I find myself torn by this trend. Having started my career as a wire service reporter with United Press International, I have enormous sympathy with wire service reporters and the pressures, both professional and financial, under which they toil. But UPI might still be thriving today as a wire service, which it is not, if it had been able to outsource some of its lower-end business when I started as a reporter in London twenty-five years ago.

"It is delicate with the staff," said Glocer, who has cut the entire Reuters staff by roughly a quarter, without deep cuts among the reporters. The Reuters staff, he said, understand that this is being done so that the company can survive and then thrive again. At the same time, said Glocer, "these are sophisticated people out reporting. They see that our clients are doing the exact same things. They get the plot of the story . . . What is vital is to be honest with people about what we are doing and why and not sugarcoat the message. I firmly believe in the lesson of classical economists about moving work to where it can be done best. However, we must not ignore that in some cases, individual workers will not easily find new work. For them, retraining and an adequate social safety net are needed."

In an effort to deal straight with the Reuters staff, David Schlesinger, who is now the company's global managing editor, sent all editorial employees a memo, which included the following excerpt:

> OFF-SHORING WITH OBLIGATION
>
> I grew up in New London, Connecticut, which in the 19th century was a major whaling center. In the 1960's and 70's the whales were long gone and the major employers in the region were connected with the military—not a surprise during the Vietnam era. My classmates' parents worked at Electric Boat, the Navy and the Coast Guard. The peace dividend changed the region once again, and now it is best known for the great gambling casinos of Mohegan Sun and Foxwoods and for the pharmaceutical researchers of Pfizer. Jobs went; jobs were created. Skills went out of use; new skills were required. The region changed; people changed. New London, of course, was not unique. How many mill towns saw their mills close; how many shoe towns saw the shoe industry move elsewhere; how many towns that were once textile powerhouses now buy all their linens from China? Change is hard. Change is hardest on those caught by surprise. Change is hardest on those who have difficulty changing too. But change is natural; change is not new; change is important. The current debate about off-shoring is dangerously hot. But the debate about work going to India, China and Mexico is actually no different from the debate once held about submarine work leaving New London or shoe work leaving Massachusetts or textile work leaving North Carolina. Work gets done where it can be done most effectively and efficiently. That ultimately helps the New Londons, New Bedfords and New Yorks of this world even more than it helps the Bangalores and Shenzhens. It helps because it frees up people and capital to do different, more sophisticated work, and it helps because it gives an opportunity to produce the end product more cheaply, benefiting customers even as it helps the corporation. It's certainly difficult for individuals to think about "their" work going away, being done thousands of miles away by someone earning thousands of dollars less per year. But it's time to think about the opportunity as well as the pain, just as it's time to think about the obligations of off-shoring as well as the opportunities . . . Every person, just as every corporation, must tend to his or her own economic destiny, just as our parents and grandparents in the mills, shoe shops and factories did.

"THE MONITOR IS BURNING?"

Do you know what an Indian call center sounds like? While filming the documentary about outsourcing, the TV crew and I spent an evening at the Indian-owned "24/7 Customer" call center in Bangalore. The call center is a cross between a co-ed college frat house and a phone bank raising money for the local public TV station. There are several

floors with rooms full of twenty-somethings—some twenty-five hundred in all—working the phones. Some are known as "outbound" operators, selling everything from credit cards to phone minutes. Others deal with "inbound" calls—everything from tracing lost luggage for U.S. and European airline passengers to solving computer problems for confused American consumers. The calls are transferred here by satellite and undersea fiber-optic cable. Each vast floor of a call center consists of clusters of cubicles. The young people work in little teams under the banner of the company whose phone support they are providing. So one corner might be the Dell group, another might be flying the flag of Microsoft. Their working conditions look like those at your average insurance company. Although I am sure that there are call centers that are operated like sweatshops, 24/7 is not one of them.

Most of the young people I interviewed give all or part of their salary to their parents. In fact, many of them have starting salaries that are higher than their parents' retiring salaries. For entry-level jobs into the global economy, these are about as good as it gets.

I was wandering around the Microsoft section around six p.m. Bangalore time, when most of these young people start their workday to coincide with the dawn in America, when I asked a young Indian computer expert there a simple question: What was the record on the floor for the longest phone call to help some American who got lost in the maze of his or her own software?

Without missing a beat he answered, "Eleven hours."

"Eleven hours?" I exclaimed.

"Eleven hours," he said.

I have no way of checking whether this is true, but you do hear snippets of some oddly familiar conversations as you walk the floor at 24/7 and just listen over the shoulders of different call center operators doing their things. Here is a small sample of what we heard that night while filming for Discovery Times. It should be read, if you can imagine this, in the voice of someone with an Indian accent trying to imitate an American or a Brit. Also imagine that no matter how rude, unhappy, irritated, or ornery the voices are on the other end of the line, these young Indians are incessantly and unfailingly polite.

Woman call center operator: "Good afternoon, may I speak with . . . ?" (Someone on the other end just slammed down the phone.)

Male call center operator: "Merchant services, this is Jerry, may I help you?" (The Indian call center operators adopt Western names of their own choosing. The idea, of course, is to make their American or European customers feel more comfortable. Most of the young Indians I talked to about this were not offended but took it as an opportunity to have some fun. While a few just opt for Susan or Bob, some really get creative.)

Woman operator in Bangalore speaking to an American: "My name is Ivy Timberwoods and I am calling you . . ."

Woman operator in Bangalore getting an American's identity number: "May I have the last four digits of your Social Security?"

Woman operator in Bangalore giving directions as though she were in Manhattan and looking out her window: "Yes, we have a branch on Seventy-fourth and Second Avenue, a branch at Fifty-fourth and Lexington . . ."

Male operator in Bangalore selling a credit card he could never afford himself: "This card comes to you with one of the lowest APR . . ."

Woman operator in Bangalore explaining to an American how she screwed up her checking account: "Check number six-six-five for eighty-one dollars and fifty-five cents. You will still be hit by the thirty-dollar charge. Am I clear?"

Woman operator in Bangalore after walking an American through a computer glitch: "Not a problem, Mr. Jassup. Thank you for your time. Take care. Bye-bye."

Woman operator in Bangalore after someone has just slammed down the phone on her: "Hello? Hello?"

Woman operator in Bangalore apologizing for calling someone in America too early: "This is just a courtesy call, I'll call back later in the evening . . ."

Male operator in Bangalore trying desperately to sell an airline credit card to someone in America who doesn't seem to want one: "Is that because you have too many credit cards, or you don't like flying, Mrs. Bell?"

Woman operator in Bangalore trying to talk an American out of her

computer crash: "Start switching between memory okay and memory test . . ."

Male operator in Bangalore doing the same thing: "All right, then, let's just punch in three and press Enter . . ."

Woman operator in Bangalore trying to help an American who cannot stand being on the help line another second: "Yes, ma'am, I do understand that you are in a hurry right now. I am just trying to help you out . . ."

Woman operator in Bangalore getting another phone slammed down on her: "Yes, well, so what time would be goo . . ."

Same woman operator in Bangalore getting another phone slammed down on her: "Why, Mrs. Kent, it's not a . . ."

Same woman operator in Bangalore getting another phone slammed down on her: "As a safety back . . . Hello?"

Same woman operator in Bangalore looking up from her phone: "I definitely have a bad day!"

Woman operator in Bangalore trying to help an American woman with a computer problem that she has never heard before: "What is the problem with this machine, ma'am? The monitor is burning?"

There are currently about 245,000 Indians answering phones from all over the world or dialing out to solicit people for credit cards or cell phone bargains or overdue bills. These call center jobs are low-wage, low-prestige jobs in America, but when shifted to India they become high-wage, high-prestige jobs. The esprit de corps at 24/7 and other call centers I visited seemed quite high, and the young people were all eager to share some of the bizarre phone conversations they've had with Americans who dialed 1-800-HELP, thinking they would wind up talking to someone around the block, not around the world.

C. M. Meghna, a 24/7 call center female operator, told me, "I've had lots of customers who call in [with questions] not even connected to the product that we're dealing with. They would call in because they had lost their wallet or just to talk to somebody. I'm like, 'Okay, all right, maybe you should look under the bed [for your wallet] or where do you normally keep it,' and she's like, 'Okay, thank you so much for helping.'"

Nitu Somaiah: "One of the customers asked me to marry him."

Sophie Sunder worked for Delta's lost-baggage department: "I remember this lady called from Texas," she said, "and she was, like, weeping on the phone. She had traveled two connecting flights and she lost her bag and in the bag was her daughter's wedding gown and wedding ring and I felt so sad for her and there was nothing I could do. I had no information.

"Most of the customers were irate," said Sunder. "The first thing they say is, 'Where's my bag? I want my bag now!' We were like supposed to say, 'Excuse me, can I have your first name and last name?' 'But where's my bag!' Some would ask which country am I from? We are supposed to tell the truth, [so] we tell them India. Some thought it was Indiana, not India! Some did not know where India is. I said it is the country next to Pakistan."

Although the great majority of the calls are rather routine and dull, competition for these jobs is fierce—not only because they pay well, but because you can work at night and go to school during part of the day, so they are stepping-stones toward a higher standard of living. P. V. Kannan, CEO and cofounder of 24/7, explained to me how it all worked: "Today we have over four thousand associates spread out in Bangalore, Hyderabad, and Chennai. Our associates start out with a take-home pay of roughly $200 a month, which grows to $300 to $400 per month in six months. We also provide transportation, lunch, and dinner at no extra cost. We provide life insurance, medical insurance for the entire family—and other benefits."

Therefore, the total cost of each call center operator is actually around $500 per month when they start out and closer to $600 to $700 per month after six months. Everyone is also entitled to performance bonuses that allow them to earn, in certain cases, the equivalent of 100 percent of their base salary. "Around 10 to 20 percent of our associates pursue a degree in business or computer science during the day hours," said Kannan, adding that more than one-third are taking some

kind of extra computer or business training, even if it is not toward a degree. "It is quite common in India for people to pursue education through their twenties—self-improvement is a big theme and actively encouraged by parents and companies. We sponsor an MBA program for consistent performers [with] full-day classes over the weekend. Everyone works eight hours a day, five days a week, with two fifteen-minute breaks and an hour off for lunch or dinner."

Not surprisingly, the 24/7 customer call center gets about seven hundred applications a day, but only 6 percent of applicants are hired. Here is a snippet from a recruiting session for call center operators at a women's college in Bangalore:

Recruiter 1: "Good morning, girls."

Class in unison: "Good morning, ma'am."

Recruiter 1: "We have been retained by some of the multinationals here to do the recruitment for them. The primary clients that we are recruiting [for] today are Honeywell. And also for America Online."

The young women—dozens of them—then all lined up with their application forms and waited to be interviewed by a recruiter at a wooden table. Here is what some of the interviews sounded like:

Recruiter 1: "What kind of job are you looking at?"

Applicant 1: "It should be based on accounts, then, where I can grow, I can grow in my career."

Recruiter 1: "You have to be more confident about yourself when you're speaking. You're very nervous. I want you to work a little on that and then get in touch with us."

Recruiter 2 to another applicant: "Tell me something about yourself."

Applicant 2: "I have passed my SSC with distinction. Second P also with distinction. And I also hold a 70 percent aggregate in previous two years." (This is Indian lingo for their equivalents of GPA and SAT scores.)

Recruiter 2: "Go a little slow. Don't be nervous. Be cool."

The next step for those applicants who are hired at a call center is the training program, which they are paid to attend. It combines learning how to handle the specific processes for the company whose calls they will be taking or making, and attending something called "accent neutralization class." These are daylong sessions with a language teacher

who prepares the new Indian hires to disguise their pronounced Indian accents when speaking English and replace them with American, Canadian, or British ones—depending on which part of the world they will be speaking with. It's pretty bizarre to watch. The class I sat in on was being trained to speak in a neutral middle-American accent. The students were asked to read over and over a single phonetic paragraph designed to teach them how to soften their *t*'s and to roll their *r*'s.

Their teacher, a charming eight-months-pregnant young woman dressed in a traditional Indian sari, moved seamlessly among British, American, and Canadian accents as she demonstrated reading a paragraph designed to highlight phonetics. She said to the class, "Remember the first day I told you that the Americans flap the 'tuh' sound? You know, it sounds like an almost 'duh' sound—not crisp and clear like the British. So I would not say"—here she was crisp and sharp—"'Betty bought a bit of better butter' or 'Insert a quarter in the meter.' But I would say"—her voice very flat—"'Insert a quarter in the meter' or 'Betty bought a bit of better butter.' So I'm just going to read it out for you once, and then we'll read it together. All right? 'Thirty little turtles in a bottle of bottled water. A bottle of bottled water held thirty little turtles. It didn't matter that each turtle had to rattle a metal ladle in order to get a little bit of noodles.'

"All right, who's going to read first?" the instructor asked. Each member of the class then took a turn trying to say this tongue twister in an American accent. Some of them got it on the first try, and others, well, let's just say that you wouldn't think they were in Kansas City if they answered your call to Delta's lost-luggage number.

After listening to them stumble through this phonetics lesson for half an hour, I asked the teacher if she would like me to give them an authentic version—since I'm originally from Minnesota, smack in the Midwest, and still speak like someone out of the movie *Fargo*. Absolutely, she said. So I read the following paragraph: "A bottle of bottled water held thirty little turtles. It didn't matter that each turtle had to rattle a metal ladle in order to get a little bit of noodles, a total turtle delicacy . . . The problem was that there were many turtle battles for less than oodles of noodles. Every time they thought about grappling with the haggler turtles their little turtle minds boggled and they only caught a little bit of noodles."

The class responded enthusiastically. It was the first time I ever got an ovation for speaking Minnesotan. On the surface, there is something unappealing about the idea of inducing other people to flatten their accents in order to compete in a flatter world. But before you disparage it, you have to taste just how hungry these kids are to escape the lower end of the middle class and move up. If a little accent modification is the price they have to pay to jump a rung of the ladder, then so be it—they say.

"This is a high-stress environment," said Nilekani, the CEO of Infosys, which also runs a big call center. "It is twenty-four by seven. You work in the day, and then the night, and then the next morning." But the working environment, he insisted, "is not the tension of alienation. It is the tension of success. They are dealing with the challenges of success, of high-pressure living. It is not the challenge of worrying about whether they would have a challenge."

That was certainly the sense I got from talking to a lot of the call center operators on the floor. Like any explosion of modernity, outsourcing is challenging traditional norms and ways of life. But educated Indians have been held back so many years by both poverty and a socialist bureaucracy that many of them seem more than ready to put up with the hours. And needless to say, it is much easier and more satisfying for them to work hard in Bangalore than to pack up and try to make a new start in America. In the flat world they can stay in India, make a decent salary, and not have to be away from families, friends, food, and culture. At the end of the day, these new jobs actually allow them to be more Indian. Said Anney Unnikrishnan, a personnel manager at 24/7, "I finished my MBA and I remember writing the GMAT and getting into Purdue University. But I couldn't go because I couldn't afford it. I didn't have the money for it. Now I can, [but] I see a whole lot of American industry has come into Bangalore and I don't really need to go there. I can work for a multinational sitting right here. So I still get my rice and sambar [a traditional Indian dish], which I eat. I don't need to, you know, learn to eat coleslaw and cold beef. I still continue with my Indian food and I still work for a multinational. Why should I go to America?"

The relatively high standard of living that she can now enjoy—enough for a small apartment and car in Bangalore—is good for America as well. When you look around at 24/7's call center, you see that all the computers are running Microsoft Windows. The chips are designed by Intel. The phones are from Lucent. The air-conditioning is by Carrier, and even the bottled water is by Coke. In addition, 90 percent of the shares in 24/7 are owned by U.S. investors. This explains why, although the United States has lost some service jobs to India in recent years, total exports from American-based companies—merchandise and services—to India have grown from $2.5 billion in 1990 to $5 billion in 2003. So even with the outsourcing of some service jobs from the United States to India, India's growing economy is creating a demand for many more American goods and services.

What goes around, comes around.

Outsourcing produces exports

Nine years ago, when Japan was beating America's brains out in the auto industry, I wrote a column about playing the computer geography game Where in the World Is Carmen Sandiego? with my then nine-year-old daughter, Orly. I was trying to help her by giving her a clue suggesting that Carmen had gone to Detroit, so I asked her, "Where are cars made?" And without missing a beat she answered, "Japan."

Ouch!

Well, I was reminded of that story while visiting Global Edge, an Indian software design firm in Bangalore. The company's marketing manager, Rajesh Rao, told me that he had just made a cold call to the VP for engineering of a U.S. company, trying to drum up business. As soon as Mr. Rao introduced himself as calling from an Indian software firm, the U.S. executive said to him, "*Namaste*," a common Hindi greeting. Said Mr. Rao, "A few years ago nobody in America wanted to talk to us. Now they are eager." And a few even know how to say hello in proper Hindu fashion. So now I wonder: If I have a granddaughter one day, and I tell her I'm going to India, will she say, "Grandpa, is that where software comes from?"

No, not yet, honey. Every new product—from software to widgets—goes through a cycle that begins with basic research, then applied research, then incubation, then development, then testing, then manufacturing, then deployment, then support, then continuation engineering in order to

add improvements. Each of these phases is specialized and unique, and neither India nor China nor Russia has a critical mass of talent that can handle the whole product cycle for a big American multinational. But these countries are steadily developing their research and development capabilities to handle more and more of these phases. As that continues, we really will see the beginning of what Satyam Cherukuri, of Sarnoff, an American research and development firm, has called "the globalization of innovation" and an end to the old model of a single American or European multinational handling all the elements of the product development cycle from its own resources. More and more American and European companies are outsourcing significant research and development tasks to India, Russia, and China.

According to the information technology office of the state government in Karnataka, where Bangalore is located, Indian units of Cisco Systems, Intel, IBM, Texas Instruments, and GE have already filed a thousand patent applications with the U.S. Patent Office. Texas Instruments alone has had 225 U.S. patents awarded to its Indian operation. "The Intel team in Bangalore is developing microprocessor chips for high-speed broadband wireless technology, to be launched in 2006," the Karnataka IT office said, in a statement issued at the end of 2004, and "at GE's John F. Welch Technology Centre in Bangalore, engineers are developing new ideas for aircraft engines, transport systems and plastics." Indeed, GE over the years has frequently transferred Indian engineers who worked for it in the United States back to India to integrate its whole global research effort. GE now even sends non-Indians to Bangalore. Vivek Paul is the president of Wipro Technologies, another of the elite Indian technology companies, but he is based in Silicon Valley to be close to Wipro's American customers. Before coming to Wipro, Paul managed GE's CAT scanner business out of Milwaukee. At the time he had a French colleague who managed GE's power generator business for the scanners out of France.

"I ran into him on an airplane recently," said Paul, "and he told me he had moved to India to head up GE's high-energy research there."

I told Vivek that I love hearing an Indian who used to head up GE's CT business in Milwaukee but now runs Wipro's consulting business in Silicon Valley tell me about his former French colleague who has moved to Bangalore to work for GE. That is a flat world.

Every time I think I have found the last, most obscure job that could be outsourced to Bangalore, I discover a new one. My friend Vivek Kulkarni used to head the government office in Bangalore responsible for attracting high technology global investment. After stepping down from that post in 2003, he started a company called B2K, with a division called Brickwork, which offers busy global executives their own personal assistant in India. Say you are running a company and you have been asked to give a speech and a PowerPoint presentation in two days. Your "remote executive assistant" in India, provided by Brickwork, will do all the research for you, create the PowerPoint presentation, and e-mail the whole thing to you overnight so that it is on your desk the day you have to deliver it.

"You can give your personal remote executive assistant their assignment when you are leaving work at the end of the day in New York City, and it will be ready for you the next morning," explained Kulkarni. "Because of the time difference with India, they can work on it while you sleep and have it back in your morning." Kulkarni suggested I hire a remote assistant in India to do all the research for this book. "He or she could also help you keep pace with what you want to read. When you wake up, you will find the completed summary in your in-box." (I told him no one could be better than my longtime assistant, Maya Gorman, who sits ten feet away!)

Having your own personal remote executive assistant costs around $1,500 to $2,000 a month, and given the pool of Indian college grads from which Brickwork can recruit, the brainpower you can hire dollar-for-dollar is substantial. As Brickwork's promotional material says, "India's talent pool provides companies access to a broad spectrum of highly qualified people. In addition to fresh graduates, which are around 2.5 million per year, many qualified homemakers are entering the job market." India's business schools, it adds, produce around eighty-nine thousand MBAs per year.

"We've had a wonderful response," said Kulkarni, with clients coming from two main areas. One is American health-care consultants, who often need lots of numbers crunched and PowerPoint presentations drawn up. The other, he said, are American investment banks and financial services companies, which often need to prepare glossy pamphlets with graphs to illustrate the benefits of an IPO or a proposed merger. In the case of a merger, Brickwork will prepare those sections of the report dealing with general market conditions and trends, where most of the research can be gleaned off the Web and summarized in a standard format. "The judgment of how to price the deal will come from the investment bankers themselves," said Kulkarni. "We will do the lower-end work, and they will do the things that require critical judgment and experience, close to the market." The more projects his team of remote executive assistants engages in, the more knowledge they build up. They are full of ambition to do their higher problem solving as well, said Kulkarni. "The idea is to constantly learn. You are always taking an examination. There is no end to learning . . . There is no real end to what can be done by whom."

Unlike Columbus, I didn't stop with India. After I got home, I decided to keep exploring the East for more signs that the world was flat. So after India, I was soon off to Tokyo, where I had a chance to interview Kenichi Ohmae, the legendary former McKinsey & Company consultant in Japan. Ohmae has left McKinsey and struck out on his own in business, Ohmae & Associates. And what do they do? Not consulting anymore, explained Ohmae. He is now spearheading a drive to outsource low-end Japanese jobs to Japanese-speaking call centers and service providers in China. "Say what?" I asked. "To China? Didn't the Japanese once colonize China, leaving a very bad taste in the mouths of the Chinese?"

Well, yes, said Ohmae, but he explained that the Japanese also left behind a large number of Japanese speakers who have maintained a slice of Japanese culture, from sushi to karaoke, in northeastern China, particularly around the northeastern port city of Dalian. Dalian has become for

Japan what Bangalore has become for America and the other English-speaking countries: outsourcing central. The Chinese may never forgive Japan for what it did to China in the last century, but the Chinese are so focused on leading the world in the next century that they are ready to brush up on their Japanese and take all the work Japan can outsource.

"The recruiting is quite easy," said Ohmae in early 2004. "About one-third of the people in this region [around Dalian] have taken Japanese as a second language in high school. So all of these Japanese companies are coming in." Ohmae's company is doing primarily data-entry work in China, where Chinese workers take handwritten Japanese documents, which are scanned, faxed, or e-mailed over from Japan to Dalian, and then type them into a digital database in Japanese characters. Ohmae's company has developed a software program that takes the data to be entered and breaks it down into packets. These packets can then be sent around China or Japan for typing, depending on the specialty required, and then reassembled at the company's database in its Tokyo headquarters. "We have the ability to allocate the job to the person who knows the area best." Ohmae's company even has contracts with more than seventy thousand housewives, some of them specialists in medical or legal terminologies, to do data-entry work at home. The firm has recently expanded into computer-aided designs for a Japanese housing company. "When you negotiate with the customer in Japan for building a house," he explained, "you would sketch out a floor plan—most of these companies don't use computers." So the hand-drawn plans are sent electronically to China, where they are converted into digital designs, which then are e-mailed back to the Japanese building firm, which turns them into manufacturing blueprints. "We took the best-performing Chinese data operators," said Ohmae, "and now they are processing seventy houses a day."

Chinese doing computer drawings for Japanese homes, nearly seventy years after a rapacious Japanese army occupied China, razing many homes in the process. Maybe there is hope for this flat world . . .

I needed to see Dalian, this Bangalore of China, firsthand, so I kept moving around the East. Dalian is impressive not just for a Chinese

city. With its wide boulevards, beautiful green spaces, and nexus of universities, technical colleges, and massive software park, Dalian would stand out in Silicon Valley. I had been here in 1998, but there had been so much new building since then that I did not recognize the place. Dalian, which is located about an hour's flight northeast of Beijing, symbolizes how rapidly China's most modern cities—and there are still plenty of miserable, backward ones—are grabbing business as knowledge centers, not just as manufacturing hubs. The signs on the buildings tell the whole story: GE, Microsoft, Dell, SAP, HP, Sony, and Accenture—to name but a few—all are having backroom work done here to support their Asian operations, as well as new software research and development.

Because of its proximity to Japan and Korea, each only about an hour away by air, its large number of Japanese speakers, its abundance of Internet bandwidth, and many parks and a world-class golf course (all of which appeal to knowledge workers), Dalian has become an attractive locus for Japanese outsourcing. Japanese firms can hire three Chinese software engineers for the price of one in Japan and still have change to pay a roomful of call center operators ($90 a month starting salary). No wonder some twenty-eight hundred Japanese companies have set up operations here or teamed up with Chinese partners.

"I've taken a lot of American people to Dalian, and they are amazed at how fast the China economy is growing in this high-tech area," said Win Liu, director of U.S./EU projects for DHC, one of Dalian's biggest homegrown software firms, which has expanded from thirty to twelve hundred employees in six years. "Americans don't realize the challenge to the extent that they should."

Dalian's dynamic mayor, Xia Deren, forty-nine, is a former college president. (For a Communist authoritarian system, China does a pretty good job of promoting people on merit. The Mandarin meritocratic culture here still runs very deep.) Over a traditional ten-course Chinese dinner at a local hotel, the mayor told me how far Dalian has come and just where he intends to take it. "We have twenty-two universities and colleges with over two hundred thousand students in Dalian," he explained. More than half those students graduate with engineering or science degrees, and even those who don't, those who study history or literature, are

still being directed to spend a year studying Japanese or English, plus computer science, so that they will be employable. The mayor estimated that more than half the residents of Dalian had access to the Internet at the office, home, or school.

"The Japanese enterprises originally started some data-processing industries here," the mayor added, "and with this as a base they have now moved to R & D and software development . . . In the past one or two years, the software companies of the U.S. are also making some attempts to move outsourcing of software from the U.S. to our city . . . We are approaching and we are catching up with the Indians. Exports of software products [from Dalian] have been increasing by 50 percent annually. And China is now becoming the country that develops the largest number of university graduates. Though in general our English is not as competent as that of the Indian people, we have a bigger population, [so] we can pick out the most intelligent students who can speak the best English."

Are Dalian residents bothered by working for the Japanese, whose government has still never formally apologized for what the wartime Japanese government did to China?

"We will never forget that a historical war occurred between the two nations," he answered, "but when it comes to the field of economy, we only focus on the economic problems—especially if we talk about the software outsourcing business. If the U.S. and Japanese companies make their products in our city, we consider that to be a good thing. Our youngsters are trying to learn Japanese, to master this tool so they can compete with their Japanese counterparts to successfully land high-salary positions for themselves in the future."

The mayor then added for good measure, "My personal feeling is that Chinese youngsters are more ambitious than Japanese or American youngsters in recent years, but I don't think they are ambitious enough, because they are not as ambitious as my generation. Because our generation, before they got into university and colleges, were sent to distant rural areas and factories and military teams, and went through a very hard time, so in terms of the spirit to overcome and face the hardships, [our generation had to have more ambition] than youngsters nowadays."

Mayor Xia had a charmingly direct way of describing the world, and