When the 15th-century German goldsmith Johannes Gutenberg expanded upon ancient Chinese woodblock and typing techniques to create a printing press with movable type, he forever changed the relationship between scholars and the written word. Nearly 600 years later, a new revolution is under way. Electronic book devices such as Amazon.com’s Kindle and Sony’s Portable Reader have yet to replace the good old codex altogether, but many cultural critics believe that they will soon.

For research institutions, the implications are profound. With the increasing digitization of old-fashioned books and the production of new books exclusively in electronic form, scholars can access information without ever leaving their living room. Libraries, therefore, must reinterpret their role to meet the changing needs of patrons.

To help envision and refine these needs, the NYU Division of Libraries has formed an alliance with the self-styled “think-and-do tank,” the Institute for the Future of the Book. Established in 2004, IFB studies the widespread shift in communication, and produces new ideas and tools to help engineer it.

Together, NYU and IFB will use a National Endowment for the Humanities start-up grant to develop enhancements to MediaCommons, an electronic scholarly publishing network in media studies that includes multimedia content as well as links to other articles and tools for adding public comments. They will also investigate new technologies for research, collaboration, and publication. "The library has to become an organization engaged with the transformation," says NYU’s dean of libraries Carol A. Mandel.

"The library has to become an organization engaged with the transformation," says NYU’s dean of libraries Carol A. Mandel. Some of the changes that students and professors can expect in coming years, Mandel says, include the movement of more physical books off-site, a reconfigured library with spaces available for more styles of research and collaboration, and a new emphasis on dissemination that will assist educators with all aspects of scholarly communication. But, Mandel notes, certain fundamental functions will not change. "It’s always been the library's role to help scholars discover and use information," she says. "We will continue to do that. And we will still have books on the premises—at least for now."

As with any revolution, not everyone is comfortable with the changes taking place. Hasia Diner, professor of Hebrew and Judaic studies, worries about what will happen to the quality of research when fewer books are available and the only way to engage with texts is online. "Thousands of times I’ve gone up to the stacks to look for one thing, and immediately I’ve been drawn to the book next to it," she says. "That book often turns out to be extremely valuable in my research. You can’t find everything you need through keyword searches. Sometimes you need the slowness of physical browsing, and you need to confront a text in its entirety.”

Despite the move to digital, Mandel insists that libraries are in no danger of becoming irrelevant. On the contrary, she says, they are becoming more useful and their roles more multifaceted. With fewer circulation and cataloging duties, librarians are freer to help with research and technological guidance. "In a sense, the Internet is the world’s biggest library," IFB director Bob Stein agrees. "But it’s a disorganized one, and we need new generations of libraries and publishing to sort through and use information."
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The New Spin

You are closer to judging a candidate by the content of his or her character.

by Courtney E. Martin / GAL ’04

A

s a campaign aide in the tense 1998 Oklahoma gubernatorial race, Chahton Melburn attended a rotary event to repre-

sent his candidate, former state legislator Laura Boyd. When Boyd’s opposition, incumbent governor Frank Keating, arrived, he took one look over Melburn, the only minority in the place, and asked: “Are you serving dinner?”

Only a decade later, the race for the White House has reinvigorated many of the old rules (and behaviors) of politics, notes Melburn, now an assistant professor in the Steinhardt School of Culture, Edu-
cation, and Human Development who studies racial politics in

televised campaigns. “No one says, ‘Let’s cut oil and coal’—there’s just general talk about global warming and conser-

vation. That’s an enormous testa-

ment to the effect lobbying has.”

And the candidates have taken advantage of 527s to make up for their particular campaign weak-

nesses. McCain has relied on these groups, Kerdis says, because of his enormous fund-raising advantages;

the less well-known Obama, who backed out of public financ-

ing for his campaign, has used them to broadcast his vision to a national audience.

Despite their new focus on shaping a candidate’s character, special interest groups still direct what issues make their way to the ultimate policymakers. D.C. Kerdis notes how the candidates have carefully
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The stagnating housing market, spiking energy costs, and slowed spending have upped the pressure on politicians to make promises.

The source of these attacks has changed. More than ever, political parties now share the job of political pandering. “Read my lips: No new taxes.”

For the first time, presidential candidates are touting bold promises to galvanize support in an election year. Many have promised “chicken in every pot” or legislation that “will make the government better known to the average American.”

One candidate, incumbent Governor Frank Keating of Oklahoma, attended a rally wearing a “take the white house back” T-shirt. The other candidates, notes McIlwain, now an assistant professor in the Steinhardt School of Culture, Education, and Human Development, who studies racial appeals in American politics, had help from W. Bush’s administration, which, with an unpopular war, a crippled economy, and unprecedented gas prices, suffers from the least of Bush tax cuts, including those that benefit the richest 1 percent of taxpayers. Don’t just expect another rebate check until 2012.

For CANDIDATES INFLUENCE THE ECONOMY WITH BOLD PROMISES IN EVERY ELECTION CYCLE

by Andrew Flynn

An election year means a pot of gold for American political life. Remember, though, that “no new taxes” John Adams was denied a second presidential term, and that “mega-lomans” Barry Goldwater was kept from even a first? So despite John McCain and Barack Obama’s talk of a new kind of politics, it’s no shock that the rhetoric of character assassination is still the core of presidential campaigns.

Indeed, almost all U.S. recessions since the 1998 Oklahoma gubernatorial race, a campaign McIlwain attended a rally to reframe the Whitewater scandal. For the White House has rewritten many of the old rules (and behaviors) of politics, notes McIlwain, new political in his campaign, has used them to broadcast his vision to a national audience.

Despite their new focus on shaping a candidate’s character, special interest groups still dictate what issues make their way to the public. While the amount of money lobbying groups could give directly to a party, this led to the “moneymarketing” rise of independent “527 groups” — made infamous in the 2004 election by the Swift Boat Veterans for Truth’s attack on John Kerry’s war record—which circumvent donation restrictions by advocating for a specific issue rather than a candidate. And the candidates have taken advantage of 527S to make their particular campaign weaknesses. McCain has relied on these groups, Kerby says, because of his enormous fundraising ability, a rubber stamp; the less well-known Obama, who backed out of public financing for his campaign, has used them to broadcast his vision to a national audience.

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Ironically, this phenomenon has been spurred on by campaign finance reforms, which, Kerby notes how the candidates have carefully danced around the question of fiscal responsibility while pro-

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Ironically, this phenomenon has been spurred on by campaign finance reforms, which, Kerby notes how the candidates have carefully danced around the question of fiscal responsibility while pro-
Beyond the anxious political climate, a recent study appears to confirm Americans’ increasing and earnest support for those deemed nontraditional candidates. Brian McCabe and Jennifer Heerwig (GAL ’05), doctoral candidates at the Graduate School of Arts and Science, found that, contrary to a common thinking, people with college degrees are less likely to give a “right” answer that misrepresents their real action (e.g., whites may say they are comfortable voting for a black president when, in fact, they aren’t). At the same time, voters today are more diverse and more educated than ever before, signaling a potential change in the perception of just who qualifies as “electable.” “Obama’s being black undermines the far reaches of change that Americans are so hung up for,” McIlwain explains. “He was attuned to the public mood and knew it was the time [to run].” Regardless of the outcome in November, Obama, Sarah Palin, Hillary Clinton, and John McCain, have forever changed the nature of political communication. After 43 presidents, pundits can no longer claim that America would not seriously consider a female, a black, or a 70- plus-year-old candidate. This is significant not just for the presidency but for building a federal government that more accurately represents a country in which women make up more than half of the populace and minorities make up a third. McIlwain predicts: “It will be just a little easier for the next female presidential nominee, the next black candidate for Senate, or the next Latino, female congressional hopeful.”

**EARLY IN THE PRIMARIES, CNN CORRESPONDENT JOHN KING SEEMED TO CHANNEL JOHN MADDEN. HE poked at an oversize screen, drawing a squiggly line here to separate regions on a state map and circles there to highlight pockets of the Democratic vote, as if he were analyzing a touchdown strategy. The political play-by-plays were brought to life with a seven- and-a-half-foot “Magic Wall” monitor that could simultaneously pull up vote totals from multiple races, zoom in on counties, and summon charts and graphs, all with a few touches of the screen.**

The man behind the “magic” is Jeff Han, who was working as a computer scientist at the Courant Institute of Mathematical Sciences when he conceived of his “Multi-touch Wall,” originally intended for group computing. CNN unveiled the device during the Iowa caucuses in January 2008 and has used it to simplify election results, often in real time. Here’s Obama doing in Bloomington? Some quick finger taps and viewers were zipping through Indiana to find out. “It’s really helping what news production is for,” Han says, “to disseminate information, educate the viewer, and break down a complicated thing like these multiple elections.”

The new technology appears to pay off: CNN routinely drew more viewers during the primaries than either MSNBC or Fox News Channel and took the lead in the key prime-time demographic of 25- to 54-year-olds for the first time since 2001. Meanwhile, Han’s invention secured him a spot on Time’s 2008 list of the world’s 100 most influential people, and his clients now include film production companies, the government, and even Fox, which followed CNN with a wall of their own, dubbed the “Bill-board.”

Two strong traditions. One even stronger future. Introducing Polytechnic Institute of NYU.

On July 1, 2008, Polytechnic University became an affiliate of New York University and is now Polytechnic Institute of NYU—the most comprehensive school of engineering, applied sciences and technology in the New York area.
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The Class

by Renée Alfuso / CAS ’06

STUDY GLOBAL BUSINESS IS
(A) NEW YORK CITY, (B) LONDON,
(C) Shanghai, or (D) Buenos Aires.

How about all of the above?

Undergrads in the new World Studies Track will study at NYU in New York and at three NYU sites—a total of four continents—before they reach senior year.

“All business today is global,” says program director Joseph Foudy, who’s also a clinical assistant professor of economics and management. “It’s inconceivable that any of my students will do business where they’re not thinking from a global perspective—whether they decide to go into finance or start a restaurant in New York City.”

When the Leonard N. Stern School of Business announced the program last fall, 20 percent of the freshman class was ready to sign up, so the number of slots. The program’s first group of 50 sophomores, now enrolled in an orientation course at Washington Square, will head to London in January for the first of several shared international experiences.

The same classmates will enroll in courses in each location that build on their collective experiences while highlighting the region. One semester they’ll be learning Asian business etiquette over lunch at a Chinese restaurant in the Village, and the next they’re studying Mandarin in Shanghai. Foudy contends there’s no substitute for physical presence. “This is why business people get up at five o’clock in the morning and fly to London for a two-hour meeting only to turn around again,” he says. “There is something even in the age of Web conferencing that you miss when you’re not there.”

Here’s a look at how World Studies Track students will rack up the frequent flyer miles:

NEW YORK, NEW YORK
SOPHOMORE YEAR,
FALL SEMESTER

Sure, the other locales may seem more exotic, but NYC is still the business epicenter of the world.

So before embarking on their journey, students take advantage of lunch trips, and guest speakers who tackle topical issues, such as outsourcing, as part of their Economics of Global Business course. “Being here in the center of things where you can see all these other places and understand the rest of the world,” says Foudy, who teaches the class as a launching capstone project. When they return to the Square as seniors, students reflect on their nation-hopping with a capstone project.

LONDON, ENGLAND
SOPHOMORE YEAR,
SPRING SEMESTER

The language may be the same, but life is different across the pond as students see in their issues in Contemporary British Politics and Culture class. Each week, new guests—from politicians and journalists to soccer club managers and gay-rights advocates—expose the New Yorkers to London’s social sphere. Students also choose from an array of liberal arts and specialized Stern courses, some of which include field trips to banks, manufacturing plants, and this being London—local breweries. The city provides the ideal backdrop for the International Issues & European Perspectives course because, says David-Hillel Ruben, director of NYU in London, it’s a much more cosmopolitan city than any other financial center, even in the States.

SHANGHAI, CHINA
JUNIOR YEAR, FALL SEMESTER

Students cross continents and cultures as they study at NYU in Shanghai—the country’s largest city and Asia’s dynamic financial capital—with classmates from China and the United States. Classes are taught by both NYU and local faculty. In addition to key economics courses, students must take a Chinese language class and Introduction to Contemporary China but are also encouraged to explore topics such as the environment, photography, or Chinese film. Foudy says, “A lot of business students just want to focus like a laser beam, so with this we try to give them a broader scope.”

BUENOS AIRES, ARGENTINA
JUNIOR YEAR, SPRING BREAK

Before heading below the equator, students do an in-depth analysis of a particular Argentinean company as part of an international studies course. Then, once spring break rolls around, they jet to Buenos Aires to tour the company’s facilities and meet with senior management. When they return to New York, students work in teams to distill what they learned on-site into a slide show of strategic recommendations, including ways the company can increase profits and fight off competitors. Buenos Aires is an ideal location for studying business, says Foudy, who calls it “one of the most vibrant markets in the Americas.”

TO STAY COMPETITIVE TODAY, BUSINESS STUDENTS HOPSCOTCH THE GLOBE AND CALL MANY DIFFERENT CAMPUSES HOME.

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To stay competitive today, business students hopscotch the globe and call many different campuses home.

by Renée Alfuso / CAS ’06

What they’re learning
DIVIDING A CAKE IS NOT A BIG ISSUE FOR MOST ADULTS. AS LONG AS EVERYBODY GETS A SLICE, they’re usually happy. But replace them with quarreling kids—He wants more frosting! She got more candles!—and you begin to see the need for a fair method. Now replace the kids with a couple in the throes of divorce, and swap the dessert with a pile of assets, and things can get messy. To solve this problem, Steven Brams, professor in the Wilf Family Department of Politics, who studies game theory and strategies for negotiation, created an algorithm called Adjusted Winner (AW), which regularly gets both parties more than 50 percent of the goods—often even 75 percent. It might sound too good to be true, but AW is based on the premise that people want different things. Brams says. Through a procedure where each party allocates numerical points to items in the package, each initially wins the ones they value more and then certain adjustments are made so that in the end both arrive at a solution that is “near-fair.”

For at least one million years, the Mexican cavefish has lived in darkness. Down in the low-lit pools of its habitat, the fish progressively lost the vision genes in order to conserve energy—a process that took some 500,000 years. But in just one generation, biology professor Richard L. Borowsky has restored sight to the offspring of these fish in just six months. The research, published in Current Biology, and Evolution & Development, reverses thousands of years of regressive evolution and could offer clues to human blindness. “Cave animals can be a model for vision loss,” Borowsky says. “Our research could be the essential vision structures vanished. However, when Borowsky crossed these fish with normal, nonblind fish, the more I realize every cent of first-generation offspring recombined vision genes, 41 percent of first-generation offspring regained eyesight in one particular hybrid group. “We saw a reemergence of the processes that must occur in connection with the brain for vision to be possible,” he says. “These senses that have not been exercised since these fish entered the caves.” Borowsky first studied the cavefish, which involves 6 nations and Brazil, and his lab now boasts one of the nation’s largest collections of cavefish. “The more I study cavefish, the more I realize every change is critical,” he says. “But all share the same characteristics: They’re dark.”

Working with young children and the past seven years working with master’s students learning to teach science. Her call to arms: “Don’t underestimate kids when it comes to science. Teachers, books, and prepackaged demonstrations commonly present science as a static collection of knowledge rather than a process. That’s great if your purpose is to teach fact, but, Kirch says, if you want to teach the process—“how do you analyze data, draw conclusions, evaluate something whether something makes sense to you as a person”—kids must be taught to do their own research and ask their own questions. Given the chance, she has found children are capable of such scientific reasoning. A former bench scientist in molecular and cellular biology now on faculty at the Steinhardt School of Culture, Education, and Human Development, Kirch has also started recording conversations among adult researchers and notes strong similarities with those she encourages among second-graders. Kirch is preparing her preliminary observations for publication.

If all schools follow her lead, the day of the paper-mâché volcano passing as a worthwhile science project may become extinct.
Coming Out of the Dark

by Ted Boscia

For at least one million years, the Mexican cavefish has lived in darkness. Down in the low-lit pools of its habitat, the fish progressively lost unneeded eye function in order to conserve energy—a process that took some 500,000 years. But in just one generation, biology professor Richard L. Borowsky has restored sight to the offspring of these fish in his lab.

The research, published in Current Biology and Evolution & Development, reverses thousands of years of regressive evolution and could offer clues to human blindness. “Cave animals can be a model system for us as we try to identify the genetic markers for vision loss,” Borowsky says. “Our research could be beneficial to humans who have a genetic predisposition to diseases like macular degeneration, cataracts, or other conditions that deteriorate the structure and function of the eye.”

Borowsky and his team focused on four populations of the Mexican cavefish, Astyanax mexicanus, each of which developed the trait independently after evolving from surface tetras. Over time, the fish lost eye pigmentation and its essential vision structures vanished. However, when Borowsky crossbred isolated groups of the cavefish, which recombined vision genes, 41 percent of first-generation offspring regained eyesight in one particular hybrid group. “We saw a reemergence of the processes that must occur in connection with the brain for vision to be possible,” he says. “These are senses that have not been exercised since these fish entered the caves.”

Borowsky first studied the country’s cavefish at the suggestion of a Mexican graduate student more than 15 years ago. Since then, this research has taken him to other far-flung places, such as Thailand and Brazil, and his lab now boasts one of the nation’s largest collections of cavefish. “The more I study cavefish, the more I realize every cave is different,” he says. “But all share the same characteristic: They’re dark.”

science education

YOUNG EINSTEINS

by Matthew Hutson

Recently a group of scientific investigators buried potatoes in the ground to lure local insects and worms. When a young man named Alan reported to the group that the soil invertebrates hadn’t even noticed his potato, his collaborators suggested how the experiment might have gone wrong. After a long discussion, Alan offered another hypothesis the others hadn’t considered: “I’m not even sure the bugs like the potato.” A bold theory for a second-grader.

“He was being critical of not only everything everyone was saying, teachers and students alike, but also of the original text,” says Susan A. Kirch, an associate professor of teaching and learning. Kirch, who witnessed Alan’s insight—and cited it in a recently published paper in the journal Cultural Studies of Science Education—has spent the past four years working with young children and the past seven years working with master’s students learning to teach them science. Her call to arms: Don’t underestimate kids when it comes to science.

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