

prison camps, and no new scholars were allowed to arise. At the start of the Soviet era, roughly 10 percent of Dagestanis were sufficiently well versed in the Qur'an to be among the spiritual elite. The figure is now less than 0.1 percent.

The new Muslim institutions of higher education have cobbled together curricula that are neither

strongly religious nor rigorously secular. Students at the North Caucasian Islamic University, for example, take 432 hours of Qur'anic exegesis, 360 hours of physical education, and 72 hours each of information technology, homeland history, international relations, and astrophysics. "Many of them are forced to obtain a second secular education

when looking for a job."

The Dagestan "Islamic spiritual revival" has been stillborn, Bobrovnikov says. Even Muslim students who have gone abroad to study at religious centers in Syria, Egypt, Saudi Arabia, and Tunisia have "long ago given up their studies and gone into the Russian-language tourist business."

SCIENCE & TECHNOLOGY

He Said, She Said

THE SOURCE: "Are Women Really More Talkative Than Men?" by Matthias R. Mehl, Simine Vazire, Nairán Ramírez-Esparza, Richard B. Slatcher, and James W. Pennebaker, in *Science*, July 6, 2007.

NOT TO MINCE WORDS, BUT women have a reputation for being much chattier than men. In 2006, neurobiologist Louann Brizendine, in *The Female Brain*, attached some numbers to the stereotype, estimating that "a woman uses about 20,000 words per day while a man uses about 7,000." Those numbers poured into the media, cited in *Newsweek*, *The New York Times*, and *The Washington Post*, and were also reported on CBS, CNN, and National Public Radio, taking on the stature of scientific fact.

But according to Matthias R. Mehl, a psy-

chology professor at the University of Arizona, Simine Vazire, at Washington University in St. Louis, and their colleagues at the University of Texas, Austin, up to now "no study has systematically recorded the natural conversations of large groups of people for

extended periods of time." Mark Liberman, a University of Pennsylvania linguistics professor, attempted last year to fill the void, analyzing tape-recorded conversations of 153 participants he discovered in a British archive. He found that the women spoke 8,805 words per day versus the men's 6,073, but noted that his findings were not conclusive, since his subjects were free to turn the recorders on and off.

Mehl and his colleagues tested 396 university student volunteers using an electronically activated recorder that "operates by periodically recording snippets of ambient sounds, including conversations, while participants go about their daily lives." Data from the study reveal that women spoke on average 16,215 words per day and men 15,669, a statistically insignificant difference. But the most talkative 17 percent were equally split between men and women. And the three biggest chatterboxes, gushing

EXCERPT

A Trillion Stars

Earth is a clump of iron and magnesium and nickel, smeared with a thin layer of organic matter and sleeved in vapor. It whirls along in a nearly circular orbit around a minor star we call the sun. . . . There are enough stars in the universe that if everybody on Earth were charged with naming his or her share, we'd each get to name a trillion and a half of them.

—ANTHONY DOERR, author of *Four Seasons in Rome* and other books, in *Orion* (July–Aug. 2007)

more than 40,000 words in the course of a day? All men.

While Mehl and his associates admit that their study sample—all students—wasn't typical of the whole population, they believe that sex differences among the general public would be about the same. Their conclusion: "The widespread and highly publicized stereotype about female talkativeness is unfounded."

SCIENCE & TECHNOLOGY

A Solid B+ for Prediction

THE SOURCE: "Anticipations: The Remarkable Forecasts of H.G. Wells" by Paul Crabtree, in *The Futurist*, Sept.-Oct. 2007.

IF H. G. WELLS WERE IN A *JEO-**pardy* category, it would almost certainly be science fiction. But at the turn of the last century, Wells (1866–1946) was regarded as one of the leading intellectuals of the West, with an influence that was felt in science, biology, history, and education. In widely popular books, he predicted an astonishing number of the seminal events of the 20th century, from the splitting of the atom to the creation of limited-access freeways, from guerilla warfare to the rise of the Boston-Washington megalopolis.

About 80 percent of the dozens of predictions in Wells's 1901 book, *Anticipations*, were at least partly right and 60 percent were "extremely accurate," writes Paul Crabtree, a retired federal analyst. Wells foresaw dramatic increases in the speed of travel, with most people transported in independent road

vehicles and only heavy freight moving by rail. He recognized the future of the airplane, but relegated it to a footnote. He expected the size of cities to expand exponentially until the New York metropolitan area encompassed 40 million people—it has 19 million residents today. He thought the "irresponsible" wealthy class would grow, as would a poor, uneducable underclass whom technology would render unemployable. He predicted the decline of marriage and an increase in childless unions. Machines and technology would become the primary means of waging war, he wrote; military victories would be won "in the

schools and colleges and universities." He foresaw English—"but perhaps French"—becoming the dominant world language. He recognized the globalization that is a hallmark of the world economy a century hence.

In later books, Wells forecast the use of atomic energy and the dropping of nuclear weapons from airplanes. In 1933, he wrote a novel that was only a few months off in predicting the date of the outbreak of World War II, according to Crabtree.

But as prescient as Wells was about technological change, he was clueless about religion and



A gas works erupts in flames as German bombers fill the sky over London in 1940. In a 1933 novel, H. G. Wells was only slightly off in predicting the date of the outbreak of World War II.