

# Global Warming: The Culprit?

Evidence mounts that human activity is helping fuel monster hurricanes

By JEFFREY KLUGER

**N**ATURE DOESN'T ALWAYS KNOW WHEN TO quit—and nothing says that quite like a hurricane. The atmospheric convulsion that was Hurricane Katrina had barely left the Gulf Coast before its sister Rita was spinning to life out in the Atlantic.

Katrina and her kin are part of a trend of increasingly powerful hurricanes that have been playing out for more than 10 years. Dramatic

changes like this inevitably raise the question, Is global warming to blame? For years, environmentalists have warned that one of the first signs of a climatological crash would be an upsurge in the most violent hurricanes, which thrive in a suddenly warmer world. Now, after watching two Gulf Coast hurricanes reach Category 5 in the space of four weeks, even skeptics are starting to wonder whether something serious is going on.

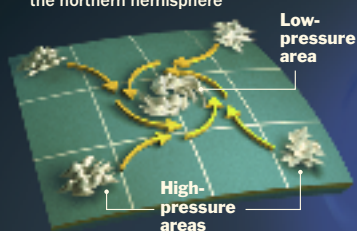
“There is no doubt that climate is changing and humans are partly responsible,” says Kevin

## HURRICANE RITA

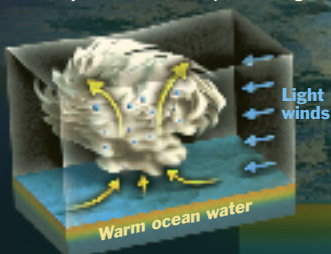
# A VICIOUS CYCLE

Over the past 35 years, the number of hurricanes each season has remained constant, but their average intensity has increased, with the number of Category 4 and 5 storms—the most powerful—nearly doubling. Given the swelling populations along the coasts, the danger from monster hurricanes like Rita and Katrina has risen dramatically

- 1 AREAS OF LOW PRESSURE** over the ocean draw in air from surrounding, higher-pressure areas. The earth's rotation makes those winds spiral counterclockwise in the northern hemisphere



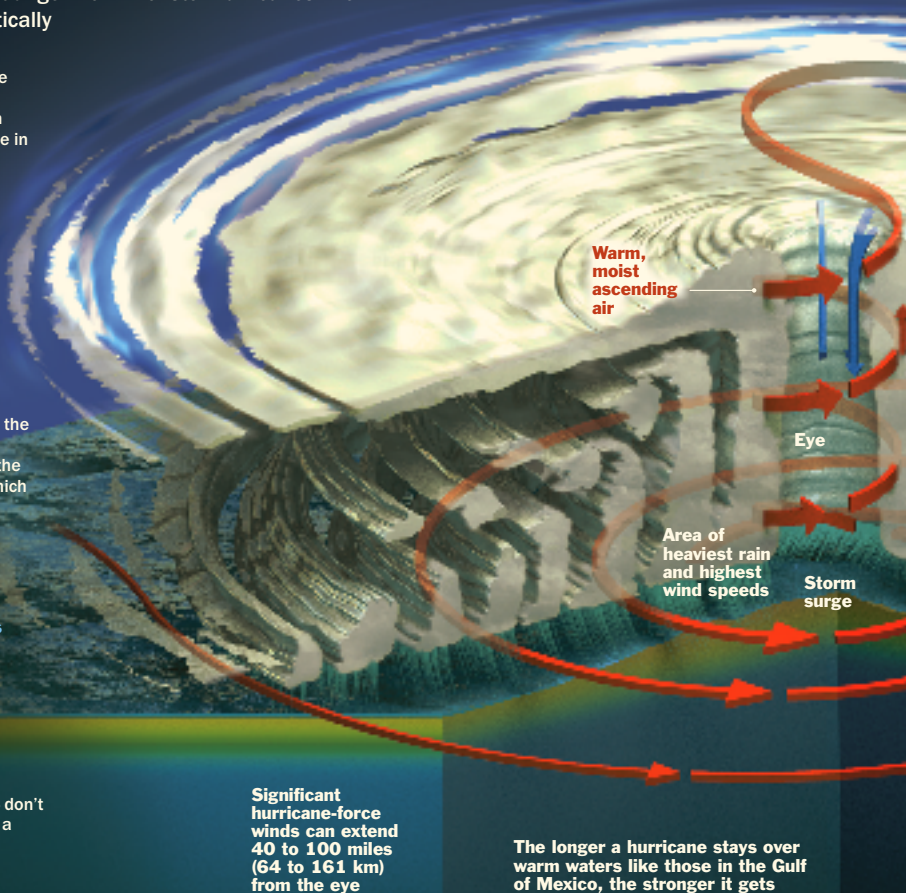
- 2 MOIST AIR WARMED** by the heat of the ocean rises through the storm, intensifying the suction effect. Eventually the storm dumps some of its water as rain, which falls away and can then be pulled in again



- 3 IF STRONG ATMOSPHERIC WINDS** don't break this cycle, the storm becomes a hurricane when spiraling air speeds reach 74 m.p.h. (119 km/h), forming a vortex of rain-laden clouds that circle a calm eye

Significant hurricane-force winds can extend 40 to 100 miles (64 to 161 km) from the eye

The longer a hurricane stays over warm waters like those in the Gulf of Mexico, the stronger it gets



Trenberth, head of the climate-analysis section at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado. “The odds have changed in favor of more intense storms and heavier rainfalls.”

But do scientists really know for sure? Can man-made greenhouse gases really be blamed for the intensity of storms like Rita and Katrina? Or are there too many additional variables to say one way or the other? Chris Landsea of Miami’s National Hurricane Center is one of many experts who believe global warming may be boosting the power of hurricanes—but only a bit, perhaps 1% to 5%. “A 100-mile-per-hour wind today would be a 105-mile-per-hour wind in a century,” he says. “That is pretty tiny in comparison with the swings between hurricane cycles.” What’s more, historical studies rely on measurements taken both before and during

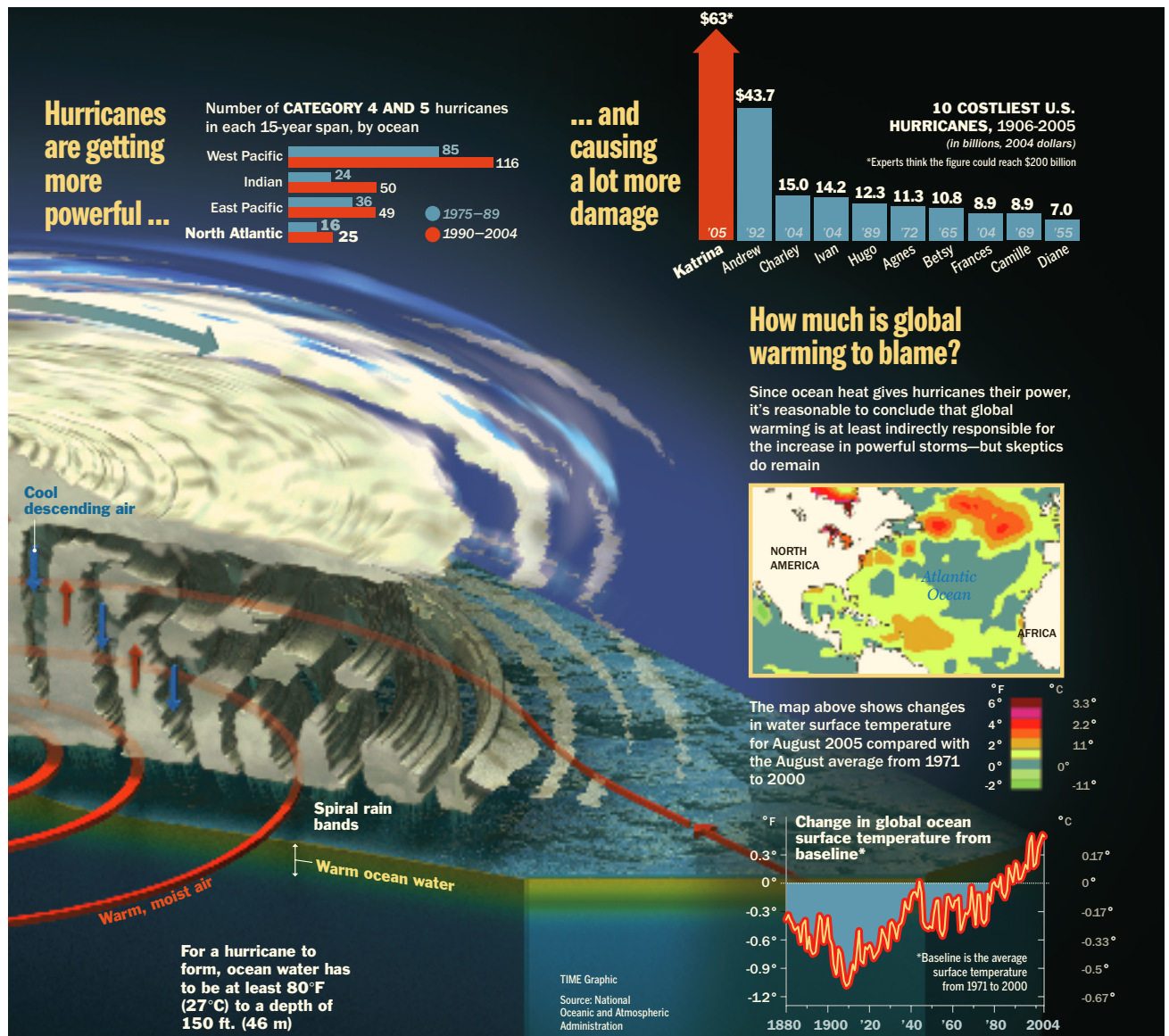
the era of satellites. Size up your storms in divergent ways, and you’re likely to get divergent results.

Some scientists are also studying the even more alarming phenomenon of abrupt climate change. Ice cores taken from Greenland in the 1990s show that the last ice age came to an end not in the slow creep of geological time but in the quick pop of real time, with the entire planet abruptly warming in just three years.

It’s hard to say whether any of this will convince global-warming skeptics. What does seem clear is that the ranks of those skeptics are shrinking. ■

### Questions

1. What pattern in hurricane strength have scientists observed in the last 10 years?
2. How long did it take for the last ice age to end?



# A Transplant First

Surgeons use a donated face to reclaim a disfigured woman's life. But troubling ethical questions remain

By **CHRISTINE GORMAN**

**S**O MUCH OF HOW WE SEE OURSELVES—AND how other people see us—is bound up in our faces that the idea of transplanting one person's visage onto another seems not just improbable but bizarre. And yet for the past few years, surgeons at a handful of medical centers in the U.S. and Europe have been cautiously preparing for just such a procedure to offer hope to patients who have been severely disfigured by burns or accidents. No one had yet raised a scalpel to try, in part because of numerous medical, ethical and psychological concerns that had to be considered first. That's one reason it was so startling to learn in early December that the first face transplant—albeit a partial one—has taken place. Doctors in France reported that they took a triangular patch of facial tissue containing the nose, lips and chin of a brain-dead donor and transplanted them onto a 38-year-old mother of two who had been severely mauled by a dog last May.

By all accounts, the operation, which was approved by at least three different sets of public-health and ethics authorities, was a success. The match and color of the transplanted section “were even better than we had expected,” said Dr. Bernard Devauchelle, coordinator of one of the surgical teams. “In just four hours we had re-established vascular connections between the skin fragment and [the patient].”

The facial transplant, which would have been unusual under any circumstances, stirred heated debate following a French media report that the

woman might have sustained her injuries during a suicide attempt in which the dog apparently bit her in an effort to wake her up. That raised the question of whether she was stable enough psychologically to give consent to the operation, never mind care for herself afterward. But Dr. Jean-Michel Dubernard, one of the surgeons who operated on the woman, denied the report. “There was no suicide attempt,” he told reporters. Instead, he said, the woman took a sleeping pill after a family fight, and the dog bit her when she stepped on it in the night. She was examined by several psychiatrists, he added, who determined that she was a suitable candidate for transplant.

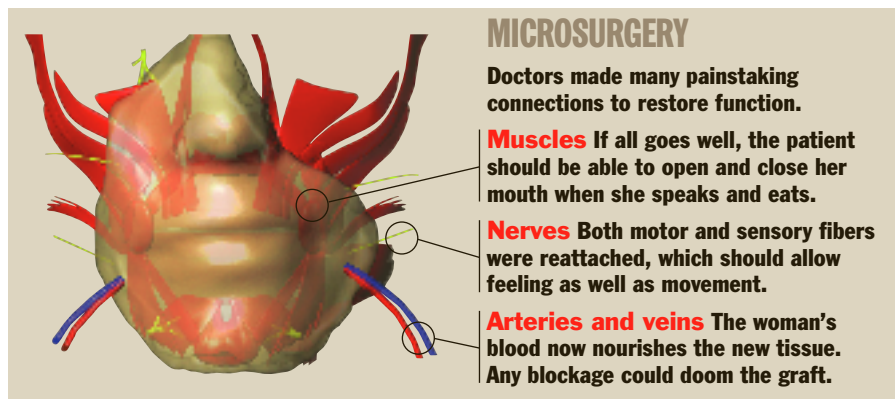
Others criticized the operation as a rush to make history. “I believe a better result could have been achieved with careful facial reconstruction,” says Dr. Denys Pellerin, vice president of the French National Academy of Medicine. “This procedure was based on ambition.”

Dubernard would have none of it. “For us, it was not a matter of being first,” he told *TIME*. “It just happened that we had a good candidate and a good donor and an excellent team.”

For now, the doctors are pleased with their patient's progress. “[She] is happy with the results,” Dubernard says. “She can finally look at herself in the mirror—something she could not do just a week before.” The next few months and years will determine whether that good fortune continues. ■

## Questions

1. In your view, what medical, ethical and psychological concerns are posed by face transplants?
2. What issues did the French media raise concerning this particular case?



# A Jury of Their Peers

In youth courts, teens run the show, but experts say that there's nothing juvenile about this innovative form of justice

By JEREMY CAPLAN

**T**O COMPLETE HER CROSS-EXAMINATION, PROSECUTOR Sarah Carr, 16, had one final question for Andrew G., 17, the defendant in a recent case at the youth court in Colonie, N.Y.: "Didn't you know it was wrong?" Andrew nodded shyly, eyes averted. He knew that stealing a \$4.97 *Star Wars* action figure from Wal-Mart was not only a petty crime but also a geeky one in the eyes of his high school peers, some of whom were serving on the jury.

In Colonie's youth court, the jurors and lawyers are adolescents and so are the judge and the bailiff, who swears in witnesses that often include the only adults in the room: parents, victims and police officers. The perpetrators are limited to first-time offenders who are under the age of 19 and who admit guilt to minor crimes. Sentences are generally creative forms of community service, never jail terms, and the record shows that 99% of those sentenced complete the required tasks. Doing so keeps their criminal records clean, which helps for college and job applications.

Youth court is quickly becoming an institution across the United States. In 1994, there were just 78 such courts; today the number is 1,035 and growing. Some are run by schools, others by police departments or nonprofit groups. All told, these junior courts will hold more than 100,000 trials this year, according to the National Youth Court Center in Lexington, Kentucky.

Advocates say they not only help relieve crim-

inal-court backlogs but have also proved they can turn around a kid who has gone wrong. A study by the Urban Institute found that youth courts are often more effective in preventing repeat crimes than are other methods used by cities to discipline first-time minor offenders, which range from a letter of warning to referral to juvenile criminal court.

The peer-court concept dates back to 1947 in Mansfield, Ohio, where kids handled neighborhood trials for young bicycle snatchers. The modern youth court started to take shape in the early 1970s, when a few cities experimented with a more formal kind of peer justice. In recent years, the movement has gained momentum, cheered on by police departments and local governments eager for justice that works and does so cost effectively. An entire youth-court trial typically takes less than an hour, including deliberations. Nationally, the program's average cost per case is about \$480, according to an American Youth Policy Forum study. Probation, on the other hand, costs about \$1,635, while the cost of trying a juvenile in criminal court usually ranges from \$21,000 to \$84,000, according to the study.

During deliberations in Andrew's sentencing, juror Stephen McCann, 13, wondered aloud why a 17-year-old was still playing with action figures. The jury foreman then questioned whether Andrew should have confessed sooner to his parents. After all the jurors had their say, the group reached a consensus: 30 hours of community service and an apology letter to Wal-Mart. "By now he should be mature enough not to steal toys," McCann said. "I think this will help him resist the temptation." ■

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## Questions

1. What types of offenders are eligible to have trials in youth court?
2. How and when did youth court start?
3. How effective are youth courts compared to other methods of preventing repeat crimes?

# War on the Water Front

As the thirst for bottled water grows, a battle is brewing over precious resources—and profits

By JYOTI THOTTAM

**I**N A STATE BETTER KNOWN FOR ITS LOBSTER rolls and rugged landscape, James Wilfong has a radical new vision for Maine's future. On his trips abroad as a Small Business Administration official in the 1990s, Wilfong came to realize that in many places, water was worth fighting for. "The light went off in my head," he says. "Water is Maine's oil in this century."

Maine has only 1.3 million people but at least 25 trillion gallons of drinkable water in its lakes and aquifers. Wilfong, a former state legislator, wants to turn that resource into cold cash. So he proposed a tax on large bottled-water operations that is set for a ballot referendum next year. Maine is one of several states where activists are challenging the \$10 billion U.S. bottled-water industry. Declares Wilfong: "We're just saying, This water is not free."

Nestlé, with six of the top 10 brands and more than \$2.2 billion in bottled-water sales, is the largest bottled-water company in the U.S., and it's at the

center of a water war on several fronts. As owner of Poland Spring, which uses 500 million gallons of Maine water a year, Nestlé could owe \$96 million in tax each year if Wilfong's proposal is passed.

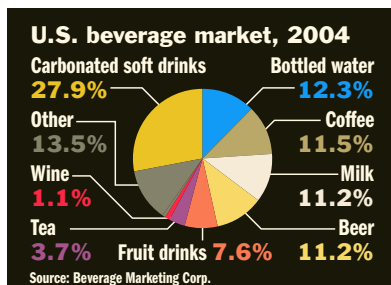
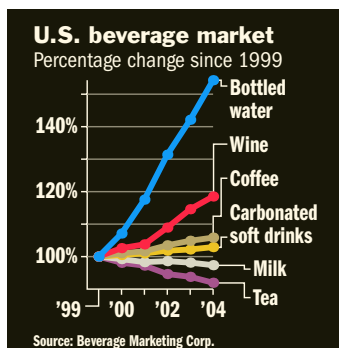
"His mission is misguided," says Kim Jeffery, CEO of Nestlé North America, which now pays only for the land where

the springs are found. In response to a new tax, he says, Nestlé would cancel a planned new plant, costing the state 250 jobs.

In Michigan, Nestlé is facing environmental challenges. Michigan Citizens for Water Conservation has filed a civil lawsuit to stop the company from withdrawing 210 million gallons of water a year near the small town of Stanwood, arguing that groundwater levels are dropping dangerously; Nestlé says they are healthy. The state legislature is considering 16 bills to set limits on withdrawals of groundwater. In a similar battle over Florida's springs, Nestlé has so far prevailed.

Bottled-water producers say they are being unfairly singled out. The Maine and Michigan proposals "penalize an industry that is producing a clean, safe, healthy product," says Stephen Kay, spokesman for the International Bottled Water Association. He notes that bottled water accounts for less than 1% of the groundwater used every year. Irrigation is by far the biggest user. "That's true but irrelevant," says Peter Gleick, president of the Pacific Institute, a water research group in Oakland, California. Any large groundwater withdrawal from one site risks drying up wells and wetlands in that area, he says.

If such concerns make large springwater sources too costly, Jeffery says, Nestlé could follow the lead of Coca-Cola and Pepsi and shift its focus to selling processed municipal tap water. ("Purified water" brands Dasani and Aquafina made \$1.9 billion last year for the two companies.) But communities willing to sell their springs will still find a market in luxury brands: rural Vanleer, Tennessee, is the proud source of BlingH2O, which sells for an estimated \$240 a case wholesale. And water-rich states like Maine could look elsewhere for their windfall; demand for bottled water in Asia is strong. Says Patrick McGowan, Maine's commissioner of conservation: "We look at that as an absolute great business opportunity." ■



## Questions

1. What is the largest bottled-water company in the United States?
2. What action have activists taken to protect Maine's water?

# Wal-Mart's Urban Romance

Eager to remake its image, the retailer is courting an unlikely ally: Black America

By TA-NEHISI PAUL COATES/CHICAGO

**I**N THE PAST DECADE, WAL-MART—THE WORLD'S biggest retailer—has been portrayed as a brutal giant. The company stands accused of wiping out small businesses, busting unions, discriminating against female employees, and employing illegal immigrants—not to mention the knock that it is a low payer. But recently one of America's most embattled corporations has found an ally in one of America's most embattled demographics. No longer content to let its profits do the talking, Wal-Mart is trying to remake its image, in some measure with the aid of inner-city African Americans.

Margaret Garner, CEO of the Chicago construction firm Broadway Consolidated, is the first black woman ever hired by Wal-Mart to build a store. In the summer of 2003, when Wal-Mart began looking at Chicago's West Side, the company went searching for contractors to build stores in the city. Wal-Mart decided to rely on Garner's local knowledge, contracting Broadway Consolidated first to demolish the old factory that stood on the store's site and then to build the 150,000-square-foot superstore that will employ as many as 300 people. Garner says the work will produce between 150 and 200 construction jobs, half of which will go to minorities. Half of those minorities will be African Americans, including black men who often have the hardest time finding jobs: ex-cons. In a city whose building trades are dogged by allegations of racism and in which the unemployment rate for black men is

11.8% (double that of white men), those job promises are huge.

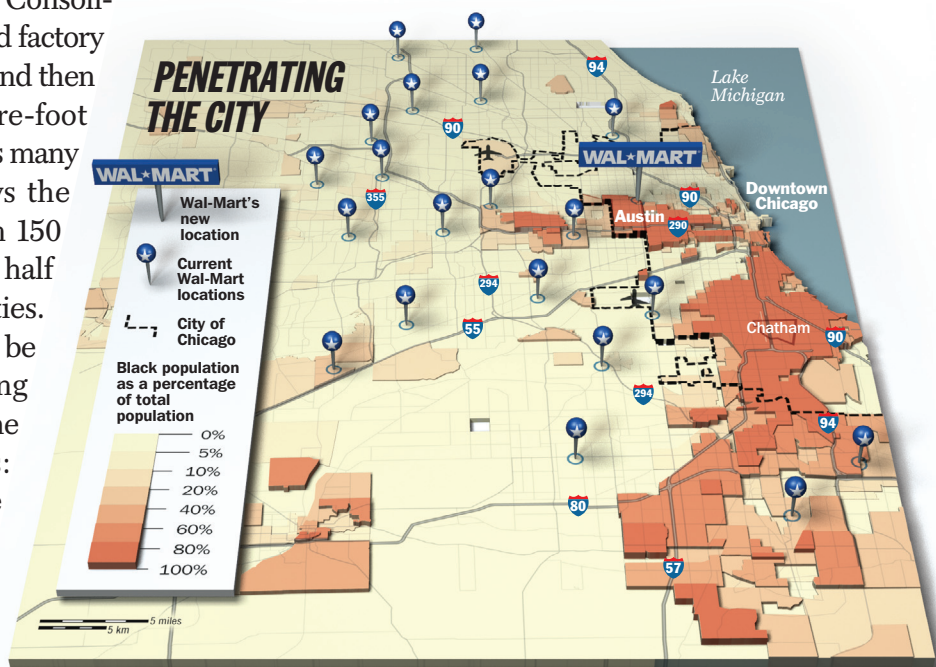
But Wal-Mart's move into the inner city has set off a debate in the black community about economic development. Traditional activists see the company as a corporate parasite. "Desperate people do desperate things. People would rather have a supermarket than not," says Jesse Jackson, whose Rainbow/PUSH Coalition is headquartered in Chicago. "But the point is that employment and development must go hand in hand. We need work where you can have a livable wage and health insurance, and retirement."

Store builder Garner is unconcerned with Wal-Mart's critics. "I think when you're the biggest and the best at what you do, people want to come after you," she counters.

In Wal-Mart, local residents have found a partner of the moment with which they hope to prove a point. Arguments about the supposed low wages, expensive health plans and gender discrimination are almost beside the point in the 37th Ward. "If it's good enough for the suburbs, why isn't it good enough for the city?" asks alderwoman Emma Mitts. "Why isn't it good enough for us?" ■

## Questions

1. How many jobs will Wal-Mart create in Chicago?
2. Why does Jesse Jackson criticize Wal-Mart?





# Current Events In Review

Test your knowledge of stories covered in the *Current Events Update* by answering the following multiple-choice questions.

\_\_\_\_ **1.** The special counsel who indicted former Vice Presidential Chief of Staff Scooter Libby is:  
a. Judith Miller                      b. Joseph Wilson  
c. Archibald Cox                      d. Patrick Fitzgerald

\_\_\_\_ **2.** The leader of al-Qaeda in Iraq is:  
a. Mousab al-Zarqawi    b. Saddam Hussein  
c. Osama bin Laden    d. Abu Noor al-Iraqi

\_\_\_\_ **3.** The newspaper that disclosed that the Bush Administration is tapping communications of some Americans without a warrant is the:  
a. *New York Times*                      b. *Detroit News*  
c. *Washington Post*                      d. *Wall Street Journal*

\_\_\_\_ **4.** The city where Wal-Mart is trying to make an alliance with the Black community is:  
a. New York                      b. Detroit  
c. Chicago                      d. Los Angeles

\_\_\_\_ **5.** In the Paris suburbs where violent protests took place last November, the unemployment rate is as high as:  
a. 30%                      b. 40%                      c. 50%                      d. 60%

\_\_\_\_ **6.** Hurricane Katrina had a devastating impact on the city of:  
a. New London                      b. New York  
c. New Orleans                      d. New Haven

\_\_\_\_ **7.** The creators of the world's largest charity with an endowment of \$29 billion are:  
a. The Rockefellers                      b. The Gateses  
c. The Fords                      d. The Bonos

\_\_\_\_ **8.** The U.S. President who nominated John Roberts to the District of Columbia Circuit Court of Appeals when Roberts was 36 was:  
a. George H. W. Bush  
b. Ronald Reagan  
c. Richard Nixon  
d. George W. Bush

\_\_\_\_ **9.** The federal agency that has 13 field offices investigating the Jack Abramoff scandal is:  
a. CIA                      b. FBI  
c. NSA                      d. Justice Department

\_\_\_\_ **10.** Scientists have reported that the increase in powerful and deadly hurricanes is likely linked to:  
a. deterioration of the ozone layer  
b. global warming  
c. nuclear proliferation  
d. increases in atmospheric radiation

Match each of the locations below with the description at right. Write the letter of the correct country in the space provided. (Note: Not all answers will be used.)

- A.** Britain
- B.** Egypt
- C.** France
- D.** Germany
- E.** Greenland
- F.** India
- G.** Iraq
- H.** Iran
- I.** Ireland
- J.** Israel
- K.** Pakistan
- L.** The United States

- \_\_\_\_ **11.** Country that has ties to some Kurdish and Shi'ite political parties in Iraq.
- \_\_\_\_ **12.** Moshe Katsav is the president of this country.
- \_\_\_\_ **13.** Bono, the famous rock star and one of TIME's Persons of the Year, is from this nation.
- \_\_\_\_ **14.** European country where the first face transplant took place.
- \_\_\_\_ **15.** Ice cores from this island nation have shown that the last ice age ended abruptly.
- \_\_\_\_ **16.** Hamas was founded as an offshoot of Muslim Brotherhood, which has its home in this country.
- \_\_\_\_ **17.** Democratic nation whose President has recently approved wire-tapping citizens without obtaining a warrant.
- \_\_\_\_ **18.** 50,000 people were killed here in a 2005 earthquake.
- \_\_\_\_ **19.** Ramadi and Fallujah are cities in this country.
- \_\_\_\_ **20.** The most recent election in this country resulted in a woman becoming chancellor, an unprecedented event.