

September 5, 2005
\$2.25

The New York Times

upfront

INSIDE: The Battle Over the Constitution

working for a
U.S. company—
in Shanghai

designing
the smallest
handheld
ever

willing to work
for one fifth of
what you make

thinking up
the next
Google

Meet Your Competition

Millions of young people in places like China and India are going after the same jobs you are: What globalization means to you

ISSN # 15251992 VOL # 138 NO.1

 SCHOLASTIC

Globali



CHINA GRADUATES
FIVE TIMES MORE
ENGINEERS
THAN THE U.S.

When your computer crashes in the middle of a late-night homework session and you call a help line, there's a good

chance in this era of globalization that the friendly person assisting you is on the other side of the world, possibly in Bangalore, India's high-tech capital.

Bangalore is home to not only Indian firms, but also to outposts of American companies like Dell, IBM, and Delta Airlines, which in recent years have been hiring Indians to handle jobs outsourced from the U.S. Well-educated, ambitious, and fluent in English, young Indians cost a lot less than their American counterparts: A call-center employee in Bangalore makes around \$5,000 a year, compared with about \$25,000 in the U.S.

Today, there are 160,000 people in high-tech jobs in Bangalore, and they're doing a lot more than answering help-line calls. Someone in India (or China, South Korea, or elsewhere) may be preparing your parents' tax returns, reading your X-rays, or writing software you'll soon be using. Globalization has entered a new phase, with critical implications for all Americans, especially young people. *New York Times* Op-Ed columnist Thomas L. Friedman wonders if the U.S. is ready for the challenge.

For so many years, America's economy was so dominant on the world stage, so out front in so many key areas, that we fell into the habit of thinking we were competing largely against ourselves. If we fell behind in one area or another—whether it was math and science skills, broadband capacity, or wireless infrastructure—we took the view that: "Oh well, we'll fix that problem when we get to it. After all, we're just competing against ourselves."

In recent years, though, with the leveling of the global playing field, it should be apparent that we are not just competing against ourselves. The opening up of countries like India, China, and Russia means that their young people can plug and play—connect, collaborate, and compete—more easily and cheaply than ever before. And they are. We, alas, are still coasting along as if we have all the time in the world.

"Today, the most profound thing to me is the fact that a 14-year-old in Romania or Bangalore or the [former] Soviet

zation!

COVER STORY

The Challenge to America

By Thomas L. Friedman

Computers and the Internet have made the world a much smaller place—and brought foreign competition right to America's doorstep



INDIA ACCOUNTS FOR 44% OF GLOBAL OUTSOURCING

THIS COMPUTER-CHIP designer is one of 1,600 employees at Texas Instruments' Bangalore facility.

Union or Vietnam has all the information, all the tools, all the software easily available to apply knowledge however they want," says Marc Andreessen, a co-founder of Netscape and creator of the first commercial Internet browser. "That is why I am sure the next Napster is going to come out of left field."



ONE THIRD OF INDIA'S COLLEGE GRADS ARE FLUENT IN MORE THAN 2 LANGUAGES

OPERATORS take calls from American consumers at a call center in Bombay.



FIBER OPTIC CABLE

How did it all happen so fast? Several key events and forces came together during the 1990s and converged around the year 2000. First, on Nov. 9, 1989, the Berlin Wall came down, allowing us to envision a more global future. Coincidentally, Microsoft's Windows 3.0, which helped create a global computer interface, shipped six months later.

THE INTERNET COMES TO LIFE

Another key date was Aug. 9, 1995—the day Netscape went public. Netscape brought the Internet to life by making an easy-to-use Web browser widely available. Its stock offering also triggered the dot-com boom, prompting American companies to invest billions of dollars in fiber-optic telecommunications cable. And when undersea and underground fiber networks drove down the cost of transmitting voices, data, and images, Boston, Bangalore, and Beijing became next-door neighbors overnight.

This article is adapted from Friedman's book, "The World is Flat: A Brief History of the 21st Century," and his recent columns.

TOP: VERMA SANTOSH/GAMMA; BOTTOM: SAVITA KIRLOSAR/REUTERS/NEWS.COM



TRYING OUT A NEW LAPTOP at the 2005 China International High-Tech Exhibition in Beijing

CHINA'S GDP HAS QUADRUPLED SINCE 1978

These developments produced even more ways in which individuals and companies around the world could collaborate. Among them were “outsourcing” and “offshoring,” in which all kinds of work—even entire factories and research facilities—could be shifted from the United States and Western Europe to places like China and India, where the work could be done cheaper, and in some cases, better.

INNOVATION WITHOUT EMIGRATION

Yet another major change occurred during the 1990s: Some 3 billion people who had been out of the global economic game came onto the playing field—the people of China, India, Russia, Eastern Europe, Latin America, and Central Asia. As their economies and political systems opened up, they were able to join the free market.

No country has benefited more from these changes, including America’s massive investment in technology, than India. “India had no resources and no infrastructure,” says Dinakar Singh, a Wall Street executive whose parents earned doctorates in India before emigrating to America. “For decades, you had to leave India to be a professional. Now, you can plug into the world from India.”

‘Americans whining—we have never seen that before.’

—Rajesh Rao

This convergence of new players on a new playing field may be the most important force shaping global economics and politics in the early 21st century. China now supplies as much as 70 percent of the merchandise sold by Arkansas-based Wal-Mart, America’s biggest private employer. But what China really wants is that the next generation of products not just be “made in China” but also “designed in China,” and eventually “dreamed up in China.” The same goes for India.

According to Craig Barrett, the CEO of Intel, “You don’t bring 3 billion people into the world economy overnight without huge consequences, especially from three societies [India, China, and Russia] with rich educational heritages.” That is why there is no guarantee that America and Western Europe will be leading the way as the 21st century unfolds.

If this moment has any parallel in recent history, it is the height of the Cold War, in 1957, when the Soviet Union



CHINA NOW PRODUCES AS MUCH AS 70% OF THE MERCHANDISE SOLD BY WAL-MART

SEN. BYRON DORGAN (D-N.D.) at a protest in Washington, D.C., against the outsourcing of U.S. jobs



‘In the international competition to have the biggest and best supply of knowledge workers, America is falling behind.’

—Bill Gates



MANY COUNTRIES IN ASIA are creating new competition for the U.S.

leaped ahead of America in the space race by launching the *Sputnik* satellite. The main challenge then was from those practicing extreme Communism—Russia, China, and North Korea. The main challenge today is from those practicing extreme capitalism—China, India, and South Korea.

Rajesh Rao, a video-game entrepreneur from Bangalore, suggests that instead of complaining about outsourcing, Americans and Western Europeans “would be better off thinking about how you can . . . raise yourself into doing something better.” Says Rao: “Americans whining—we have never seen that before.”

Shirley Ann Jackson, president of Rensselaer Polytechnic Institute in Troy, N.Y., says that a “quiet crisis” is eroding America’s scientific and engineering base. “If left unchecked,” says Jackson, the first black woman to earn a Ph.D. in physics from the Massachusetts Institute of Technology, “this could challenge our pre-eminence and capacity to innovate.”

TOMORROW’S WORK FORCE

Three gaps now plague America. The first is an “ambition gap.” Compared with young Indians and Chinese, too many Americans have become lazy. We also have a “numbers gap”—we are not producing enough engineers and scientists. And finally, we are developing an “education gap.”

Bill Gates, Microsoft’s chairman, is concerned about high school education in America. “When I compare our high schools to what I see when I’m traveling abroad, I am

INDIA’S COLLEGES GRADUATE MORE THAN 3 MILLION STUDENTS EVERY YEAR



A MICROSOFT BILLBOARD provides a high-tech backdrop to a more traditional Indian scene, an open-air market in Bangalore.

terrified for our work force of tomorrow,” says Gates. “By 12th grade, U.S. students are scoring near the bottom of all industrialized nations [in math and science] . . . In the international competition to have the biggest and best supply of knowledge workers, America is falling behind.”

Everyone is going to have to run a little faster to advance his or her standard of living. When I was growing up, my parents used to say to me, “Tom, finish your dinner—people in China are starving.” I am now telling my own daughters, “Girls, finish your homework—people in China and India are starving for your jobs.”