreign policy around these areas of emphasis.

The difficulty, as always in foreign policy, is that the priorities conflict. In particular, demanding in strict terms that Japan reform its economy and that China and Russia ensure political freedom contradicts to some extent the goal of preserving amicable great-power relationships.

But there is much room for U.S. foreign policy to balance these interests more intelligently than is the case today. Pressure for Russian democracy, for example, will be well-received in many circles in Russia, while NATO expansion threatens to undermine U.S.-Russian relations entirely. Whatever differences Washington has with Beijing, some degree of broad-based social and economic engagement must remain the foundation of any U.S. policy toward China. The United States can encourage reform in Cuba without alienating most of its allies through the economic imperialism of the Helms-Burton legislation. And major new initiatives to make the arc of crisis more self-sufficient and to begin addressing long-term energy issues through, for example, a cooperative effort on renewables with China and other powers would be well-received throughout the world.

## CONCLUSION

We began this report from a position of "cautious optimism," and although it has been sorely tested by the evidence of the aforementioned trends, we remain wedded to it. We believe that the dominant threads of the knowledge era are hopeful--empowering, democratizing, egalitarian and environmentally healthy. But the dangers inherent in the knowledge era, the reactions to change and by-products of the age's hopeful trends, mandate a cautious version of optimism. The key, as we have stressed throughout this report, is not fate but choice: the choices we make over the next decade to shape the future. Much of our optimism stems from the fact that the knowledge era equips us with the information, the social institutions, and the technologies we need to make the right choices; the rest is up to us.

In the broadest terms, it should be clear that we are embarked upon perhaps the most fundamental social transformation in history. In order to shape this transformation so that it works for good rather than ill, we will need new social institutions, new values, new authorities. As Peter Drucker argues, "If the twentieth century was one of social transformations, the twenty-first century needs to be one of social and political innovations, whose nature cannot be so clear to us now as their necessity." The scale of this change, and the power it imparts, will magnify the importance of human responsibility and values.

In conclusion, then, arguably the three most important lessons suggested by this transition are these: the decisive role of education, as the activity that equips people for success in the knowledge era; the primacy of moral values and social responsibility at a time when both are urgently needed; and the need for a "New Capitalism," a reform of some elements of capitalist theory to ensure that markets capture the true costs and implications of economic activities. Together, these categories comprise the social and economic agenda of the next decade. How well the nations and people of the world tackle that agenda will determine whether the cautious optimism of this report is warranted.

## FOR FURTHER READING

In addition to supplying many of the quotations and facts used in this report, the following works reflect some of the most insightful thinking on future trends. These more recent volumes can supplement the classics in the field, including works by Toffler, Naisbitt, McLuhan and others.

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