

# Inside the Life of the Migrants Next Door

Thirty years of migration—mostly illegal—connect a small town in Mexico to New York's wealthy Hamptons. An inside look at how both sides have benefited, and paid a price

By **NATHAN THORNBURGH**

**T**HE HAMPTONS, A THIN necklace of ultra-wealthy hamlets at the tip of New York's Long Island, are best known as a summer playground for Manhattan millionaires. But this night, the people who service the lavish Hamptons lifestyle were throwing their own party. The hundred or so guests had gathered for a *quinceañera*—a souped-up Latino version of a sweet-16 party, thrown for a girl's 15th birthday. Nearly all the attendees come from a town called Tuxpan in the green hills of the central-Mexican state of Michoacán, which has seen several generations of young workers move to this far, affluent corner of the U.S. They came with nothing, and many have managed to build a solid facsimile of middle-class American life. Still, most of them are—in the hard talk of the immigration debate—illegal aliens, part of an emerging presence that was once seen as a blessing but has turned into one of the Hamptons' biggest controversies.

The story of Tuxpan's large presence in the Hamptons begins with a single wanderer. Mario Coria, 55, grew up so poor in Tuxpan that at age 11 he left for Mexico City to work in construction. In January 1977, when he was 26, Coria had a chance encounter with a vacationing restaurateur from Bridgehampton, New York. The men struck up a halting conversation in Spanish, and within two years, Coria had accepted the American's invitation



to work as a gardener in the Hamptons. His blend of industry and attention to detail made him a hit with the wealthy Hamptonites. One family liked him so much that they had their personal attorney help him apply for legal residency. Coria started out making just \$3.25 an hour, but today he is a U.S. citizen and owns a house in the Hamptons town of Wainscott. He bought it for \$125,000 in 1996, but similar homes are selling for more than half a million dollars today.

Early on, friends and relatives asked how they could make their way to the Hamptons. In 1985 he brought over his half-brother Fernando. Fernando invited two friends, who started bringing their relatives. A handful became dozens. Dozens become hundreds. There are no reliable estimates, but workers in the Hamptons say there are as many as 500 Tuxpeños living full-time in the area, and scores more show up during the work-filled summer months.

The Hamptons have long cultivated a climate of easygoing tolerance, and for years town leaders dealt with illegal immigration by simply looking the other way. But that too is changing, as the numbers grow larger and the complaints grow louder. The tensions are most evident in the complex relationship between the Hispanic immigrants and the German, Italian and Irish families that for a century formed the area's working-class backbone. Those locals were the ones who did the gardening, cleaning and cooking in the Hamptons before

Latinos started showing up and working longer for less. And it's the working-class residents who end up not only competing for work with but also living next door to the newcomers.

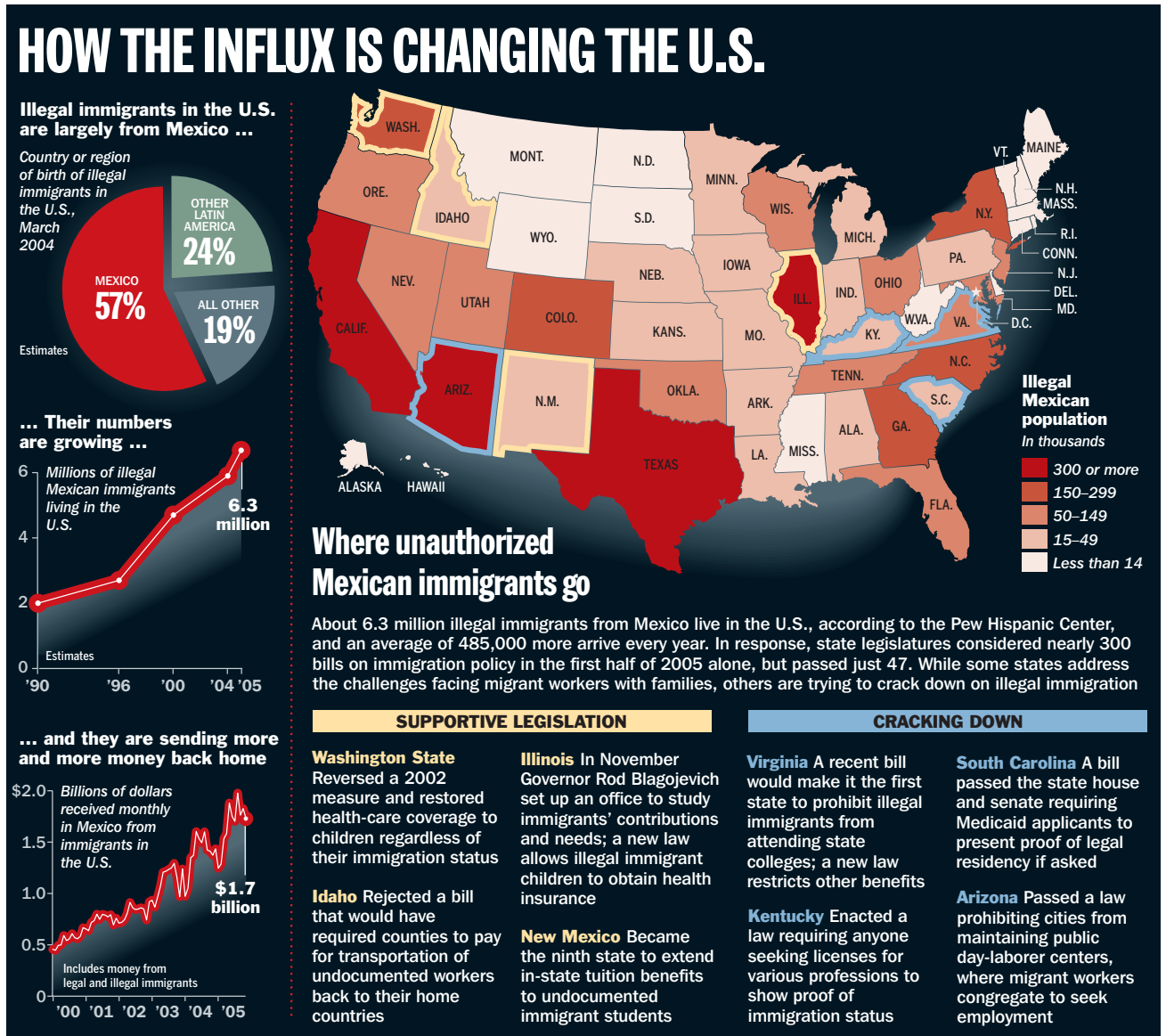
As crossing the border has become more difficult and expensive, workers are staying longer and bringing their children to live with them in the U.S. Julio, 18, and Carlos, 15, moved to the Hamptons from Tuxpan almost a decade ago with their parents Julio Sr. and Yadira. The boys grew up on PlayStations, sledding in the winter and pool parties in the summer. They speak accentless English and for most of their childhood were average happy-go-lucky small-town kids. But because the brothers were born in Mexico, they have no legal American papers. And that means they are not able to apply for federal college loans or even prove that they meet

the residency requirements of the local community college. So just before Julio was about to enter the 10th grade, the boys went back to Tuxpan with their mother to finish high school, which would make them eligible to attend a Mexican university. Their father would keep working in New York alone.

Back at the *quinceañera* in Bridgehampton, the festivities continued, yet the price and the promises of immigration were never far out of mind. Julio Sr. was there—but his wife and sons were 2,000 miles away in Tuxpan. ■

**Questions**

1. How did so many Mexicans from Tuxpan end up in the Hamptons?
2. Why have new immigrants from Mexico clashed with working-class locals in the Hamptons?



# Trying to Make a Decent Living

While some janitors struggle to get by, others are climbing into the middle class. Behind the new battle over low-wage workers

By JEREMY CAPLAN

IT'S 9 P.M., AND CRAIG JONES has just finished dumping 400 trash cans' worth of garbage into the Cincinnati Textile Building's basement compactor. The weighty refuse he carries each night hardly fazes Jones after five years on the job, but the grime he has to scrub off dirty waste-baskets still gets to him a little.

"Wiping spit is a tough thing to get used to," he says. Jones, 27, earns \$6.50 an hour without benefits, vacation time or sick days. His employer, Professional Maintenance, a cleaning contractor, usually schedules him for just four hours a night, five nights a week, so Jones' biweekly paycheck amounts to about \$260, before taxes. The monthly rent for his spartan ground-level apartment in a once-industrial part of town is \$215, so there's little left after phone and utility bills and food. He hasn't bought a new piece of clothing in years.

Less than 300 miles away, Robyn Gray is in the midst of cleaning 48 kitchenettes, dusting 90 conference rooms and scrubbing 40 glass doors at One Mellon Center, a financial building in downtown Pittsburgh, Pennsylvania. Although her work is equally grueling, Gray, 44, is paid well, compared with Cincinnati, Ohio, janitors like Jones. For working a 9:30 P.M.-to-6 A.M., 40-hour-a-week schedule, she earns \$12.52 an hour and gets health insurance, three weeks' vacation and three personal days a year. Her \$26,000 annual salary has helped Gray and her husband—who

**The living-wage movement aims to convince the public that all Americans who work hard deserve to earn a wage they can live on.**

works for a company that erects cell-phone towers—buy their own home, send their two daughters to college and even go on the occasional family vacation. In May, they took their first trip to Honolulu, Hawaii.

The major difference between Gray and Jones, say advocates for low-wage workers, is that she lives in a city where janitors are unionized and have collectively negotiated what they call a *living wage*—that is, salaries

considerably above the minimum wage. The living-wage movement may have got a new burst of energy when the Change to Win Federation, made up of seven labor unions that split from the AFL-CIO last year to focus more directly on the lives of low-wage Americans, officially launched its first national initiative on April 24. Dubbed Make Work Pay!, the campaign aims to convince the public in 35 U.S. cities that all Americans who work hard deserve to earn a wage they can live on.

The new campaign's supporters include former North Carolina Senator and likely presidential contender John Edwards. "The perception exists that [a living wage] is not a politically popular subject, and that people in general aren't interested in it," Edwards says. "But my feelings now on the subject are stronger than they've ever been. You can't live on \$6, \$7 or \$8 an hour and have anything to fall back on. Instead of getting ahead, which most families want to focus on, they're focused on survival."

The model Edwards and others want to replicate is the Service Employees International Union's (SEIU) Justice for Janitors campaign,

which over the past 20 years has helped to raise wages for workers in 27 cities, including Boston, Houston and Pittsburgh. SEIU organized Justice for Janitors Day, with public protests in cities around the country. One of the key battlegrounds of the new offensive is Cincinnati, which gained 8,400 service jobs in 2004 alone. SEIU's primary strategy is to show how higher wages and job benefits have improved not only the finances of workers like Gray but also the lives of their families and the economic and social welfare of the cities in which they live.

Pittsburgh is its Exhibit A. Once hailed as America's Iron City, Pittsburgh has gone from a manufacturing stronghold to a service-dominated economy, a shift that is evident in its abundance of converted mills. The first Justice for Janitors initiative began there in 1985. The campaign sparked an 18-month standoff in which employers locked out unionized workers and brought in replacements willing to work for lower wages. The janitors eventually triumphed, and in the years since they have bargained their way to health-care coverage, personal days and vacation time.

The city appears to have benefited too. In Pittsburgh neighborhoods with high concentrations of janitors and other service workers, high school graduation rates and home ownership rates have risen steadily over the past two decades, according to Census data. Among janitors surveyed by SEIU, the rate of home ownership had grown to

57% by 2005, an increase of nearly 20% since 1990. Meanwhile, the number of families below the poverty line has fallen. Over the past three years, the median household income in the city has grown nearly 3%, from \$39,643 to \$40,699, adjusted for inflation. And annual janitorial-job turnover, as high as 300% in Cincinnati, is just one-tenth that rate in Pittsburgh. As a result, contractors' costs for recruitment and training are significantly lower.

Cincinnati shares many attributes with Pittsburgh. Both are Rust Belt cities with midsize populations—314,000 for Cincinnati and 322,000 for Pittsburgh—and workforces similar in size and composition. But they diverge in their treatment of janitors and other low-wage service workers, and living-wage advocates say the results are telling. In Cincinnati neighborhoods like Over-the-Rhine and the West End, where Jones lives, poor wages coupled with high rates of drug use, street violence and truancy have created a cycle of interdependent problems. More than half the adult black males in the two neighborhoods are without full-time work. In the West End alone, 76.5% of the children under 5 are living in poverty, and per capita income is \$9,759 a year.

It is 10 P.M., and Craig Jones is back home after another four-hour janitorial shift. He microwaves a Stouffer's dinner and grabs a Coke from his cabinet, which is mainly stocked with canned corn and some pumpkin filling that Jones got from a food

pantry around Thanksgiving. He has been looking for a better-paying job during his off-hours but hasn't found one, so he is pinning his hopes on the Justice for Janitors campaign. "I'm not looking for a handout," he says. "But I feel like I'm stuck." ■

### Questions

1. What is the difference between the salaries and benefits that Craig Jones and Robyn Gray receive for doing the same job? Why is there a difference?
2. What is the primary goal of the living-wage movement?



# The Multitasking Generation

Today's teens are e-mailing, IMing and downloading while writing the history essay. What is all that digital juggling doing to kids' brains and to their family life?

By **CLAUDIA WALLIS**

IT'S 9:30 P.M., AND STEPHEN AND Georgina Cox know exactly where their children are. Well, their bodies, at least. Piers, 14, is holed up in his bedroom—eyes fixed on his computer screen—where he has been logged onto a MySpace chat room and AOL Instant Messenger (IM) for the past three hours. His twin sister Bronte is planted in the living room, having commandeered her dad's iMac—as usual. She, too, is busily IMing, while chatting on her cell phone and chipping away at homework.

The Coxes are one of 32 families in the Los Angeles area participating in an intensive, four-year study of modern family life, led by anthropologist Elinor Ochs, director of UCLA's Center on Everyday Lives of Families. While the impact of multitasking gadgets was not her original focus, Ochs found it to be one of the most dramatic areas of change since she conducted a similar study 20 years ago. "I'm not certain how the children can monitor all those things at the same time, but I think it is pretty consequential for the structure of the family relationship," says Ochs.

The big finding of a 2005 survey of Americans ages 8 to 18 by the Kaiser Family Foundation is not that kids were spending a larger chunk of time using electronic media—that was holding steady at 6.5 hours a day (could it possibly get any bigger?)—but that they were packing more media exposure into that time: 8.5 hours' worth, thanks to



“media multitasking.” Increasingly, the media-hungry members of Generation M, as Kaiser dubbed them, don't just sit down to watch a TV show with their friends or family. Between a quarter and a third of them, according to the survey, say they simultaneously absorb some other medium “most of the time” while watching TV, listening to music, using the computer or even while reading.

Although many aspects of the networked life remain scientifically uncharted, there's substantial literature on how the brain handles multitasking. And basically, it doesn't. It may seem that a teenage girl is writing an instant message, burning a CD and telling her mother that she's doing homework—all at the same time—but what's really going on is a rapid toggling among tasks rather than simultaneous processing. “You're doing more than one thing, but you're ordering them and deciding which one to do at any one time,” explains neuroscientist Jordan Grafman, chief of the cognitive neuroscience section at the National Institute of Neurological Disorders and Stroke (NINDS).

Then why can we so easily walk down the street while engrossed in a deep conversation? Why can we chop onions while watching *Jeopardy*? It turns out that very automatic actions or what researchers call “highly practiced skills,” like walking or chopping an onion, can be easily done while thinking about other things, although

the decision to add an extra onion to a recipe or change the direction in which you're walking is another matter.

When people try to perform two or more related tasks either at the same time or alternating rapidly between them, errors go way up, and it takes far longer—often double the time or more—to get the jobs done than if they were done sequentially, says David E. Meyer, director of the Brain, Cognition and Action Laboratory at the University of Michigan. “The toll in terms of slowdown is extremely large—amazingly so,” Meyer says. He frequently tests Gen M students in his lab, and he sees no exception for them, despite their “mystique” as master multitaskers. “The bottom line is that you can't simultaneously be thinking about your tax return and reading an essay, just as you can't talk to yourself about two things at once,” he says. “If a teenager is trying to have a conversation on an e-mail chat line while doing algebra, she'll suffer a decrease in efficiency, compared to if she just thought about algebra until she was done. People may think otherwise, but it's a myth. With such complicated tasks [you] will never, ever be able to overcome the inherent limitations in the brain for processing information during multitasking. It just can't be, any more than the best of all humans will ever be able to run a one-minute mile.”

Other research shows the relationship between stimulation and performance forms a bell curve: a little stimulation—whether it's coffee or a blaring

soundtrack—can boost performance, but too much is stressful and causes a fall-off. In addition, the brain needs rest and recovery time to consolidate thoughts and memories. Teenagers who fill every quiet moment with a phone call or some kind of e-stimulation may not be getting that needed reprieve. Habitual multitasking may condition their brain to an overexcited state, making it difficult to focus even when they want to. “People lose the skill and the will to maintain concentration, and they get mental antsiness,” says Meyer.

But turning down the noise isn't easy. By the time many kids get to college, their devices have become extensions of themselves, indispensable social accessories. “The minute the bell rings at most big public high schools, the first thing most kids do is reach into their bag and pick up their cell phone,” observes Denise Clark Pope, lecturer at the Stanford School of Education, “never mind that the person [they're contacting] could be right down the hall.”

Many educators and psychologists encourage teenagers to break free of compulsive engagement with screens and spend time in the physical company of human beings—a growing challenge not just because technology offers such a handy alternative but because so many kids lead highly scheduled lives that leave little time for old-fashioned socializing and family meals. Indeed, many teenagers and college students say overcommitted schedules drive much of their

multitasking.

In the end, Generation M has a lot to teach parents and teachers about what new technology can do. But it's also important to remember what technology can't do—and that there's life beyond the screen. ■

## How the Brain Toggles

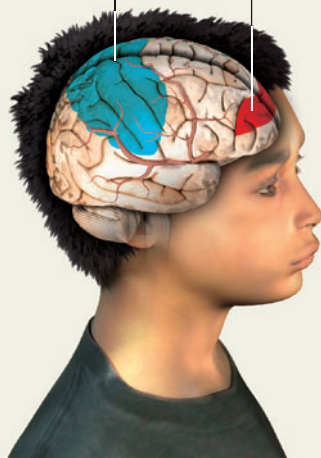
*Imaging studies have begun to reveal the anatomy of multitasking. Young adults have some advantages*

### THE MEDIAL PARIETAL LOBES

These areas are active when you are not focused on a task; they are considered default regions. When turning to a task, young adults do better than older adults in quieting the activity of the default regions. That may explain why older adults are more distracted by background thoughts (“Did I return that call?”).

### BRODMANN'S AREA 10

This section of the anterior prefrontal cortex acts as the switching station for multitasking. fMRI studies show increased blood flow to that region when one turns from one task to another and when one resumes the first task. The prefrontal cortex is much more highly developed in humans than in lower primates. It is one of the last to mature in adolescence and one of the first to decline with aging. Young children and people over 60 tend to be less adept at multitasking than young adults.



### Questions

1. What was the surprise finding in a 2005 Kaiser Family Foundation study of Americans ages 8 to 18?
2. What are the drawbacks of multitasking?

# Are We Losing Our Edge?

The U.S. still leads the world in scientific innovation. But years of declining investment and fresh competition from foreign countries threaten to end our supremacy

By **MICHAEL D. LEMONICK**

**E**DISON LIU IS A HONG KONG native who studied in the U.S. and eventually rose to become director of the division of clinical sciences at the National Cancer Institute. But in 2001 the government of Singapore made him an offer he couldn't refuse: the directorship of the brand new Genome Institute along with a \$25 million starting budget—part of a \$288 million integrated network of life-science research centers and biotech start-ups called Biopolis. Says Liu: "I came because I saw that the entire leadership of the country, the fabric of the country was thirsting for biology."

If this was just an isolated case, it would be easy to dismiss. Such stories, though, have become disturbingly common. After more than a half-century of unchallenged superiority in virtually every field of science and technology, from basic research to product development, America is starting to lose ground to other nations. It's still on top for now; the U.S. continues to lead the world in economic performance, business and government efficiency and in the strength of its infrastructure. As recently as 2001, the U.S., with just 6% of the world's population, churned out 41% of its Ph.D.s. And its labs regularly achieve technological feats, as the recent rollout of a new, superpowerful Macintosh computer and the launch of a space probe to Pluto make clear.

But by almost any measure—academic prizes, patents granted to U.S. companies, the trade deficit in high-technology products—we're losing



ground while countries like China, South Korea and India are catching up fast. Unless things change, they will overtake us, and the breathtaking burst of discovery that has been driving our economy for the past half-century will be over.

Some critics have tried to put the blame for the U.S.'s scientific decline on President George W. Bush, citing his hostility to stem-cell research, his downplaying of global warming, his statements in support of "intelligent design" as

an alternative to evolution, and his Administration's appointment of nonscientists to scientific panels as well as its alleged quashing of dissenting scientists. But experts have been warning for decades that U.S. science was heading for trouble for three simple reasons. The Federal Government, beset by deficits for most of the past three decades, has steadily been cutting back on investment in research and development. Corporations, under increasing pressure from their stockholders for quick profits, have been doing the same and focusing on short-term products. And the quality of education in math and science in elementary and high schools has plummeted, leading to a drop in the number of students majoring in technical fields.

Responding to an increasingly insistent drumbeat of lobbying over the past few months from industry leaders, scientists and legislators, Bush announced in his 2006 State of the Union address the launch of what he called the American Competitiveness Initiative. The plan: double federal funding of research in basic areas like nanotechnology, supercomputing and alternative energy; make permanent the R&D tax credit;

and train 70,000 additional high school science and math teachers.

Back in the 19th and early 20th centuries, people like Thomas Edison, Samuel Morse and the Wright brothers proved that Americans were pretty good at creating useful technology. But all of it was based on fundamental science done in places like Britain, Germany and France, where the true intellectual action was. If not for Adolf Hitler, it might still be, but his aggression drove scientists out of Europe, and the desperate need to defeat him galvanized the U.S. and Britain into pouring money into defense research, creating powerful new technologies—radar, sonar, the atom bomb. U.S. leaders learned that pure research like atomic and electromagnetic physics, combined with massive government funding, could lead to dramatic breakthroughs in military technology.

In absolute terms, of course, the U.S. is still the world leader in scientific research. Yet, says Shirley Tilghman, president of Princeton University and a molecular biologist, “there’s still reason to feel some urgency. The world is not standing still while we take a pause.”

For the first time in decades, however, there’s hope that the pause may be ending. Given its bipartisan appeal, the Bush Competitiveness Initiative is likely to pass. Funding won’t be easy, given the soaring deficit, but the people who dole out the money are enthusiastic. “I am very, very supportive,” Representative Frank Wolf, the House Republican in charge of science funding, told TIME, “and I think the President is going to get what he requested.” Sometimes, marvels Alexander, “these things sit for years and then suddenly come together in a big way.” ■

**Questions**

1. Why has America had an edge over other nations in scientific development?
2. Why has the U.S. begun to lose this edge?

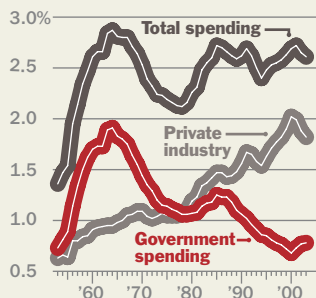
# Slowing Down While Others Speed Up

The U.S. dominates the world in science and technology, but if current trends continue, that won't be true much longer



**SPENDING ON RESEARCH** The U.S. pours more money into science than does any other country, but federal funding—vital for basic research to develop new technologies—has been shriveling. Six countries now devote a larger share of their economy to science

U.S. spending on research and development as a percentage of GDP



Top 10 countries in research spending as a percentage of GDP\*

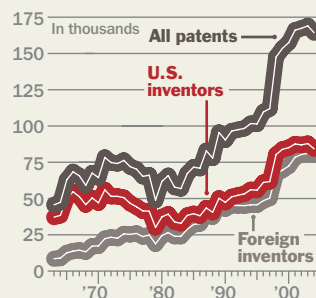
Israel	4.43%
Sweden	3.98%
Finland	3.49%
Japan	3.15%
Iceland	3.04%
South Korea	2.64%
<b>U.S.</b>	<b>2.61%</b>
Switzerland	2.57%
Germany	2.55%
Denmark	2.53%

\*2003 data, except Israel (2001), Switzerland (2000), and Denmark (2002)

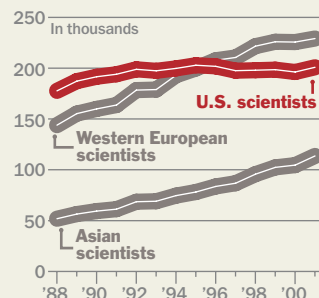


**SHOWING THE RESULTS** A key measure of innovation is the arrival of new products; another is the publication of articles in scholarly journals. Foreign inventors have nearly caught up in patent grants, and U.S. science publishing has fallen behind Europe's as Asia's surges

U.S. patents granted, by nationality of inventor

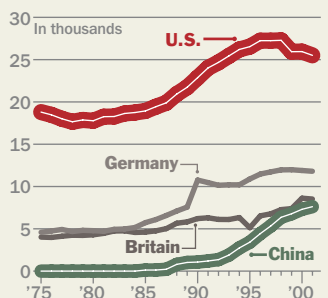


Articles published in science and engineering journals



**TRAINING THE NEXT WAVE** The U.S. still awards far more science Ph.D.s than any other country, but that number is tapering off as China's is jumping. The U.S. also has the most science majors in the world but ranks 25th when that number is adjusted for population

Doctorates earned in science and engineering fields, by country



Countries with the highest percentage of 24-year-olds with science degrees\*

Finland	13.2%
Hungary	11.9%
France	11.2%
South Korea	11.1%
Singapore	10.9%
Britain	10.7%
Sweden	9.5%
Australia	9.3%
Ireland	8.5%
Russia	8.5%
<b>U.S.</b>	<b>5.7%</b> (25th in the world)

\*2000 data, except Singapore (1995), Britain (2001) and Russia (1999)

Sources: National Science Foundation; O.E.C.D.; European Commission; National Academy of Sciences; U.S. Patent and Trademark Office





# Analyzing Complex Graphics

The visual aid **Coming to America** on **pages 28 and 29** is packed with information on how human beings populated the Americas. But what does it all mean? Use the questions below to sharpen your skills in reading and interpreting complex graphics.

**1.** According to the map, there have been human remains found at how many sites in the New World? Consult the map key above South America. Then name the sites:

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**2.** What is the southernmost site where human remains have been found? The northernmost?

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**3.** Of the sites whose dates are not in dispute, name the site whose date is most recent. Which is oldest site whose date is not in dispute?

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**4.** What does B.P. stand for?

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**5.** Of all the sites on the map, which is the oldest? Give its name and date.

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**6.** The last ice age in North America began in the year \_\_\_\_\_ B.P. and ended in the year \_\_\_\_\_ B.P.

**7.** True or false: There is indisputable proof that early migrants arrived from Europe on the East Coast of the U.S..

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**8.** Recent archeological finds suggest that bands of people might have migrated down what coastal routes up to 30,000 years ago?

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**9.** Why is it unlikely that scientists will find archeological artifacts along coastal migration routes?

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**10.** True or false: Most of the migratory patterns run south to north.

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**11.** In North America, there was an inland, passable, ice-free corridor approximately \_\_\_\_\_ years ago.

**12.** How can scientists discover when populations diverged from each other, which can then suggest a date for possible migration patterns?

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# Who Were the First Americans?

They may have been a lot like Kennewick Man, whose hotly disputed bones are helping rewrite our earliest history. An exclusive inside look

By **MICHAEL D. LEMONICK** and **ANDREW DORFMAN**

**J**IM CHATTERS, A FORENSIC ANTHROPOLOGIST, had been called in by the coroner of Benton County, Washington, to consult on some bones found by two college students on the banks of the Columbia River, near the town of Kennewick. The bones were obviously old, and when the coroner asked for an opinion, Chatters' off-the-cuff guess was that they probably belonged to a settler from the late 1800s. Then a CT scan revealed a stone spear point embedded in the skeleton's pelvis, so Chatters sent a bit of finger bone off to the University of California at Riverside for radiocarbon dating. When the results came back, it was clear that his estimate was dramatically off the mark. The bones weren't 100 or even 1,000 years old. They belonged to a man who had walked the banks of the Columbia more than 9,000 years ago.

In short, the remains that came to be known as Kennewick Man were almost twice as old as the celebrated Iceman discovered in 1991 in an Alpine glacier, and among the oldest and most complete skeletons ever found in the Americas. Scientists have found only about 50 skeletons of such antiquity, most of them fragmentary. Any new find can thus add crucial insight into the ongoing mystery of who first colonized the New World—the last corner of the globe to be populated by humans. Kennewick Man could cast some much-needed

light on the murky questions of when that epochal migration took place, where the first Americans originally came from and how they got here.

The scientific team that examined the skeleton was led by forensic anthropologist Douglas Owsley of the Smithsonian Institution's National Museum of Natural History. Owsley and his team were able to nail down or make strong guesses about Kennewick

**Kennewick Man could cast much-needed light on the murky questions of where the first Americans originally came from and how they got here.**

Man's physical attributes. He stood about 5 feet, 9 inches tall and was fairly muscular. Previous estimates had Kennewick Man's age as 45 to 55 when he died, but Owsley thinks he may have been as young as 38. Nothing in the bones reveals what caused his death. Perhaps the most remarkable discovery: Kennewick Man had been buried deliberately.

The existence of Kennewick Man leads to the question: Who really discovered America? The conventional answer to that question dates to the early 1930s, when stone projectile points that were nearly identical began to turn up at sites across the American Southwest. They suggested a single cultural tradition that was christened Clovis, after an 11,000-year-old-plus site near Clovis, New Mexico. And because no older sites were known to exist in the Americas, scientists assumed that the Clovis people were the first to arrive. They came, according to the theory, no more than 12,000 years B.P. (before the present), walking across the dry land that connected modern Russia and Alaska at the end of the last ice age, when sea level was hundreds of feet lower than it is today.



However in 1997, a blue-ribbon panel of researchers took a hard look at evidence presented by Tom Dillehay, then at the University of Kentucky, from a site he had been excavating in Monte Verde, Chile. After years of skepticism, the panel finally affirmed his claim that the site proved humans had lived there 12,500 years ago. If people were living in southern Chile 12,500 years ago, they must have crossed over from Asia considerably earlier, and that means they couldn't have used the ice-free inland corridor; it didn't yet exist. Instead, many scientists now believe, the earliest Americans traveled down the Pacific coast—possibly even using boats. Even if the earliest Americans traveled down the coast,

that doesn't mean they couldn't have come through the interior as well.

Genetics points to an original homeland for the first Americans. "Skeletal remains are very rare, but the genetic evidence suggests they came from the Lake Baikal region" of Russia, says anthropologist Ted Goebel of the University of Nevada at Reno, who has worked extensively in that part of southern Siberia. "There is a rich archaeological record there," he says, "beginning about 40,000 years ago." Based on what he and Russian colleagues have found, Goebel speculates that there were two northward migratory pulses, the first between 28,000 and 20,000 years ago and a second some-

## Tools in the search

### ARCHAEOLOGY

Skeletons like Kennewick Man are rare. More often scientists study and date other indications of human activity—remains of butchered animals, stone tools, spear points or even bits of burned charcoal. Unfortunately, such artifacts may never be found along coastal migration routes—they're now under water



### GENETICS

Scientists use markers in DNA samples from indigenous peoples in North and South America to figure out when populations diverged from each other. DNA comparisons suggest the first Americans may have diverged from groups in the Lake Baikal area of what is now Russia as early as 26,000 years ago



### LINGUISTICS

By studying native words and grammar, scientists can establish links and infer the amount of time required for different languages to evolve from a common origin. As of 1492, there were an estimated 1,000 languages in the Americas that may have developed from the original migrants



# In Search of the Real Google

An inside look at how success has changed Larry Page and Sergey Brin's dream machine. Can they still be the good guys while running a company worth \$100 billion?

By **ADI IGNATIUS**

**I**T'S TIME TO MAKE SOME BIG decisions, so the Google guys are slipping on their white lab coats. After eight years in the spotlight running a company that Wall Street now values at more than \$100 billion, Google co-founders Sergey Brin and Larry Page are still just in their early 30s. Page, a computer geek from Michigan who as a boy idolized inventor Nikola Tesla (you know, the guy who developed AC power), has a Muppet's voice and a rocket scientist's brain. Brin, born in Russia and raised outside Washington, is no less clever but has a mischievous twinkle in his eye.

A team of four engineers enters the meeting room, each clutching an IBM Think Pad. The engineers tell Brin and Page that they can generate extra advertising revenue by adding small sponsored links to image-search results, as Google already does with text searches. "We're not making enough money already?" Page asks. Everyone laughs. The share price has soared as high as \$475, making Google, in market-cap terms, the biggest media company in the world. The engineers press on. Their trials predict the tweak would be worth as much as \$80 million a year in additional revenue. Brin isn't moved. "I don't see how it enhances the experience of our users," he says. It probably wouldn't hurt it much either. But the Google guys reject the proposal—"Let's not do



it," Brin declares, to the engineers' obvious disappointment—leaving the \$80 million on the table.

Whether Google gets it right in sessions like that—balancing business opportunities against consumers' trust—is crucial to the company's future. After eight years of incredible growth, it's fair to ask whether Google is due for a stumble. To put it another way, can Google maintain its success and remain true to the ideals that made it so popular? These are the guys

who adopted as their informal corporate motto "Don't be evil." Its vulnerability was plainly evident early in 2006, when jittery investors cashed out en masse after it reported an 82% increase in its fourth-quarter profit (below the market's expectations) and again after Google said it was launching a heavily censored Chinese-language site.

It's hard to say exactly what "Don't be evil" means, and one could argue that that's the unwritten principle of every respectable corporation. But Brin and Page's ultimate vision—to make nearly all information accessible to everyone all the time—is a tricky thing, given that a lot of us (individuals, corporations, governments) aren't comfortable with a 100% free flow of data. Google was recently slammed for a software feature that results in the company's storing users' personal data for up to a month. At times like these, Google keeps that mantra handy—*Don't be evil, don't be evil, don't be evil*—as a reminder to try to do the right thing in a

complex world. Which means turning down \$80 million windfalls from time to time. Or telling U.S. prosecutors, as Google did early in 2006, that it won't hand over data on people's Internet use.

Google owes much of its success to the brilliance of Brin and Page, but also to a series of fortunate events. It was Page who, at Stanford in 1996, initiated the academic project that eventually became Google's search engine. Brin, who had met Page at student orientation a year earlier, joined the project early on. Their breakthrough, simply put, was that when their search engine crawled the Web, it did more than just look for word matches; it also tallied and ranked a host of other critical factors like how websites link to one another. Brin and Page meant to name their creation Googol (the mathematical term for the number 1 followed by 100 zeroes), but someone misspelled the word and it stuck as *Google*. They raised money from professors and venture capitalists, and moved off campus to turn Google into a business. Perhaps their biggest stroke of luck came early on when they tried to license their technology to other search engines, but no one met their price, and they built it up on their own.

The next breakthrough came in 2000, when Google figured out how to make money with its invention. It had lots of users, but almost no one was paying. The holy grail turned out to be advertising, which is now the source of nearly all its revenue. If you're a company selling sneakers, you can bid to have a link to your website appear in the sponsored area whenever someone does a Google search for, say, tennis or sneakers. How prominently your ad will be displayed depends on how much you bid and how many people click on your ad. That means you can't just buy your way to the top; your link also has to appeal to users. You pay Google for every click you receive.

Google then had another brainstorm: extend the ad-link idea beyond search queries so that any content site could automatically run ads linked to its text. Google's technology, known as AdSense, can instantly analyze the text of any site and deliver relevant ads to it. Brin and Page signed

up thousands and thousands of clients before their competitors knew what was happening.

As Google rushes forward, it's reasonable to ask whether it is making the right bets on the Internet's future. For one thing, Google has tempted Microsoft into battle by developing new Web-based software and exploring partnerships that could challenge the Seattle giant's desktop dominance. But it's Yahoo!—which has a significantly different vision—that could most threaten Google. Yahoo! is focusing instead on “social search,” in which everyday Internet users pool their knowledge to create alternative systems of content that deliver more relevant results—which,

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of course, can be monetized. At stake is the future of Web searching. For Google, it is all about harnessing the vast power of the Internet to get results as quickly and accurately as possible.

Ultimately, Google's business proposition is about trust. It retains loads of our data—what we search for, what we say in our Gmails—so we need to know it won't be evil with them. That's why, unlike Yahoo!,

Google doesn't want to create its own content in any significant way. Once you do that, Brin and Page reason, people will start to wonder about the search results, whether they are skewed to help Google's bottom line. And once people wonder about that, the whole model—of this innovative, seemingly trustworthy company—is compromised. Do the Google guys pay attention to what people think? You bet. During our interview, Brin pops out to look for the December copy of *Wired*. In 2004 the magazine had put him and Page on the cover with the adoring line GOOGLEMANIA! The recent cover, by contrast, includes the line GOOGLEPHOBIA: WHO'S AFRAID OF SERGEY? (WHO ISN'T?). Brin picks up the issue and shakes his head in dismay. “I find it surprising,” he says. But that's what happens when you're No. 1, even if you're trying to be the good guy. ■

**Questions**

1. How did Google first start making money?
2. What is the strategy of Yahoo!, Google's biggest competitor, for the future of Internet searching?