



## Will We All Be Unemployed?

Looking ahead to our place in the next economy.

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When we hear about manufacturing jobs moving overseas—whether in steel, cotton, textiles, or Buicks—it doesn't sting all that much anymore, unless, of course, a family member is among the pink-slipped unlucky. Somehow it seems inevitable—progress, even: The United States is continuing its forward movement, leaving behind the remnants of the Industrial Age and bringing its diverse workforce into the Information Age, ready to lead the way.

But news of software-programming and radiology positions being outsourced to Romania and India has a more visceral impact. Few knowledge workers—and aren't we all supposed to be knowledge workers now?—foresaw their livelihoods being jeopardized by the same free-market principles that have devastated U.S. manufacturing.

Yet technology and toppling trade barriers have left white-collar jobs as vulnerable to overseas migration as those in blue-collar industries. And U.S. workers may not even be the first choice to run call centers or manage the information that is the new economy's lifeblood: Americans are expensive, what with 401(k)s, ergonomics requirements, health care, vacation days, and life insurance, and most have little educational or training advantage over their foreign counterparts.

"I'm nervous," says the ordinarily buoyant management guru Tom Peters. "I don't think there's any job that's safe right now."

"Is the anxiety justified? Absolutely," says Dow Chemical ideation leader Andy Hines. "We're facing a real challenge."

After all, notes USC management professor Ian Mitroff, "if finance and engineering-design jobs can be moved offshore, what can't be moved?"

If you find the trend disquieting in principle, check out the numbers: A recent U.C. Berkeley study estimated that some 14 million U.S. white-collar jobs—11 percent of all jobs—are at risk of being outsourced, anytime employers want to make the move. That's significantly higher than the widely reported Forrester Research forecast of 3.3 million jobs lost over the next 15 years, not to mention the 2.5 million manufacturing jobs lost in the last three years. And who can blame U.S. companies for looking east for lower personnel costs? The Berkeley researchers, Ashok Deo Bardhan and Cynthia A. Kroll, note that Indian telephone operators earn under \$1 an hour, payroll clerks just \$2, paralegals \$8 or less.

The baby boomers' retirement will stave off any true white-collar crisis for a few years—employers will be scrambling for warm bodies, and anyone who fits that

description will probably get by. But for far-thinking organizations, the coming demographic shift is another argument for moving operations offshore even faster. In five or 10 or 20 years, will there be any work for knowledge workers—or their supervisors—to do?

Of course, few forecast a future as bleak as all that—U.S. workers have survived every previous disruption, major and minor, and they'll survive this one. It's the disruption's severity and duration that are in question—and whether top-tier workers will be able to maintain their position in the global economy.

Granted, not everything can be outsourced. Despite improvements in videoconferencing and the ubiquity of cell phones, plenty of jobs—even white-collar jobs—require face-to-face contact. We haven't—and won't—become "a nation of burger-flippers," as Lee Iacocca once feared; the service economy hasn't trumped the information age. Whatever the Internet's reach, society can't function without doctors, social workers, and police officers. The economy will continue to need trainers and researchers and economists and teachers and lawyers and editors—and executives to manage them all.

And there's the not-unimportant fact that work will always be here because here is where workers want to be. The United States remains the world's top destination spot for both well-off emigrants and destitute refugees, all seeking a dynamic, vibrant society as well as economic prosperity. Sure, the cost of living is far lower in the developing world, but America is where people want to come<sup>151</sup>and stay. It may be cheaper to start a software-development firm in Ghana or the Philippines, but how many U.S. entrepreneurs would gladly relocate their families from Ohio or Massachusetts?

So should we be worried about our prospects a decade or two down the line? What will it take to stave off downward mobility—individual and collective—and decline both economic and social? We asked some thought leaders with their eyes on the future, including a few who proudly call themselves futurists, to peer at what's ahead for American executives and knowledge workers.

### Applaud the Job Exodus?

We already know what won't work: protectionist efforts to keep jobs here. It hasn't worked with manufacturing—the latest example, George W. Bush's clumsily enacted and globally rejected steel tariffs, ended up costing more jobs than they saved. And no program of tax-based carrots and sticks is likely to keep data-entry and accounting functions on these shores.

Anyway, creative destruction of jobs is hardly news in



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any industrialized nation. Each economic era has seen massive displacement of workers, of families, of entire industries. No one called it retraining, but all those cobblers and subsistence farmers and, yes, buggy-whip factories needed to transform into something else—something unforeseen.

"The loss of manufacturing jobs is just another chapter of technological progress in our economy," insists Christopher Meyer, former director of the Center for Business Innovation, who says that the ongoing white-collar volatility, like economic upheavals before it, is absolutely necessary. He sees the job exodus as "part of a long-term trend of manufacturing jobs leaving this economy—and we should applaud it." A country advances by replacing lower-level jobs: "That's how economic growth happens—the new jobs have to have higher value-added, higher productivity. It's like when automation replaced blue-collar jobs—we look at most of the jobs it displaced as brutish and short: mining coal, or having your internal organs cooked by the infrared radiation from a ladle of steel. These adjustments will allow more people to do what they want to do, not what they have to do."

Business thinker Stan Davis, Meyer's frequent co-author, uses a pipeline metaphor to describe the pattern of job creation and motion. "I'm not concerned about U.S. job losses so long as we're feeding the front end of the pipeline with growth and innovation," he says. "As each new innovation creates new jobs and new sectors mature, those jobs migrate down the global food chain. The issue is, 'Does the United States represent the front end of the pipeline?' It's a question of how long we stay healthy and grow and innovate and create new sectors."

And no matter how many call centers and programmers head overseas, the United States has a head start in invention and innovation, according to Glen Hiemstra, founder of Futurist.com: "Our biggest competitive advantage will remain creativity and innovative thinking—as compared to routine churning out of information—because of the innovative history of the country, because of the cross-cultural mix that leads to fertility of thinking," he says.

U.S. companies and workers also benefit—though they won't do so forever—from ease and familiarity of communication, language, and organization. Futurist Watts Wacker, CEO of FirstMatter LLC, points out that no emphasis on efficiency will obviate the need for human contact—"You can't Six Sigma relationships," he says—or for unusually valuable personnel. "There will always be a premium for people who are better than others."

The question is whether U.S. workers will always be better than their foreign competitors. Meyer emphasizes that workers must stress distinctiveness over

superiority: "Either U.S. income will fall to the level of those in other countries who have the same skills, or we have to have different skills," he says. "So what are those different skills going to be?"

The effort to develop those different skills must be a priority for not just individuals but entire economic sectors, says Dow Chemical's Andy Hines, who also chairs the Association of Professional Futurists. "Look at what's happened to unions," he points out. "They've had a very similar kind of challenge—in their case, with physical labor migrating overseas—and they've responded not by trying to improve what they brought to the table but by staying static and trying to hold on tight. When someone else can do the job for one-sixth the price, you're going to lose no matter how hard you fight. It's a losing game, and knowledge workers can lose to—if they stay at the same skill level as somebody in India."

### Staying Ahead of the Curve

Keeping U.S. workers on the cutting edge will require efforts both individual and national. It won't just happen. Hines calls it a national imperative: "If we stand still, there will be up-and-coming economies that will take the things that we're doing now," he says.

Hiemstra cites "two critical things that we need to do" on a national scale. First: We must move quickly to bring a high-speed Internet connection "into every home and every business location," he says. "Other countries are moving in that direction as a matter of national policy, through a mixture of public initiative and privatization. We ought to be looking at the Korean model, and at what's happening with the telecommunications infrastructure in China and India, which are moving much faster than we are on a percentage basis. This ought to be a top national priority for us, and currently it's seen only as something that would be nice—if the telecommunications companies could make money doing it.

"Second," he continues, "to maintain our innovation lead, we need to push for more people receiving advanced math, science, and technology education. Grad schools in those areas are dominated by foreign students. We're just not generating enough people with the kind of high-level technical knowledge to do the innovation in the new technologies and in the realms of innovation that are going to be dominant in the next quarter-century."

USC's Ian Mitroff also sees education as key. "We haven't done a good job of teaching critical thinking and creative problem-solving," he says. "People find critical thinking difficult because it's a radical switch from their 20 years of education in solving well-structured problems. We've produced a nation of certainty junkies,



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where if you can't define a problem with precision and certainty, people go crazy. Well, welcome to the real world. The game has changed. Problems change as fast as you're working on them." Indeed, they change because you're working on them—or not working on them.

For Corporate America as a whole, if CEOs needed any more incentive to pay more attention to long-range planning and encourage entrepreneurial thinking within organizations, the offshoring trend should provide a convincing kick in the pants. "For most organizations," Mitroff says, "most of the traditional management functions get in the way of innovation. That doesn't mean that a company shouldn't have a CFO, but you have to have a different kind of CFO—an interdisciplinary CFO."

Hines argues that companies that want to stay vital—not to mention in business—must encourage creative thinking in the workforce as well as on an organizational level. "It's not just the jobs that are going overseas—it's the corporate functions," he says. "If you're going up against a European-headquartered company, your only value-add is going to be being creative, innovative, and forward-looking."

### Keeping Up on Your Own

You've seen all those articles warning knowledge workers to upgrade their skills or get left behind? Time to start photocopying them for your staff.

"Knowledge workers should be working to acquire more knowledge," Hiemstra counsels. "You've got to keep learning in new areas and improving your skills as much as you can. You've got to keep asking yourself, 'What will I be learning in the next six months?' And you need to look for opportunities to be more innovative in the settings you're in."

Both Meyer and Mitroff believe that tomorrow's successful knowledge worker will be the one who can cope with an increasingly unstable world. "Don't look for a job that's well-defined, with a lot of work rules and specifications," Meyer says. "Look for jobs where your task is to make change rather than to continually deliver the same thing—not to do but to innovate. Conceive of your job as entrepreneurial."

Mitroff insists that top workers must "be comfortable with huge amounts of uncertainty. That's part of the new skill set. They will have to learn how to solve ill-defined problems, to retool and regear, to learn inter- and transdisciplinary education, to make connections between problems and issues. Everyone will have to learn systems thinking, what the properties are of complex systems and how that can be used as a problem-solving skill. People are going to have to learn the art of problem formulation. They're going to have to

learn how to question assumptions—in fact, a whole discipline for challenging assumptions. They're going to have to grapple with complex, fuzzy issues that are often in conflict, that are contradictory. It's a totally different philosophy of inquiry."

Tom Peters echoes Mitroff's emphasis on uncertainty, in somewhat less academic language. "We have become a nation of spoiled brats!" he exclaims. "America is not about certainty. The fundamental Pilgrim-father myth may be mostly nonsense, but that myth—which has served us quite well for over 300 years—is that America is about taking chances and reinventing ourselves. We have become security junkies, and to hell with that."

For Peters, white-collar workers who can demonstrate discrete, concrete achievement are most likely to beat out their peers, domestic or foreign. Some, naturally, generate tangible results in the normal course of their work: "I give a bunch of speeches—people like 'em or don't like 'em," he says. "I write a bunch of books—people like 'em or don't like 'em. I write a bunch of articles—people like 'em or don't like 'em. Whatever. They're stuff." But most workers and executives are unaccustomed to thinking in those terms. "It's far more difficult if you are a purchasing manager, HR manager, or finance manager, even if you are at the \$100,000-a-year level," Peters says. If asked to provide evidence of their accomplishments, "to some extent, the most that those people could say is, 'I came to work every day; I showed up; I did good work; the company is still around.'" Successful 21st-century career management—including planning for that career's next phase—demands less passivity.

"Your responsibility is to be continually upscaling," Hines says. "You need a work/life plan in which you're constantly raising your own bar. If you do that, you'll always be ahead of the outsourcing wave. It's not as though everything stands still—there's a demand for more advanced activities, and if you've been keeping yourself in professional shape, you'll go up the curve with it." He argues that, more than ever, it's crucial for workers to not leave their careers in their employers' hands. "I have a responsibility to maintain my own skill level, and I can't just get stale in one place and hope I'll be taken care of, because I won't be. I'm not sure that most people have quite that level of personal responsibility yet."

Top executives in particular, of course, face broader issues than their own careers—and are, if anything, at greater risk than front-line white-collar workers of losing their place in the next economy. If all the positions you used to supervise are 8,000 miles away, and your salary is now thousands of times higher than theirs, you're affordable only if you can offer something truly extraordinary.

The futurists' key advice: Expand your scope of



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knowledge and vision. "Put your head up," Hiemstra urges, "and start seeing what's happening. I speak frequently to groups of executives in various industries, and I ask them, 'How many know something about nanotechnology?' The typical percentage is 5 to 10 percent who've even heard of it, which always floors me. Then I ask how many know what's happening with global population, and even though it's become a big news item, almost no executives know about the impending decline in global population in significant parts of the world—the fact that Europe will see a population decline of 80 million people in the next 50 years. Since population and social trends are primary drivers of business, I'm always surprised that executives are barely familiar with these things."

### Where Will the Jobs Come From?

As Watts Wacker puts it, the U.S. economy has evolved "from agricultural to manufacturing to social to information to mental." But the consensus is that the transition to the "mental"—a "Creative Age," in the phrase of Carnegie Mellon professor Richard Florida—remains a ways off. Hiemstra insists that "we're still in the early stages of the information age," if you date the age from the emergence of the World Wide Web.

"I think we're about two-thirds through the knowledge wave," says Andy Hines, who's excited about the prospects for the last third: "This is the part where it gets good and interesting. It takes a really long time to institutionalize and incorporate and get used to working with big innovations, like electricity and information. And now it's so routine—such a part of everyday life—that we're really figuring out how to use it."

Hiemstra looks to biotech, energy, and nanotechnology for the next boom, and Davis agrees, calling biology the "parent science" of the next economic era—one that is bottom-up and rule-based rather than top-down and law-based, as physics is.

Wacker agrees and emphasizes business process as well: "The information age has been about disintermediation; the next age will be about reintermediation," he says. "It's not that we don't need middlemen—we just need different kinds of middlemen, and that's where the new jobs will be."

And Hines sees the next economic wave being driven by sustainability—"the triple-bottom-line idea." In the next decade or two, "sustainability will be a driving force of what we're going to use this knowledge and innovation and creativity for." The push for increased consciousness in issues of ethics, the environment, and economic justice will come from developing countries, NGOs, and knowledge workers themselves, he predicts. "A growing number of those workers want to be socially

responsible and environmentally responsible, and they haven't been able to express that. The demand for the triple bottom line, which used to be from the crazy NGOs and the fringe, is going to come from us.

"At Dow Chemical," Hines continues, "sustainability is a very important part of our company. The message has thoroughly permeated—of course, you can't measure how much everyone believes it, but you start to see that this is what people really want to do. It's sometimes hard in the business climate to act on what you believe, but I think we're going to see more of it: Talented workers are going to go places that let them express what they want to express."

But predictions of what the next economy will focus on, or what its "energy source" will be, or even what its unofficial name will be, don't—can't—point definitively to the next job sector. The tech explosion came out of nowhere and rescued the U.S. economy by boosting productivity; will the next new sector do the same? We can only guess what it will be—or what impact it may have. It's not enough to study demographics and forecast that Generation Y, in its entirety, will be staffing nursing homes for retired boomers.

Peters is fast losing faith: "I'm unnerved by this jobless recovery; I'm a lot less confident than I was 18 months ago," he says. "For 15 years, this was the pattern: We lost a manufacturing job to Mexico; we added a service job in New York—or better yet, 1.5 service jobs. I'm uncomfortable with that simplistic notion, now that we are losing high-paying jobs at an unprecedented rate—especially those damn tech jobs that we got only five years ago. It's not clear to me where the replacement jobs will come from. I think we have every right to be worried."

### The Next Organization

It's practically a truism: The command-and-control era is dead; long live the age of empowerment and self-governed teams and decentralization and knowledge-sharing. And yet charismatic CEOs are still superstars, and plenty of old-style, top-down organizations are not only hanging tough but thriving. Top executives aren't the only ones content with the status quo: "We still have a lot of workers, a large sector of the economy, who want to spend their careers with one company, and who don't want to go anywhere—who have no intention of going anywhere," says Michele Bowman, senior VP of Global Foresight Associates and a founding member of the Association of Professional Futurists.

So will every company be forced to change how it does business in the next decade or two? Of course not. Some don't have to change and sure as hell don't want to. Others simply can't face that degree of disruption.



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Plenty will make incremental changes, and only under duress. And many of all these holdouts will get along just fine in the next economy.

But the rest of you—start thinking about new systems of thinking and organization. We mean it this time.

"For those whose business model currently is not threatened the way it is in music and telecommunications, I would not rest easy," Davis says. "I would be looking to figure out how my current model is creaky. What are the business models for the future? We don't have them yet. The dotcom bubble bursting is a perfect example of the wrong answer for the right question—the question being, 'What's your business model?' We'll figure out the models within the next decade or so, and they'll probably be bottom-up models."

Those models may come from the unlikeliest of sources. "On Sept. 11," Peters points out, "a virtual organization attacked a real organization, and at least in the short term, the virtual organization made idiots out of us."

Mitroff invokes the same unsettling example. "Al Qaeda has a 21st-century network node organization, and we're fighting them with a 19th-century bureaucracy," he says. "The war on terrorism is not just a military war—it's an organizational war. People have been educated to solve problems that say, 'Here I am—solve me,' and we don't live in that world anymore. Sept. 11 also showed that the oceans are no longer protective moats—we don't have a magic bubble around this country." The lesson applies to work as well: "The white-collar crisis represents a radical transformation of the nature of work. You now have to be able to make connections between your job—however limited it is—and an unlimited, unbounded world."

Not everyone is apprehensive about participating in an unbounded world. "Our borders keep expanding; this is really the second or third era of globalization," Bowman says. "Twenty years from now, will we have employee ideologies that reflect industry-based perspectives more than geographically based perspectives? Absolutely." She looks ahead to a world largely populated by "electronic immigrants"—workers who take jobs in other countries without actually changing residence, much less citizenship.

Hiemstra believes that spreading globalization will occasion re-examinations of corporate social responsibility. "In the next quarter-century, more and more kinds of work will be eligible to be done anywhere in the world by people who are skilled enough to do them," he says. "Companies of all kinds will be forced to ask, 'What is our obligation to, commitment to, interest in the community and our workers? What are we really here for?' I don't know what the answers will be. They may say that the only things that matter are survival of

the company and shareholder value, or they'll have a more complex answer. But companies will have to sit down and decide what is really important and what that means in terms of moving the work or not moving the work."

With American workers in mind, Peters is not especially optimistic about what choices companies will make—or even about the prospects for those companies' survival. "I think we're entering a 50-, 60-, 70-, 80-year period of instability, where I can well imagine the great American economy being surpassed by the Chinese or the Indians," he says. "The certainty is gone—which suggests that workers don't have that long to screw around. You've got to figure out what you have to sell in a global economy—and then sell the hell out of it."

### Silver Lining

Does overseas migration of American knowledge jobs directly benefit the United States and its workers? Definitely: As countries such as India and Ghana begin taking—and creating—high-value jobs, those countries will see an irresistible incentive to invest more in education and other human-capital expenditures, and to de-emphasize repressive policies and military escalation. And other nations will surely follow their example: If Romania can do it, why not us? That human-capital investment, Christopher Meyer points out, is "a prerequisite for sustained economic development."

Of course, the United States, in its current antagonistic attitude, is more concerned with security than in other nations' economic health—and the white-collar transfer aids that goal as well. "High-value jobs give countries a stake in free trade and orderly economic life, which is the best anti-terror campaign that we could devise," Meyer says, noting that in addition, exporting of opportunity tends to reduce disparities in personal income—a healthy outcome by any measure: "Within a society and across the globe, there may be no more divisive force than income inequality."

--M.B.