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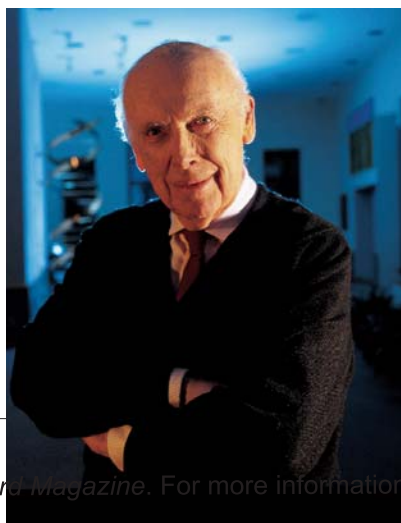
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ANNIE BISSETT

Cambridge 02138

Fairy tales, Chekhov debuts, more on campus architecture

NOT DAZZLED

I SYMPATHIZE with the shocked Athenians and disgusted Germans who visited the exhibit of ancient sculptures that had recently been colored, as depicted in "Dazzlers" (November-December 2007, page 32). Those tarted-up objects have been rendered loathsomely tasteless. Sculptures that have retained the paint put on by their creators, such as the German religious sculptures of the late middle ages and the contemporary Indonesian wooden carvings, are immensely appealing. It is certainly likely that the Greeks and Romans who created those statues had the talent and taste to paint them in a way that would appeal to us as much or more than their unpainted ones do.

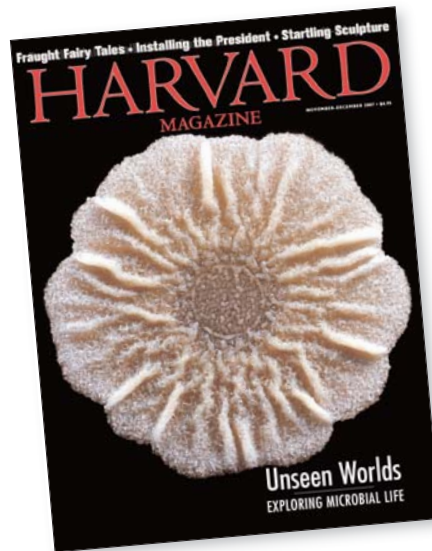
BARBARA R. BERGMANN, Ph.D. '58
Washington, D.C.

AUDEN, AGING

I WAS DELIGHTED to see Adam Kirsch's article on W.H. Auden's "Under Which Lyre" ("A Poet's Warning," November-December 2007, page 23), but was surprised that he misinterprets what seems to me the clear sense of one spot in the poem. He writes of the line "the fattening forties" as follows: "The comedy of the poem, and its prescience, lies in Auden's description of Apollo, the presiding spirit of what he calls 'the fattening forties.'" But the phrase appears in this context:

And those who like myself turn pale
As we approach with raggeding sail
The fattening forties.

Auden was 39 in 1946: he is speaking of his own forties, with their middle-aged changes of metabolism. He's said something uncomplimentary about the undergraduates ("the sophomoric/Who face the future's darkest hints/With giggles or



with prairie squints/As stout as Cortez"); now he makes fun of himself.

WAYNE D. SHIRLEY '57
Durham, N.H.

MYTHS OF CHILDHOOD REVISITED

AS THE HUSBAND of an alumna (Roselyn Juditham Pill, A.M. '49), I am privileged to read your excellent magazine. I particularly appreciated "The Horror and the Beauty" (November-December 2007, page 36), both for its specific content and for stimulating me to remember some of my much-loved childhood reading. While I have little memory of reading or hearing the sort of fairy tales recounted in the article, I have very strong and exciting memories of the King Arthur stories, the Robin Hood stories, and the legends of the Scandinavian gods. I am delighted that Maria Tatar persisted in her efforts to study and analyze the myths of childhood, and I thank Craig Lambert for bringing her work to your pages.

ROBERT F. STEINHART
Springfield, N.J.

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CHEKHOV CHECK-UP

THE RUSSIAN theatre history conveyed by Craig Lambert ("The Actor Explores," November-December 2007, page 19) is off the beam. Only two, not three, of Chekhov's four major plays received their "world premieres" at the Moscow Art Theatre: *Three Sisters* (1901) and *The Cherry Orchard* (1903). *The Seagull* was first staged at the St. Petersburg Alesandra Theatre in 1896. As for *Uncle Vanya*, it was first produced by the Rostov-on-Don Dramatic Society in 1897. Nor could Nemirovich-Danchenko have founded the Art Theatre school in 1943: he died in April of that year, while the theatre's staff and leaders were scattered, due to evacuations during the Nazi onslaught on Moscow. The studio-school was indeed founded that year, but in his name and memory, not by him.

LAURENCE SENELICK, Ph.D. '72
Fletcher professor of drama and oratory
Tufts University
Medford, Mass.

ROTC

IT WAS a nice touch to mention the ROTC color guard's participation in President Faust's installation ceremony (November-December 2007, page 57). I hope it is not lost on the University community and alumni that despite the debarment of ROTC from Harvard, these excellent young Americans did their duty to Harvard

on [this occasion]. I hope that I am able to receive my January-February [and subsequent] editions of *Harvard Magazine* during my upcoming return engagement in Iraq. I pray that the Harvard community enjoys yet another delightful spring in Cambridge, basking in the warm glow of self-righteousness of a University policy that works to deny a handful of students the opportunity to explore the fulfillment of duty and the kinship of service to our nation, in a misguided effort to promote equality.

LT. COL. ROBERT BRACKNELL, LL.M. '06
U.S. Marine Corps

BIRDING STILL

I ENJOYED the biography of ornithologist William Brewster (Vita, November-December 2007, page 42), although a statement about the Nuttall Ornithological Club, which he helped found, is misleading: "The club flourished for years, and issued regular bulletins." Indeed, the club still flourishes to this day, still regularly publishes ornithological works, and still meets monthly at Harvard, as its website attests [<http://nuttallclub.org>]. I trust that it also still encourages undergraduates to devote their lives to the study of birds, such as I have done.

JACK P. HAILMAN '58
Professor emeritus of zoology
University of Wisconsin-Madison
Jupiter, Fla.

Exemplary Contributors



Joan
Wickersham

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The Smith-Weld Prize—in the memories of A. Calvert Smith '14, formerly secretary to Harvard's Governing Boards and executive assistant to President James Bryant Conant, and Philip S. Weld '36, former president of the magazine—celebrates thought-provoking journalism about the University. Joan Wickersham's perceptive September-October cover story, "Bricks and Politics," on the design of campus buildings in Harvard's urban setting, is especially timely at the dawn of new construction in Allston.



Dan Page

Photographer Robert Adam Mayer wonderfully portrayed columnist and critic Frank Rich in his New York City milieu for the March-April cover article. We have been pleased to feature his lively, creative work on several previous occasions as well.

Illustrator Dan Page has demonstrated uncommon skill and style in bringing memorably to life complex and abstract ideas, as he did for the July-August feature, "Debtor Nation," on America's finances and economy—an unusually challenging assignment.



Robert Adam
Mayer

With great thanks, the editors wish to recognize three contributors to *Harvard Magazine* during 2007,

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ARCHITECTURE ENCORE

JOAN WICKERSHAM's "Bricks and Politics" (September-October, page 50) provides a fascinating glimpse into the inner workings of how Harvard's architectural decisions are made, which is critically important given the development of Allston. Unfortunately for Harvard, it seems that the cacophony of voices that have shaped recent construction have resulted in a series of discordant buildings (including One Western Avenue) that can politely be called unattractive. But it shouldn't be that hard to agree on at least some of the elements of an attractive building: the use of stone over concrete, detailed masonry, stained and leaded glass, woodwork, and buildings consistent in size with the community. Perhaps Harvard should consider Princeton's recently constructed Whitman College as a reasonable example. Or for true inspiration, a nice visit to Cambridge, England, wouldn't hurt.

JAY BIKOFF, PH.D. '07
Cambridge



JOAN WICKERSHAM uses as a measure of architectural excellence at Harvard and other area colleges the Harleston Parker Medal awarded annually by the Boston Society of Architects, and ponders why Harvard, by this measure, hasn't fared better. Since she evaluates only the years 2000 and later, the Carpenter Center does not come up. The selection of Le Corbusier as the architect for the center was one of the most significant in Harvard's history and one of the most controversial: In 1963 I chaired the Harleston Parker Committee which chose the Carpenter Center for the award...only to have our selection overturned by the BSA membership voting in its annual meeting, the first time in the medal's long history that that had happened. The following year a new committee again selected the Carpenter Center for the award. And this time it passed...a sort of redemption for everyone.

WALTER S. PIERCE, F.A.I.A.
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LETTERS

PROFESSORS' POLITICS ENCORE

I CAN'T LET Park Weaver Jr.'s sly insinuation (Letters, November-December 2007, page 7) that "Tenured professors... are just extremely jealous of the harder-working citizen..." stand. The tenured professors I know are harder-working than anybody else, working essentially all the time to find and codify knowledge while teaching their students. Weaver misunderstands higher education if he thinks that tenured professors on the whole aren't extremely hardworking.

JAY M. PASACHOFF '63, Ph.D. '69
 Field Memorial professor of astronomy
 Director, Hopkins Observatory
 Williams College
 Williamstown, Mass.

IT MAKES a distinctly bad impression if the only letters regarding the Harvard Portrait of Howard Gardner (September-October 2007, page 61; letters, November-December, pages 6-7) represent the antediluvian attitude of the most naive free-enterprise ideology. If no one has the right to tell economic freeloaders how much money they can make, it must be that all anti-monopoly laws and all taxes on income are absolutely immoral. Without some constraints, which can be exercised only by government, private enterprise will achieve its natural goal of universal monopoly. Besides, there is an elementary moral argument against those super-confidently "self-made men," most of whom made their pile by not giving much of a share to those who did their work and made them their money.

ARNOLD SIMMEL '47
 New York City

THANK YOU, TOO

PUBLISHER'S NOTE: A list of magazine donors published in the last issue inadvertently omitted Arthur D. Levin '54, M.B.A. '60, who generously donated \$500 in 2007. Our apologies—and our sincere thanks.

SPEAK UP, PLEASE

Harvard Magazine welcomes letters on its contents. Please write to "Letters," Harvard Magazine, 7 Ware Street, Cambridge 02138, send comments by e-mail to yourturn@harvard.edu, use our website, www.harvardmagazine.com, or fax us at 617-495-0324. Letters may be edited to fit the available space.

Right Now

The expanding Harvard universe

A CULTURAL SYMPTOM?

Repressed Memory

ARE SOME experiences so horrific that the human brain seals them away, only to recall them years later? The concept of “repressed memory,” known by the diagnostic term dissociative amnesia, has long fueled controversy in psychiatry. During the 1980s, claims of childhood sexual abuse based on recovered memories led to a spate of highly publicized court cases. A number of the supposed victims retracted their allegations in the early 1990s, admitting that they had been swayed by therapeutic techniques. Yet the scientific validity of dissociative amnesia has remained contested ground.

In a recent study, professor of psychiatry Harrison Pope, co-director of the Biological Psychiatry Lab at Harvard-affiliated McLean Hospital, put “repressed memory” to the test of time. He reasoned that if dissociative amnesia were an innate capability of the brain—akin to depression, hallucinations, anxiety, and dementia—it would appear in written works throughout history. In collaboration with associate professor of psychiatry James Hudson, Michael Parker, a professor of English at the U.S. Naval Academy, Michael Poliakoff, director of education programs at the National Endowment for the Humanities, and research assistant Matthew Boynes, Pope set out to find the earliest recorded example of a “repressed memory.”

The survey yielded various nineteenth-century instances: best known were *A Tale*

of Two Cities (1859), by Charles Dickens, in which Dr. Manette forgets that he is a physician after his incarceration in the Bastille, and *Captains Courageous* (1896), by Rudyard Kipling, in which “Penn,” a former minister, loses his memory after his family perishes in a flood and recalls that trauma only after being involved in a collision at sea. But the survey turned up no examples from pre-modern sources.

The researchers then offered a \$1,000 reward—posted in three languages on more than 30 Internet websites and discussion groups—to the first person to identify a case of dissociative amnesia in any work of fiction or nonfiction prior to 1800. They received more than 100 responses, but none met the “repressed memory” criteria. Although many early texts describe ordinary forgetfulness caused by natural biological processes, as well as instances of individuals forgetting happy memories and even their own identities, there were no accounts of



an inability to recall a traumatic experience at one point and the subsequent recovery of that memory.

In a report of their findings published in *Psychological Medicine*, Pope and his colleagues concluded that the absence of dissociative amnesia in works prior to 1800 indicates that the phenomenon is not a natural neurological function, but rather a “culture-bound” syndrome rooted in the nineteenth century. They argued that dissociative amnesia falls into the diagnostic category “pseudo-neurological symptom” (or “conversion disorder”)—a condition that “lacks a recognizable medical or neurological basis.”

The authors have also refuted a number of alternative hypotheses that might explain their survey results. For instance, they argued, the fact that pre-nineteenth-century societies may have conceptualized memory differently than we do cannot account for the lack of recorded descriptions of dissociative amnesia. “Our ancestors had little understanding about delusions and hallucinations,” Pope points out. “They didn’t know about dopamine in the brain or things we now know cause paranoia or auditory hallucinations, but descriptions of hallucinations [appear] in literature for hundreds of years and from all over the world.” Similarly, “If an otherwise lucid individual spontaneously develops complete amnesia for a serious traumatic event, such as being raped or witnessing the death of relations or friends,” the researchers explained, “a description of such a case would surely be recognizable, even through a dense veil of cultural interpretation” such as spirit possession or some other supernatural event.

What, then, accounts for “repressed memory’s” appearance in the nineteenth century and its endurance today? Pope and his colleagues hope to answer these questions in the future. “Clearly the rise of Romanticism, at the end of the Enlightenment, created fertile soil for the idea that the mind could expunge a trauma from consciousness,” Pope says. He notes that other pseudo-neurological symptoms (such as the female “swoon”) emerged during this era, but faded relatively quickly. He suspects that two major factors helped solidify “repressed memory” in the twentieth-century imagination: psychoanalysis (with its theories of the unconscious) and Hollywood. “Film

is a perfect medium for the idea of repressed memory,” he says. “Think of the ‘flashback,’ in which a whole childhood trauma is suddenly recalled. It’s an ideal dramatic device.”

Shortly after publication of their paper, the investigators awarded the \$1,000 prize to the nominator of *Nina*, an opera by Dalayrac and Marsollier performed in Paris in 1786. (Forgetting that she saw her lover apparently lying dead after a duel, the heroine waits for him daily at an appointed spot. When the young man

reappears, Nina first seems to recognize him, then doubts his identity, and only slowly accepts him for who he is.) Pope says he and his colleagues were a few years off their threshold of 1800, but he believes their argument holds: “The challenge falls upon anyone who believes that repressed memory is real to explain its absence for thousands of years.”

—ASHLEY PETTUS

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WINGED MIMICRY

Tinker, Tailor, Robot, Fly



SMALL, WINGED INSECTS have a reputation for accidentally buzzing into closed windows or swooping into your eye during a bike ride. But the research of Robert Wood, assistant professor of engineering and applied sciences, may cause you to look twice at your next fly.

Wood has been perfecting a robotic fly whose eventual applications might include locating survivors trapped in mines and spying in wartime. (The research is funded by the Defense Ad-

A breakthrough in microrobotic engineering, this artificial fly weighs as much as a few grains of rice, and may prove useful for search and rescue operations, hazardous environment exploration, environmental monitoring, and reconnaissance.

vanced Research Projects Agency, within the Department of Defense.) Now in his second year at Harvard, he began working on the project while a graduate student at the University of California, Berkeley in the late 1990s. The ambitious undertaking was, in many ways, the



The fly's wings, made of polymers that respond to an electric current, flap and rotate like those of a real fly, beating 120 times per second.

wrong project for Wood at the time. His interest in control theory—an engineer's perspective on how systems work—made him eager to develop a way to manage such a device. One small problem: “If you want to control them, you’ll have to build them first,” his adviser told him. Wood, with a background in electrical engineering, would have to become a mechanical engineer.

That crossover, which has lasted almost a decade, began with months of research alongside biologists to study the complex wing movements of houseflies, bees, and fruit flies to better mimic the mechanisms that give them flight. Then came the hard part.

Designing an automated fly implied having the ability to make lightweight, miniature working parts, a process that Wood says took up the bulk of his doctoral study, because of the lack of any previous research on which to draw. “For years, the thrust of our work was ‘How do we do this?’” says Wood. “There was no existing fabrication paradigm, given the scale we were operating on, the speed we wanted to operate with, and things like cost, turnaround, and robustness.” His research group developed and fabricated a laser carving system that could meticulously cut, shape, and bend sheets of carbon fiber and polymer—both strong but lightweight materials—into the necessary microparts.

And how to power those wings to beat 120 times per second? To keep this 60-milligram robot (the weight of a few grains of rice) with a 3-centimeter wingspan to a minimal size and weight, Wood says, you can't simply use a shrunken version of the heavy DC (direct current) motors used in most robots. So he and his team settled on a simple actuator: in this case, a lay-

ered composite that bends when electricity is applied, thereby powering a micro-scale gearbox hooked up to the wings. Wood says the actuator works even better than its biological inspiration. The power density—a measure of power output as a function of mass—of a fly's wing muscles is around 80 watts per kilogram; Wood's wing design produces more than 400 watts per kilogram.

The first takeoff occurred late one evening last March, as Wood worked alone in his office, his colleagues gone for the evening. As the fly rose, Wood jumped up in celebration, quickly verified that his camera had captured the flight, and let out a sigh of relief.

Success meant that Wood could finally turn to those questions that weren't worth asking until the fly took off: Is the shape of a fly's wings (a less-than-optimal design which Wood improved on in his robotic version) a biological limitation, or does it somehow aid the fly's aerodynamics? Does a four-winged insect offer a design improvement? Even questions of evolutionary biology come into play: Why did all the four-winged arthropod flyers of the late Carboniferous period evolve to have two wings?

Wood figures he is still only one-third of the way toward his goal of creating an autonomous flying robot. But the next step should be at least as rewarding, considering that it will include a focus on control of the insect—the reason he first got involved in the project years ago. His fly now runs on electricity transmitted via thin wiring from high-voltage amplifiers, but he aims to add an on-board power source. Initially, he hopes for five minutes of flying time, which will be extended as the battery options improve.

Eventually, he hopes to program insect



Visit harvard-mag.com/extras to watch a microbotic fly from Wood's laboratory

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robots to work in a group. “We want a human operator to be able to take out his batch of flies and say, ‘I want you guys to search for carbon dioxide’—a survivor breathing in a collapsed building,” he explains. From there, Wood sees the possibility of building group behaviors into a swarm: a means of pursuing his interest in the study of emergence, which examines how simple organisms such as ants can produce complex group structures.

Wood’s efforts to replicate nature extend beyond the fly: he has worked on a robotic minnow-sized fish, a cockroach-sized crawling robot, and even a “hummingbird.” These experiences in engineering biological structures left him awed and inspired. “If I could go back in time and choose again the field I would get into,” he says, “it might be a toss-up between engineering and biology.”

—DAN MORRELL

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ROBERT WOOD WEBSITE:

<http://micro.seas.harvard.edu>

When Farmers Met Foragers

A QUESTION MARK has long hovered over human transitions from hunting and gathering to farming: did agriculture spread by communication—in archaeological parlance, by diffusion? Or did the early practitioners of farming migrate, carrying their technology with them, and displace native hunter-gatherers? In the American Southwest, at least, a tentative answer may be in hand, stored in some of the most banal artifacts held by Harvard’s Pea-

body Museum: prehistoric wads of chewed leaves called “quids,” and thong-like “aprons,” fashioned from shredded juniper bark, stained with what is presumed to be menstrual blood.

Prehistoric quids—wads of masticated leaves found in dry rock shelters—are yielding DNA clues to the origins of farming in the American Southwest.



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In an unusual cross-disciplinary collaboration funded by the provost's office, the museum's director of collections, Steven LeBlanc, teamed with Harvard Medical School's Thomas Benjamin, a research professor in pathology whose lab normally studies mouse cancer, to recover DNA thousands of years old from the artifacts. They focused on mitochondrial DNA, which is passed from mother to child for generation after generation, and which exists in a thousand copies per cell, and extracted it successfully from about a quarter of the quids they sampled, and from a smaller fraction of the aprons. What they found in their small sample from an early corn-growing culture suggests that in this part of the New World, at least, migrating Uto-Aztecs from Mexico probably did not pass their technology to the indigenous hunter-gatherers, but instead out-reproduced and replaced them.

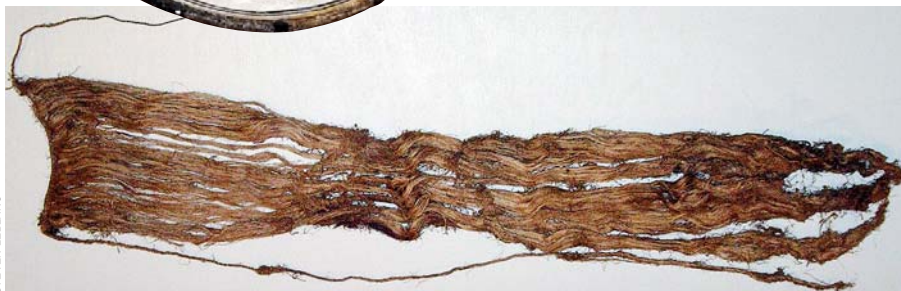
LeBlanc says this theory—that farmers spread north from central Mexico—was advanced by Peter Bellwood of Australian National University in a controversial 2005 book, *First Farmers*. “Bellwood argues that this is a worldwide pattern of how farming spreads: by migration, not diffu-

sion,” he explains. There were exceptions: places where “the foragers were either dense enough or close enough socially and technologically to the farmers that they were able to adapt. In Europe, it looks like the Basques are an example, and Scandinavia is an example,” LeBlanc says. Different geographical conditions—high altitude, or cold climates not conducive to growing crops—may have momentarily checked the farmers’ advance, giving hunter-gatherers on the other side of the pause line a chance to react. In the American Southwest, he notes, there is a Zuni-speaking population on the Arizona-New Mexico border that took up corn farming without being swamped by an Uto-Aztec influx.

But “the general pattern suggests that foragers have trouble switching to farming,” he reports, because becoming a farmer requires more than just having seeds. It means staying in the same place, storing food year-round, and changing social behavior: foragers, who often live by an ethic of sharing, would have faced “an enormous potential freeloader problem,” he says. Becoming a farmer requires changing that ethic to a policy that says, “I am not going to share completely, because I’ll starve if I do.”

LeBlanc describes his study as “one little piece of a very large chain of investigation,” but the work has nevertheless demonstrated the efficacy of using DNA analysis on objects held in museums. “The FBI does it all the time,” he says, “but archaeologically, this is the first time that anybody has ever done such a thing.” The earliest artifact LeBlanc and Benjamin studied was

A prehistoric Mimbres bowl from southwestern New Mexico illustrates how women wore thongs (called aprons) secured at the waist by a belt, with the ends dangling behind. Such artifacts (below), stained with blood that yields recoverable DNA, are often found balled up at excavation sites in the region.



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about 2,400 years old; whether the methodology is directly transferable to answer similar questions in Europe, for example, where farming's spread began thousands of years earlier, remains unknown. An answer will also depend on what sorts of objects have been saved from excavations there.

"What archaeologists think of as artifacts does change over time," LeBlanc

notes. Quids—yucca, agave, or cornstalks, probably chewed for perceived or actual medicinal benefit—don't appear in collections from some of Harvard's earliest expeditions. "By 1910, the concept of what to save was growing," he says, and quids were routinely collected, but even as late as the 1960s there were young researchers who didn't save coprolites. "They'd throw them at each other be-

cause they thought it was funny," he says. "Fortunately," he adds, "there were people who believed such objects were important, knew where they were kept, and continued to keep them," says LeBlanc. "The key is the quality of the collection."

~JONATHAN SHAW

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ABUSE MISCUE

Litmus Test for a Law

Until the mid 1980s, victims of domestic abuse who called the police could expect the officers to do little more than tell the abusive spouse to walk it off. But then two things happened. In 1984, a Connecticut woman successfully sued her city's police department after her husband stabbed her and then, in sight of an officer standing idle in the house, kicked her in the head. The same year, police in Minneapolis released a study showing that arresting abusers, rather than counseling them or sending them away for a few hours, greatly reduced the risk of future violence. As a result, many states began adopting mandatory-arrest laws that require police to take perpetrators (who are mostly men) into custody. Today 22 states, plus Washington, D.C., enforce either mandatory or pro-arrest laws, which have generally been seen as a boon for abuse survivors.

But are they? According to a recent

study by economist Radha Iyengar, the murder rate between intimate partners is more than 50 percent higher in states with mandatory-arrest laws than in those without. Iyengar, a Robert Wood Johnson Scholar in health-policy research at Harvard's Institute for Quantitative Social Science, analyzed homicide data across the country from 1976 to 2003, a period during which murder rates—including homicides among non-intimate family members such as parents and children (which fall under the jurisdiction of mandatory-arrest laws)—dropped overall. "For months I thought I must be coding something wrong," she says, but her analyses ruled out other possible explanations, including increased unemployment rates, cuts in police funding, and spikes in other types of crime. After speaking with representatives from domestic-violence organizations across the country, Iyengar began to suspect that the laws aren't necessarily helping victims, in part

because victims may not like the laws.

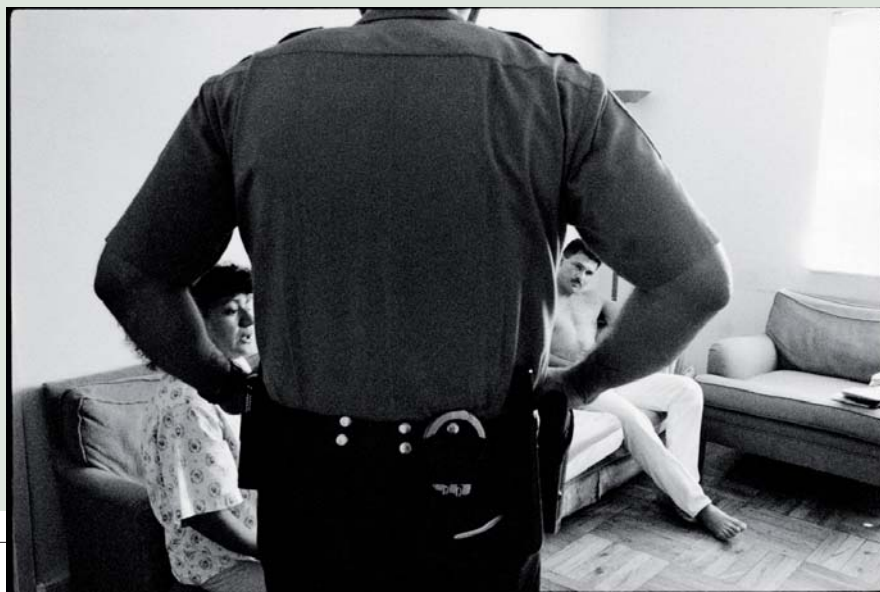
"A big problem is that victims didn't want to call the police after the laws were implemented," she says. The reasons for this are unclear, making it harder to find solutions. If victims stay quiet because of psychological ties to their abusers, harsher punishments won't entice them to call, but more support services might. Victims may also know that, if they don't take the further step of pressing charges, their partners will return home within a day, possibly raging even more. In some states, like Connecticut, where the first mandatory-arrest laws were passed in 1986, police frequently arrest both the victim and the abuser because they're unsure who's who. If there are children in the household, parents who know there's a risk of dual arrest may decide a call isn't worth potentially losing the children to social services.

After Iyengar published her findings in a *New York Times* op-ed last summer, several domestic-violence advocates criticized the study, saying that it didn't account for the complexities of spousal abuse. Iyengar, who has volunteered with the National Network to End Domestic Violence, acknowledges the criticism, and offers recommendations few would argue with: more police training to help eliminate dual arrests, and more support services (such as housing and counseling) for abuse victims. But she also points out, "At the same time, we need large-scale evaluations of policies. The solution is not to keep bad laws on the books. If we think these laws need more teeth in the criminal-justice system and more bite to be effective, then let's do that."

~KATHARINE DUNN

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Taking Stock of Celebrity

FOR ANITA ELBERSE, whose latest research investigates the impact of big-name stars on films' revenues, pop culture and rigorous analysis are not mutually exclusive. Elberse (pronounced EL-ber-see), an assistant professor of business administration, applies statistical methods to the concept of celebrity, showing how models from marketing, management, and group dynamics can help us understand stardom and its economic consequences. With methods that others have used to study the impact of company name changes, new product introductions, and celebrity product endorsements, Elberse has concluded that a famous name is worth about \$3 million in box-office ticket sales.

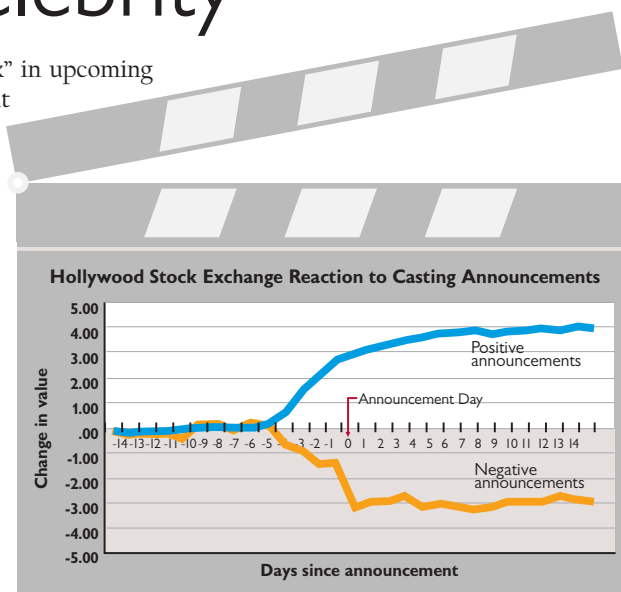
Although astronomical salaries indicate that certain actors provide something valuable for movie studios—why make such a big investment if it gets no return?—proving that hypothesis by putting a number to the value of a particular superstar cast member is difficult because each movie is made only once. To take the example Elberse used in a paper published recently in the *Journal of Marketing*: it's impossible to know how the movie *Cold Mountain* would have done with Tom Cruise, a rumored contender for the film's male lead, instead of Jude Law, who ultimately played the part.

But Elberse, whose previous research had focused on the media, entertainment, and sports industries, was familiar with the Hollywood Stock Exchange, a Web-based market simulation that allows par-

ticipants to trade "stock" in upcoming films. Elberse knew that there was a strong correlation—a factor of .94—between a particular picture's value on the exchange and its box-office revenues, with \$1 on the exchange translating to \$1 million in revenue during a picture's first four weeks of theatrical release. Because participants in the exchange can trade "stock" in a picture for several months, and in some cases for a period of years, before a film's release date, the exchange allows Elberse to track reactions to casting announcements and to quantify participants' expectations for a film's performance accordingly.

In the case of *Cold Mountain*, a 2003 Civil War drama based on a prizewinning novel, the film's value on the exchange dropped by \$21.50 with the announcement that Tom Cruise would *not* play the male lead. When Miramax announced that Jude Law would fill the role, and Nicole Kidman and Renee Zellweger the two major female roles, the film's price rose, although not to its Tom Cruise levels.

Interestingly, adding a star's name to a film's roster can also *reduce* the film's value. This happened in the wake of announcements that Jessica Biel would appear in the



Harvard Business School professor Anita Elberse found that films' values on the Hollywood Stock Exchange, an Internet-based market simulation, responded to announcements about big-name actors who were joining or leaving their casts.

2003 remake of *The Texas Chainsaw Massacre* and that Alec Baldwin was in negotiations to star in *The Cat in the Hat*. Elberse says such negative adjustments may simply reflect an expectation that a bigger name would appear in the role.

The idea that big-name stars bring home the bacon for movie studios may not seem surprising, but it does challenge the school of thought that claims stars are paid highly for no good reason. Although the occasional low-budget film with a no-name cast still makes it big, Elberse predicts these sleeper successes will become rarer. As box-office receipts shrink compared to revenues from other distribution methods—Blockbuster, Netflix, TiVo, Vudu—motion-picture companies count on theatrical releases more for advertising than for ticket sales. Big-budget, high-grossing films generate publicity and word of mouth that prompt people to add a movie to their list to watch later. As this trend continues, "I don't think stars will go away" as a force in the film industry, says Elberse; in fact, she predicts movie megastars' fortunes will only rise. ~ELIZABETH GUDRAIS

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HOLLYWOOD STOCK EXCHANGE WEBSITE:

www.hsx.com



After the announcement that Tom Cruise would not play the male lead in *Cold Mountain*, the movie's value on the Hollywood Stock Exchange dropped by \$21.50, indicating a drop of \$21.5 million in traders' expectations for the movie's ticket sales. The price rebounded on news that Jude Law and Nicole Kidman (pictured) would star in the film.

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Chart by Stephen Anderson

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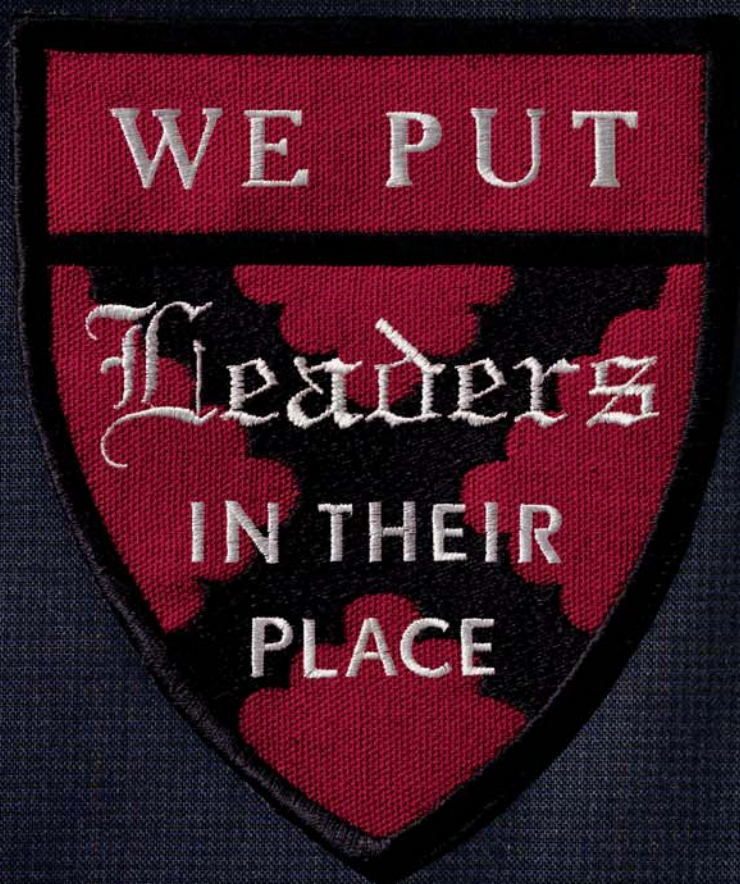
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The American Repertory Theatre

www.amrep.org; 617-547-8300

- February 9 through March 16

Julius Caesar. This production presents three of Shakespeare's most vivid characters—Caesar, Brutus, and Mark Antony—as they grapple with tyranny, political ambition, and revolution.

DANCE

www.fas.harvard.edu/-dance

617-496-2222; 617-495-8683

- February 14 at 8 P.M.

The Harvard Dance Center presents the Taylor 2 Dance Company: six dancers who perform excerpts from works by the

contemporary choreographer Paul Taylor. 60 Garden Street.

FILM

The Harvard Film Archive

www.harvardfilmarchive.org

Visit the website for complete listings.

617-495-4700

- January 11-14

A Tribute to Ingmar Bergman

- February 15-18

Director Arthur Penn will be on hand for a retrospective of his work, which includes screenings of *Bonnie and Clyde*, *Night Moves*, and *The Missouri Breaks*.

MUSIC

Harvard Jazz Bands

www.harvardclub.com

617-496-2263

- February 22 at 8 P.M.

Harvard student jazz combos perform for top prizes. Free and open to the public.

Sanders Theatre

www.boxoffice.harvard.edu

617-496-2222

- January 18 at 8 P.M.

Ladysmith Black Mambazo, the South African a cappella group.

- January 19 at 8 P.M.

A *Joyful Noise Concert* honors the legacy of the Reverend Martin Luther King Jr. Presented by the Cambridge Multicultural Arts Center.

- February 3 at 3 P.M.

Winter Thaw offers Mendelssohn and Beethoven performed by the Pro Arte Chamber Orchestra.

NATURE AND SCIENCE

The Arnold Arboretum

www.arboretum.harvard.edu

617-524-1718

- January 12, 1-3 P.M.

The opening reception for *Changing Nature*, with photographer Erik Gehring, who has been shooting images at the 265-acre site during the last two years. (On March 12 at 6 P.M., Gehring gives a lecture about his work.)

The Harvard-Smithsonian Center for Astrophysics

www.cfa.harvard.edu/events.html

617-495-7461.

Lectures and rooftop viewings (weather permitting) on January 17 and February 21 at 7:30 P.M.

Phillips Auditorium, 60 Garden Street.

Left to right: *Layla and Majnun*, an Indian opaque watercolor on paper, circa 1725; a wintry scene at the Arnold Arboretum; and dancers with the Taylor 2 Dance Company at the Harvard Dance Center.

FROM LEFT TO RIGHT: COURTESY OF IMAGING DEPARTMENT, HARVARD UNIVERSITY ART MUSEUMS; ©PRESIDENT AND FELLOWS OF HARVARD COLLEGE; COURTESY OF THE ARNOLD ARBORETUM; COURTESY OF THE HARVARD DANCE CENTER



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Pusey Library 617-495-2413

• Through January 18

Communicating with Geography offers highlights from the 10,000 colorful map-bearing postcards that were collected over many decades by Siegfried Feller and donated recently to the Harvard Map Collection.

• **Cabot Science Library**

<http://hcl.harvard.edu/libraries/#cabot>

617-495-5324 or 496-5534

• Through January 23

Baby Flamingo Has Two Daddies: Sex, Gender, and Sexuality in the Animal Kingdom features biological research suggesting flexibility in sex and gender roles among animals.

EXHIBITIONS

Harvard Museum of Natural History

www.hmn.harvard.edu

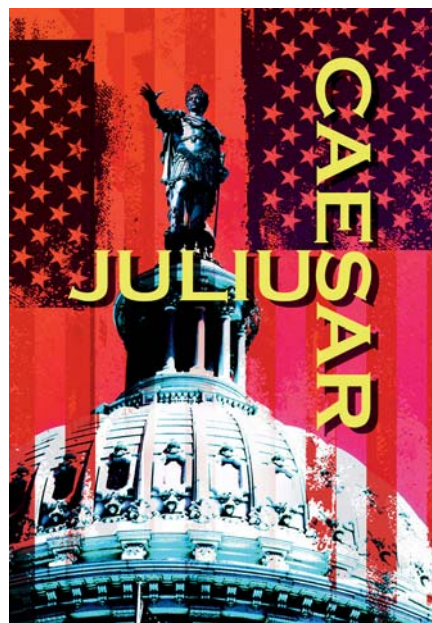
617-495-3045

• February 5 at 6 P.M.

Geneticist and explorer Spencer Wells talks about the history of human migration and the National Geographic Society's "Genographic Project."

• February 13 at 5:30 P.M.

Gallery talk with photographer Henry Horenstein, whose *Looking at Animals* exhibit features haunting close-up images of creatures from both land and sea. Reg-



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istration required through the Harvard Alumni Association: call 617-495-1920 or e-mail haa_alumnieducation@harvard.edu.

• February 14 at 6 P.M.

The museum's 2008 *Evolution Matters* lecture series kicks off with Moore professor of biological anthropology Richard Wrangham, and features other lecturers throughout the spring. For further details, visit the museum's website, or call 617-495-2773. Free and open to the public.

Peabody Museum of Archaeology and Ethnology

www.peabody.harvard.edu

617-496-1027

• Continuing: *Vanished Kingdoms: The Wulsin Photographs of Tibet, China, and Mongolia, 1921-1925.*

Semitic Museum

www.fas.harvard.edu/-semitic

617-495-4631

Continuing: *The Houses of Ancient Israel: Domestic, Royal, Divine* features a full-scale replica of an Iron Age (ca. 1200-586 B.C.E.) village house.

Fogg Art Museum

617-495-9400/9422

• Through January 31

Contemporary Art from the Harvard Collections examines a range of objects, including works by Ellen Gallagher, Edward Ruscha, Rudolf Stingel, and Sol LeWitt.

• Opening February 28

Long Life Cool: Photographs by Moyra Davey offers 40 works that magnify everyday images and objects often overlooked, such as newspapers, money,



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NEW ENGLAND REGIONAL SECTION

empty bottles, and objects atop a refrigerator.

Sackler Museum

617-495-9400/9422

• Through January 20

Gods in Color: Painted Sculptures of Classical Antiquity presents full-scale copies of Greek and Roman sculpture whose

painted decoration has been painstakingly restored.

• Through January 27

A Tradition Redefined: Modern and Contemporary Chinese Ink Paintings from the Chu-tsing Collection, 1950-2000 offers 60 works, many never before displayed here.

LECTURES

Radcliffe Institute for Advanced Study

www.radcliffe.edu

617-495-8600

• February 4 at 4 P.M.

Author Vivian Gornick talks about *"The Rise and Fall of the Jewish-American Novel."*

Radcliffe Gymnasium, 10 Garden Street.

• February 21 at 5:15 P.M.

617-495-8647/8600

The Boston Seminar Series on the History of Women and Gender presents *"Every History Has Its History: The Creation of Femi-*



HARVARD FILM ARCHIVE

nist Origins Stories" with scholars Lisa Tetrault and Melanie Gustafson. Schlesinger Library, 10 Garden Street. Registration required.

• February 22 at 2 P.M.

Yale historian Glenda Gilmore lectures on *"Guts, Greyhounds, and Gandhi: Pauli Murray's Civil Rights Movement, 1935-1973."* Radcliffe Gymnasium, 10 Garden Street.

Events listings also appear in the *University Gazette*, accessible via this magazine's website, www.harvardmagazine.com.

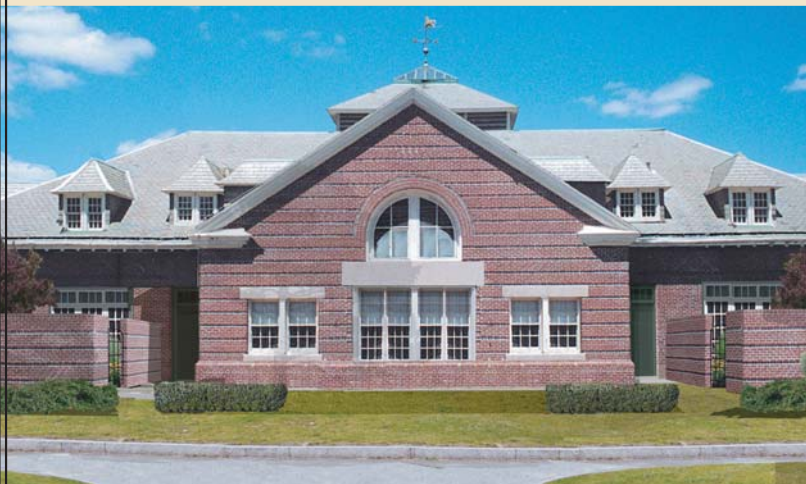


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Aging Gracefully at Home

Older New Englanders plan for the future • by Nell Porter Brown



AS BOARD PRESIDENT of Staying Put in New Canaan, Tom Towers, M.B.A. '64, believes in self-reliance. The Connecticut organization, modeled after Boston's Beacon Hill Village, provides practical services, classes, and community connections for town residents choosing to grow old in their own homes. "This is about helping ourselves," says Towers, a retired telecommunications executive. "It means 'Don't feel sorry for yourself getting old! Get off your duff and do something about it.'"

Such private, nonprofit groups are springing up in New England and else-

where in the country as part of the popular movement dubbed "aging in place." Staying Put opened for membership in October and offers transportation, help with errands, social gatherings and trips, a list of recommended tradespeople and home-healthcare agents, and a resource center for the elderly in a town where more than a third of the 16,000 residents are over the age of 50. Members pay an annual fee—\$360 for a single person and \$480 for a couple—for access to services. Staying Put will also take on a cadre of high-school volunteers (with their own extracurricular community-service requirements to fulfill) to do things like

shovel walkways in the winter or help clean out a basement. "If a member is suddenly in the hospital, for example, we can get someone to walk their dog," says Staying Put executive director Jane Nyce. "We're expecting to find a long list of surprising things that people will need."

The vast majority of seniors in America want to live at home as long as they can, according to AARP surveys. Group discounts on services, a collegial community of peers, and organized support through groups like Staying Put make that understandable desire more feasible than ever before.

The idea is so popular that within the last few years, groups have formed (or are in the planning stages) in Bronxville, New York (and other parts of Westchester County); Greenwich and Darien, Connecticut; Nashua, New Hampshire; Falmouth, Massachusetts; Burlington, Vermont; and Cambridge. Towers and other "senior social entrepreneurs" (as he puts it) are not opposed to assisted-living or retirement communities. But, they say, those places can often feel isolated and homogenous. Cambridge at Home board member Jay Lorsch, Kirstein professor of human relations at Harvard Business School, says the new group "enables us to live in our homes a lot longer than we'd otherwise be able to do—without going into retirement homes, which have be-

Above: Tom Towers at a gathering for Staying Put in New Canaan

come retirement homes, which have be-



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come very institutional and, for a lot of people, unpleasant places to be. America being America, most of us have grown children and grandchildren all over the world,” Lorsch adds. “It’s probably true that this is a way of relieving the responsibility of that younger generation to take care of their parents, and of giving older people an option beyond just relying on their kids. This is an alternative to both those things.”

More than 250 people showed up at the Cambridge group’s launch party in October, and about 300 have joined. “We can provide referrals for everything from 24/7

This “enables us to live in our homes a lot longer than we’d otherwise be able to do.”

care with nurses to someone who comes by for three hours a week to check blood pressure, or helps put the groceries away,” says executive director Kathy Spirer. (There is a fee structure for services beyond those covered by the basic membership cost.)

Board president Steven J. Stadler ’48, who has lived in his Mount Auburn Street condominium with his wife, Ingrid

Stadler, Ph.D. ’59, for more than four decades, says about 40 people went on an October trip to Yale’s art museums. The social component of the program is critical to many seniors, he says: “We’re hoping to facilitate those bonds through exercise classes, walks, yoga, bridge groups, trips, and political luncheons.” So far, he notes, the membership includes a fair number of Harvard affiliates—a big draw



Unique Senior Housing

During the last five years, MIT’s former director of planning, Robert Simha, MIT president emeritus Paul Gray, and a core group of other Harvard and MIT leaders, including Harvard Graduate School of Design professor Carl M. Sapers and professor emeritus Charles W. Harris, have devised an unprecedented, cooperative housing development in Cambridge. The project, University Residential Communities at 303 Third Street (URC), is now under construction and consists of two buildings—one with market-rate rental apartments, the other with units available for sale primarily to members of the Harvard, MIT, and Massachusetts General Hospital communities. (Visit www.facultyrealestate.harvard.edu for details.) Those units are geared to seniors—and anyone else—desiring a cooperative community while maintaining ties to academia and to the cultural benefits of urban life.

Designed and being built by Extell Corporation of New York, the URC project (offered in partnership with the Beal Companies of Boston) also provides physical and programmatic features to enable its older residents to “age gracefully in place,” Simha says. These include 24-hour concierge service; a swimming pool, hot tubs, and a flexible fitness space; a common meeting room with a fireplace, overstuffed chairs, and bar ser-

vice; a large courtyard for events; and a 4,000-square-foot dining “club.” Home healthcare, housekeeping and shuttle services, and access to the nearby MIT medical department will also be available.

A cooperative board will govern the URC building, Simha explains, because “that is the only model in Massachusetts that ensures that members of the university community are not priced out of the housing market in the future.” Intergenerational and mixed-income use is planned. Twenty-one of the units have been set aside as part of the Cambridge Affordable Housing Program and will go to applicants through a lottery based on income guidelines. The remaining 147 units will go to people of any age, at prices ranging from \$465,000 to \$1.4 million. “The goal is to create a residential community of a diverse group of people with an affinity for university life,” according to Simha. “One of the main reasons people don’t like assisted living or continuing-care facilities is that there are too many old people there.” Such places, he adds, also tend to be built in isolated, suburban towns where people cannot walk or take public transportation to movies, concerts, lectures, or restaurants. URC, in contrast, is located one block from the Kendall Square subway station and across the street from a planned multi-stage performing arts venue called the Constellation Center.

About 40 units have already been reserved, including those belonging to Simha and Gray.

NEW ENGLAND REGIONAL SECTION

for others retired from academia or professional lives who are keen on continuing to learn and be intellectually stimulated by their peers. "We've had a rapid ramp up," he adds. "There seems to be a need for this organization in Cambridge, given the big response."

Beacon Hill Village, which opened six years ago, pioneered this approach to independent living and now counts 430 members. The group has produced a comprehensive founder's manual and accompanying DVD for agencies and individuals interested in starting their own stay-at-home organizations, and in April hosted an inaugural conference on the subject that drew about 250 people from across New England, the nation, and as far away as Australia. "These villages are literally popping up all over the country," says executive director Judy Willett. Hot spots include Virginia, Maryland, and Washington, D.C. (including one in the planning stages for the Watergate apartments), and parts of California, New York, and New England (which claims a large chunk of the nation's elderly population).

According to 2005 U.S. Census projections, by 2030 the six New England states will all be among the 21 states with the highest percentages of residents above the age of 65. The biggest projected jumps are for Maine (which, by 2030, would have the second-highest percentage of elderly people after Florida), New Hampshire (rising from thirty-seventh place to seventeenth place) and Vermont (which will move to eighth place). "By 2030, we expect that one in four people in Vermont will be 65 or older," says Nancy Eldridge, executive director of Cathedral Square Corporation, a nonprofit senior-housing agency in Burlington. "We're looking at how Beacon Hill Village might be applicable to Cathedral housing units in Burlington, and to the wider area around us."



Eldridge is applying for grants to create a business model and gauge interest among local seniors in finding more innovative ways to meet their needs. It is not obvious that the Beacon Hill blueprint, set in a densely packed urban neighborhood with well-heeled clientele, is entirely transferable to Burlington, or to more rural settings, where se-



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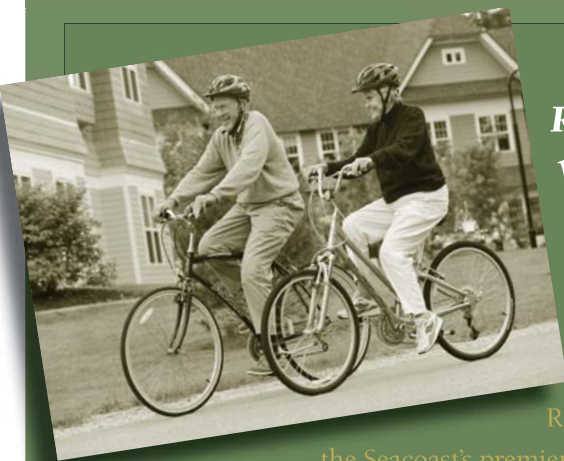



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niors are more spread out geographically, she says. But there is no doubt the need for at-home services already exists, and that demand will only grow—partly, she explains, because of the 2005 Vermont Medicaid waiver that entitles every recipient to significant services at

profit Life Coping Inc., which provides case-management assistance to the elderly in their own homes, is planning to inaugurate a village network in March that would offer its clients nonmedical and medical services, such as the care Eldridge refers to, à la carte. “I think this is

“There will be increased demand for services and the possibility that there will not be enough services for everyone.”

home. But the infrastructure to deliver such services doesn't yet exist, and meanwhile the number of nursing-home beds is shrinking. “Home healthcare agencies are doing what they can,” Eldridge adds, “but they are stretched for resources, money, and labor, and the entitlement doesn't include the 24/7 care that nursing homes do, and which many people need.”

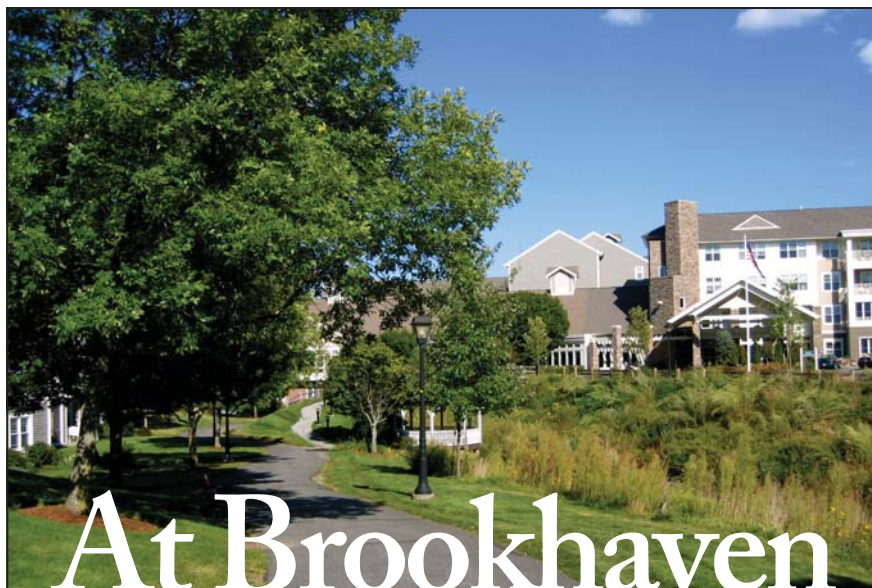
In Nashua, New Hampshire, the for-

exactly what the federal and state governments want: people who are organizing to care for themselves,” says Ellen Curelop, president of Life Coping. “For the people who can pay for these services, it could not be better.” Such private-pay systems represent the future “because the aging population is growing,” she reiterates, “and there will be increased demand for services and the possibility that there will not be enough services for everyone.

Money and long-term care services are always an issue.”

Staying Put in New Canaan deliberately set membership rates at a relatively affordable level for its location, and is building an endowment to help subsidize costs for lower-income seniors. “This is not an exclusive, elitist organization,” says director Jane Nyce. “We want this to have as broad an appeal as possible.” Elsewhere, rates vary depending on location and services: Beacon Hill Village charges \$780 per household or \$580 per individual for basic membership; Greenwich asks \$650 per couple and \$500 for an individual; and Cambridge at Home costs \$1,200 per couple and \$900 per individual annually. (Membership fees cover varied services; each organization differs.)

Whatever the price, it is vastly less than the equivalent cost of moving into an assisted-living arrangement. Often local communities offer a range of government-funded elder-care services (so-



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cial events, senior centers, transportation services, meals) that are available to all, regardless of income. In the affluent suburb of Greenwich, for example, there is plenty of help for senior citizens, says Marilyn Chou, president of At Home in Greenwich. "But there is strong resistance to depending on town services," she adds. "People don't want to feel they

are on the dole or feel that they are needy. There is also a lot of denial of age. I spoke to a 93-year-old doctor who says he doesn't need any services yet. People don't want to acknowledge that there may be a problem down the road—or tomorrow."

For Tom Towers of Staying Put in New Canaan, these are questions of practicality.

He and his wife, who have lived in the town for 39 years, sold their big home to one of their sons three years ago and moved into a condominium to live more simply, with fewer worries over maintenance, and to be closer to the center of town. They will use Staying Put services when needed, but, for now, Towers says he has thoroughly enjoyed the stimulating and challenging start-up aspects of the project and contact with others involved with the mission. "I don't believe getting older need be 'overwhelming,' if you don't feel sorry for yourself and you keep looking for interesting things to do," he says. "We don't ask for pity, but rather simply a chance to continue to enjoy life in familiar settings and with friends, old and new. Our notion of 'Taking care of ourselves' is very powerful." ▢

Resources for Staying At Home

At Home in Greenwich
Greenwich, Connecticut
203-863-9655
(no website yet)
Contact: Marilyn Chou

Cambridge at Home
Cambridge, Massachusetts
617-864-1715
www.cambridgeathome.org
Contact: Kathy Spirer

Beacon Hill Village
Boston, Massachusetts
617-723-9713
www.beaconhillvillage.org
Contact: Judy Willett

Cathedral Square Corporation
Burlington, Vermont
802-863-2224
www.cathedralsquare.org
Contact: Nancy Eldridge

Gramatan Village
Bronxville, New York
914-337-1338
www.myhometownbronxville.com (then click "Seniors")
Contact: Julie A. Dalton
(The board president is John Corry, J.D. '56.)

Staying Put in New Canaan
New Canaan, Connecticut
203-966-7917
<http://stayingputnc.org>
Contact: Jane Nyce

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Buzz, Buzz

The South End's new late-night restaurant offers dramatic flair.



IF YOU'RE 30-plus and want a fun night out with live music and a splash of funk, where do you go? The clubs and bars lining Lansdowne and Boylston streets are out of the question (too many giddy kids, too little substance). Back Bay lacks edge. And the South End's restaurants serve terrific food, but not much else. Enter the theatrically charged Beehive, which opened in the Boston Center for the Arts on Tremont Street in May.

Creative cocktails top the bistro-style menu of high-end comfort food, such as macaroni and cheese with lobster and asparagus for \$20. Burlesque acts or music—jazz, soul, cabaret, or R&B, often featuring fresh-faced performers from the Berklee College of Music—typically start after 9 nightly.

Housed on two levels, the Beehive accommodates 300 people, but downstairs is the place to be. One room, flaunting gothic/bordello décor and red lights, holds café tables and the stage, which is

Above: Three takes on the Beehive, including its boiler-room-with-a-touch-of-Paris bar.

framed with burgundy drapes. The adjacent room has a buzzing bar scene with more of a boiler-room-meets-Parisian-shabby-chic feel: exposed pipes and brick walls contrast with glittering chandeliers, French doors lead outside, and racks of antlers hang here and there. It's visually captivating, but can be fairly noisy, especially when the musicians get going.

Named for La Ruche, a hive-shaped artists' residence in 1900s Paris, the Beehive boasts a waitstaff of artists and performers who cater to a diverse, creative crowd, many of whom are unafraid to don sparkly costumes or other thoroughly original (for Boston) garb. The scene was monitored, in part, by a muscular door guard who strode around in a floor-length leather coat and Secret Service-type earphone.

We wished the food had offered as much in-

trigue. It was inconsistent, as if some inexperienced actors had been cast in this otherwise ravishing production.

Things started off very well. The charcuterie board (\$15) featured grilled kielbasa and three sumptuous slabs of pâté (duck, and combinations of pork, chicken, and goose) served with chewy peasant bread and pickled onions. The cubed beet salad with fresh arugula (\$10) had the right balance of blue cheese and candied walnut bits in a surprisingly delicate vinaigrette.

Also satisfying were the tender and gamey pork dumplings (\$9) with disks of spicy radish and an apple-curry aioli.

The entrées we ordered (we didn't try them all) lacked such interest or nuance. The paella (\$23) had the usual suspects: mussels,

chorizo, peppers, clams, and shrimp. But apart from the stellar sausage, the flavors were indistinct (no saffron detected), and the rice was soggy. The much too salty roasted organic salmon (\$23) arrived over dowdy buttered polenta with a pile of leggy watercress.

For dessert, we'd recommend the lemon crème brûlée (\$7) drizzled with pomegranate juice. But the starchy, faintly oily carrot-coconut bread pudding (\$7) was bland, and the swirl of grainy cream cheese on top looked unappetizingly like mustard. We longed for a warm, eggy pudding with incisive, whiskey-spiked hard sauce.

Despite these disappointments, the Beehive is a welcome addition for those of us hungry for a vibrant restaurant that can showcase the city's fledgling musical and theatrical talents and feed its maturing artistic patrons. ~N.P.B.



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Stirred, Shaken, and Sung

Pink Martini—musicians who don’t “know enough to be scared”

by HOWARD AXELROD

AT THE END of Pink Martini’s Carnegie Hall debut this past June, a conga line broke out in the audience and bounced its way up and down one of the aisles. Even in the venerable hall’s tiered balconies, people were on their feet, clapping and dancing. “Our music is permission to escape into a romantic world,” says lead singer China Forbes ’92.

That music—much of it written either by Forbes or by bandleader Thomas Lauderdale ’92—represents a kind of re-

verse globalization. Rather than impose one style everywhere, it draws from nearly everywhere, ranging from Edith Piaf-style torch songs to Brazilian sambas to Gershwin standards; the lyrics are in Spanish, French, Italian, Japanese, Arabic, and Portuguese, as well as English. With strings, percussion, two horn players, and Forbes’s clear, luminous voice, the 12-piece pop orchestra has a lush, energetic sound, with the sweep of a Hollywood musical from the 1940s or ’50s (www.pinkmartini.com). It’s a mix different

Pink Martini onstage, with Thomas Lauderdale on piano at far left, and vocalist China Forbes.

from almost anything else out there, and audiences are responding: Pink Martini’s first two albums sold more than a million copies combined, and its recently released third album, *Hey Eugene!*, entered Amazon’s bestseller list at number one.

The *New York Times* headlined its review of the Carnegie Hall concert “Grab a Cocktail and Listen to the Vintage-Chic Band.” Replace “Cocktail” with “Coffee,” and that headline—with its offbeat allure—could have been a handwritten sign from 1992 advertising a musical night at Café

Mardi in the Adams House lower common room. The founder of Café Mardi, and of Pink Martini, has never had trouble attracting an audience. With his platinum-blond hair, bow tie (something he gave up after college), and cross-dressing, Thomas Lauderdale has always cut a flamboyant figure. (He threw the last, and perhaps most famous, party in the now-remodeled-out-of-existence Adams House pool: “In walks the senior tutor—lots of naked people in the pool, at 3 A.M., with the lights off,” he confesses with an impish grin.) When not in the pool, Lauderdale, a classically

Off the Shelf

Recent books with Harvard connections

The Complete Fables of Jean de La Fontaine, translated by Norman R. Shapiro '51, Ph.D. '58 (University of Illinois, \$80 cloth, \$25 paper). The Wesleyan professor—who commutes from Cambridge and writes in Adams House—gives in to his La Fontaine addiction. Hence, “No doubt the first to see a camel/Fled from the unfamiliar mammal,” and other delights.

From Higher Aims to Hired Hands: The Social Transformation of American Business Schools and the Unfulfilled Promise of Management as a Profession, by Rakesh Khurana, Ph.D. '98, associate professor of business administration (Princeton, \$35). Management is an institution—but is it a profession like law or medicine? Is the M.B.A. a professional degree, or simply a license to make lots of money? Khurana explores the “delegitimation of managerial authority” and the “abandonment of the professionalization project in business schools,” and asks whether such schools can “take their future success for granted” or are, perhaps, on the verge of “reinvention.”

Tell Borges If You See Him: Tales of Contemporary Somanbulism, by Peter LaSalle '69 (University of Georgia, \$24.95). This third collection of short stories, winner of the Flannery O'Connor Award for Short Fiction, begins familiarly enough: “I was supposed to meet Emily later that night in the old Hayes-Bickford Cafeteria right there on Massachusetts Avenue in Harvard Square...”

Babies by Design: The Ethics of Genetic Choice, by Ronald M. Green, Ph.D. '73 (Yale, \$26). The author, who professes ethics at Dartmouth and advises Advanced Cell Technology on the ethics of stem-cell research, charts a path toward “the responsible introduction

of reproductive innovations” emerging from labs.

Planets, Stars, and Galaxies: A Visual Encyclopedia of Our Universe, written and illustra-

ted by David A. Aguilar (National Geographic, \$24.95). An almost psychedelic tour of the cosmos, in text, photographs, and illustrations by Aguilar, director of science information at the Harvard-Smithsonian Center for Astrophysics.

The First Campaign: Globalization, the Web, and the Race for the White House, by Garrett M. Graff '03 (Farrar Straus and Giroux, \$24). The author, formerly a Ledecky Undergraduate Fellow at this magazine, posits a 2008 election about, and shaped by, globalization and information technology.

The Short Book, written and illustrated by Zachary Kanin '05 (Black Dog & Leventhal, \$9.95 paper). The height-challenged author, a former *Lampoon* president, reaches out to others who, like him, deal with their stature every day “and sometimes at night.”



From the book *Planets, Stars, and Galaxies: A Visual Encyclopedia of Our Universe*

The Modern Element: Essays on Contemporary Poetry, by Adam Kirsch '97 (Norton, \$24.95). Collected critical essays, on subjects ranging from Jorie Graham to Billy Collins, by one of this magazine's contributing editors; in these pages, he has written most recently about Seamus Heaney and W. H. Auden.

trained pianist, could often be found late at night accompanying Forbes on Puccini and Verdi arias. But he never envisioned that a band would grow out of their collaboration. “I was more concerned with throwing parties,” he says. “With being the cruise-ship director of Adams House.”

His cruise-ship-director talents—energy, organization, and a penchant for

“I just fired the singer; we have these really big shows coming up this weekend, and I want to fly you to Portland.”

fun—have served him and Pink Martini well. Indeed, the band's appeal is not unlike that of the cruise ship: just subtract the surfeit of dining options and the shuffleboard, and enable the ship to travel at high speed through time as well

as space. Of writing lyrics in several languages and drawing on the musical styles of different eras, Lauderdale says, “It frees us from the fear of sentimentality. It's like a kid playing the piano—he doesn't know enough to be scared.”

Pink Martini's success has surprised many, and that includes Lauderdale himself. “When the band first started, I was wearing cocktail dresses and we were playing ‘I Dream of Jeannie,’” he recalls. After graduation, Forbes moved to New York City to launch a career as a singer-songwriter, while Lauderdale returned to his hometown of Portland, Oregon, hoping to get involved in politics—he aspired to become mayor someday. While working on a campaign to keep homosexuality legal in the state, he booked bands for political fundraisers; one weekend, in desperate

need of an opening band for a show, he called up his old friend Forbes. "I just fired the singer; we have these really big shows coming up this weekend, and I want to fly you to Portland," Forbes remembers him saying. With the Pink Martini sheet music in hand—Lauderdale had FedEx-ed all the songs to her—she boarded the plane.

Forbes soon signed on full-time, but the band did not find its niche easily. For one thing, traveling with so many musicians is expensive. Without the backing of a major label (the band's albums are on its own label, Heinz Records, named after Lauderdale's dog), Forbes and Lauderdale had to think unconventionally. Unable to cut expenses, they increased revenue instead by performing where they were most popular: in Europe.

The band got its first big break in 1997, when the release of its version of Edith Piaf's "*Je ne veux pas travailler*" ("I don't want to work") serendipitously coincided with French legislation that shortened the number of hours in that country's workweek. The selection was nominated for "Song of the Year," and the band for "Best New Artist" in France's version of the Grammys, the *Victoires de la Musique* awards. (The song is still popular there, having run in a Citroën commercial.) With its multilingual lyrics and diverse influences, Pink Martini soon attracted a following across the continent.

The band's success in Europe prompted American symphony orchestras to extend invitations. Since its debut with the Oregon Symphony in 1998 (Lauderdale has been friends with then-music director Norman Leyden since high school), Pink Martini has performed with the Boston Pops, the Los Angeles Philharmonic, and other companies across the country. Al-



The Pink Martini band lifting off, above, and China Forbes on the cover of their latest CD, *Hey Eugene!*

though "It's not really in young people's repertoire to go see symphony orchestras," Lauderdale says, the sophisticated fun of Pink Martini's sets has drawn a mixed crowd of old and young, turning such collaborations into an appealing way for the orchestras to reach a new demographic.

After their Carnegie Hall performance and an appearance on *The Late Show with David Letterman*, Pink Martini continued its North American tour to promote *Hey Eugene!* with stops in Montreal, Chicago, Los Angeles, and many places in between. "There's nothing better than a public library, a used-record store, and meeting strangers in dark alleys," says Lauderdale of his life as bandleader. Although the stage doors of leading concert halls don't always open onto dark alleys, Lauderdale has certainly become cruise-ship director once again.

Howard Axelrod '95, a contributor to the *New York Times Magazine*, is writing a memoir.

Sophomores, Sex, Soap

Students steam up the small screen with Harvard melodramas.

by ANDREA MCCARREN

LISA NESTLES into the folds of Adam's grey fleece jacket, her hand entwined in his. The two lovers share a park bench and an uncertain future—their budding romance, forbidden. Adam is a wide-eyed freshman from South Dakota; Lisa, a sophisticated and shapely junior from New York. But she is also his peer advising fel-

low, an upperclass student chosen to offer academic and social guidance to freshmen. By the rules of academia, their relationship is taboo.

Nevertheless, hormones rule on days like this. They've slipped away from roommates to this quiet spot overlooking the Charles River. Adam leans in toward Lisa and places a soft kiss on her forehead.

F O L I O

Venerable, Valuable Volumes

With its muted hues and pine floorboards, the store resembles a medieval library with a blinking Apple iMac on the counter. Inventory at James and Devon Gray Booksellers ranges from early editions of Machiavelli's *The Prince* and Robert Burton's *The Anatomy of Melancholy* to a book of hours, a 200-page, personal devotional volume from 1380, for which the Grays are asking \$185,000.

The couple founded their Harvard Square business when Devon Gray, A.L.B. '92, G '92, was still working on her bachelor's degree in the Harvard Extension School. They trade exclusively in volumes printed before 1700, an unusual niche in which scarcity and the literary desires of wealthy collectors generally dictate prices. These old books are hardly delicate. With their thick leather covers and acid-free paper, they endure as long as they're kept dry and out of direct sun.

The Grays once owned a book that had escaped the devastating 1764 fire that destroyed Harvard's original library. It was the third volume of a history of England that one Thomas Banister had bequeathed to the College more than five decades before the blaze. When Devon Gray bought the book, she noticed it was an "odd volume," missing its mates, and bore a startling inscription on the front endpaper: "Bibliothecae Harv; Lib; 1709 22;1;8," the Harvard shelf number. The book had either been stolen, checked out, or gone missing at the time of the fire.

"With a check at the Harvard Archives, I was able to view the original manuscript records," Devon says. "My book had been checked out of the library at the time of the fire, and thereby survived. Now that volume is back at Houghton [Harvard's rare-book library], where it belongs."

Antiquarian bookselling is a handshake business among trusted merchants. The Grays acquire everything they deal in from Western Europe, and first offer every item to the national library of its country of origin. Books arrive at their Arrow Street emporium via bonded international courier. (Interpol has all but stamped out any black market in rare, old books; each volume comes with a mini-passport detailing its provenance.)

Sixteen years ago, Roger Stoddard, then curator of rare books

at the Harvard College Library, challenged Devon, who was studying English with him, to go into the business. "He romanticized the good old days of book-selling," James recalls, "and asked, 'Why can't we do that now?'"

When Devon—inspired by Stoddard and the curator of manuscripts, Rodney Dennis—began scouring auctions and book fairs on weekends to create a collection, bankrolled by about \$8,000 in borrowed start-up capital, James was still working in industrial equipment sales. But soon she was reselling her acquisitions to Houghton and to other universities' rare-book collections. Once the shop opened, James, who trained in anthropology and is something of an autodidact, worked mainly in the store while Devon focused on the catalogs and book repair.

Their worldwide clientele includes plenty of Harvard alumni and faculty. The Grays hire undergraduates for jobs in the store and use graduate students as overseas book scouts. Customers such as professor of the history of science Mario Biagioli and Baird professor of history Mark Kishlansky use the shop for research and updates about what is on market. Harvard librarians like Peter Accardo, the acquisitions bibliographer at Houghton, stop by for a sense of what they should be buying; he says the shop "is a very important asset to our acquisition team."

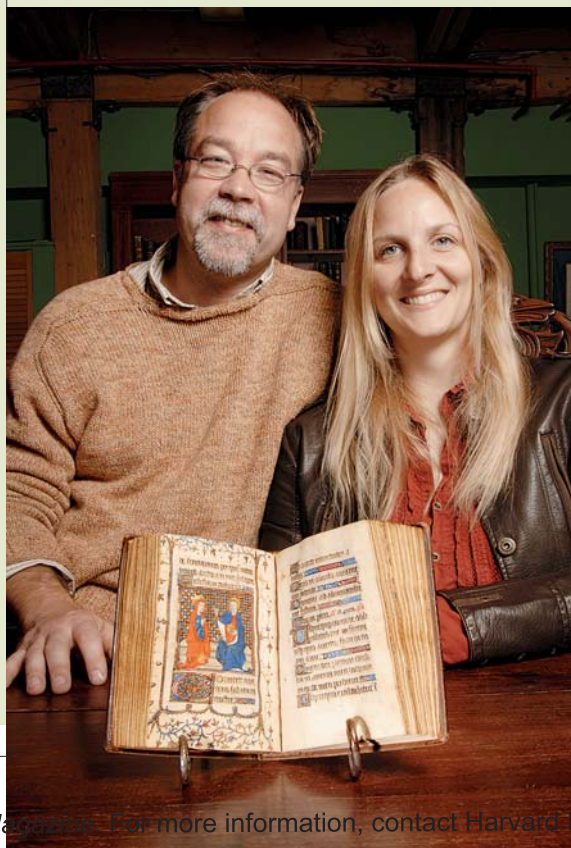
Intricate thumbnail book descriptions—critical to the bookseller's trade—distinguish the 30 or so artful catalogs the Grays have published (available at graybooksellers.com). Their largest thematic compendium to date, a forthcoming 150-page volume of poetic works, offers texts by Chaucer, Shakespeare, Donne, and Milton.

Today James still runs the store and Devon handles bookbinding and repairs. She tends to the artifacts with animal-hide glue and wheat paste, leather, unbleached linen thread, and a paring knife. "A book is an object," she points out, "though the importance of the book is the text."

—SHAUN SUTNER

Shaun Sutner is a reporter for the Worcester Telegram & Gazette.

Below: Antiquarian booksellers James and Devon Gray display a book of hours from 1380. Above, right: a medieval Psalter



MONTAGE

"Cut!" The mood is interrupted by Andrew Wesman '10, an intense student from San Francisco. He paces behind a digital camera on a tripod, occasionally raking an anxious hand through his mop of hair. "All right. That's it," he declares.

Wesman was directing an episode of *Ivory Tower*, which is produced and performed by a team of 40 Harvard undergraduates, that October 2006 afternoon on the river. One of the nation's oldest campus soap operas, the show premiered in the spring of 1994; fittingly, it has faced ups and downs since.

The structure differs in some ways from nationally broadcast soaps. "There isn't any continuity of characters or plots across seasons," says Stephen Black '07, last year's executive director, who provided guidance to the individual episode directors. "Each year has a brand new cast




Some *Ivory Tower* cast members: (left to right) Julia Gudish '10, Jon Gentry '07, Becky Cooper '10, and Jack Morley '08

of characters, and usually a somewhat different feel." The stories do continue across episodes within each season. During the 2006-07 academic year, the students made a record-setting five episodes that formed a larger whole. "It's really up to the executive director to set the tone for the year's show," says Black, "and what I went for this past year was a realistic drama/comedy that would accurately reflect the Harvard experience."

Yet, a soap opera—at Harvard?

"When Andrew and I first learned about it at the freshman activities fair, I thought it was goofy to be working on a *Harvard* soap opera," says Harry Rima-



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for
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lower '10, from Los Angeles, director of photography for the Adam/Lisa episode. "Sort of antithetical."

But the campus is brimming with material, and *Ivory Tower* tackles some of its most sensitive issues: the breakup of a first relationship, dealing with a gay roommate, failing to make the *Lampoon*, losing one's virginity, getting drunk for the first time, and experimenting with drugs, including the popular "study drug" Adderall. "*Ivory Tower* gives a glimpse into the real lives of Harvard students," says Black. "The sex is very awkward, which we think is a true reflection of Harvard. It's not exactly a school with a reputation for being sexual."

"The sex is very awkward, which we think is a true reflection of Harvard."

Black also remembers how lonely he felt at the start of his undergraduate career, when he and a roommate sat in their dorm reassuring each other that they didn't need to get drunk like some of their peers to have a good time. He envied minority students who had special gatherings organized for them during freshman orientation week, and recalls asking his roommate, "Don't you wish you were black or Asian, so you had a group to fit in with?" That line was one of many fresh-

man-year experiences to end up in *Ivory Tower*.

"The world's perception of Harvard is that the students are extremely cocky and self-assured," says Black. "I had a friend from another school who expected everyone to be wearing ascots and smoking pipes. But when it comes right down to it, a lot of kids are unsure of themselves and looking for their place to fit in."

"We're trying to draw the soap from the drama in kids' lives," says executive producer Eve Lebowitz '08, of Long Island.

"There's no need to create any kind of external situation." Among those dramas: an episode from last year's *Ivory Tower* in which another freshman, Maddie, sleeps with an upperclassman in a steamy scene in Quincy House. Though Maddie is a virgin, she is prepared for the moment, as the viewer learns when she deftly extracts a condom from her purse on the night table.

"There are a lot of threads about relationships," says Wesman. "In one episode,

we have the juxtaposition of two lovers who are starting something very serious, very beautiful, and then, two [others] who are just hooking up, something very superficial." Recalling the intense episode with Maddie, Rimalower adds, "It gets pretty risqué. That quasi-sex scene was an interesting task to film."

Soap operas are emerging at schools across the country. Boston College spoofed the television series *The O.C.* with a drama entitled *The B.C.* Columbia University produces *The Gates*. Northwestern students created *University Place*.

The crew of *Ivory Tower* uploads each episode to Google Video and YouTube, in addition to posting the shows on their own website: www.ivorytowersoap.com. The first *Ivory Tower* show of the 2006-07 season, released that October, racked up nearly 7,000 views on Google Video. (This season's first episode was scheduled to be posted by mid December.) Most students watch the show on-line in their rooms, but each episode also debuts formally in Boylston Hall's Fong Auditorium, generally attracting a full house.

Although Harvard's Office for the Arts helps fund the show, the students primarily use their personal cameras and recording equipment. Training for the crew is on-the-job, and newcomers are welcomed: *Ivory Tower*'s creators come from a wide variety of concentrations, hometowns, and socioeconomic backgrounds.

The show's popularity has meant that its on-camera stars now find themselves recognized on campus—but they are most concerned with the impressions of a few key viewers. "They'll be in a scene where they're either cursing or making out with someone," says Lebowitz, "and they'll be like, 'I can't do that on camera. My mom's watching at home!'" "I already told my dad he can't watch the second episode," says actress Julia Gudish '10, her lip gloss catching the sunlight. "I don't want my dad to see me kiss anyone. Ever."

Andrea McCarren, an investigative reporter with WJLA-TV in Washington, D.C., was a 2007 Nie-man Fellow at Harvard.

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JAMES ACKERMAN

LAND

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ALI ASANI

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CORNELIS "KASE" KLEIN

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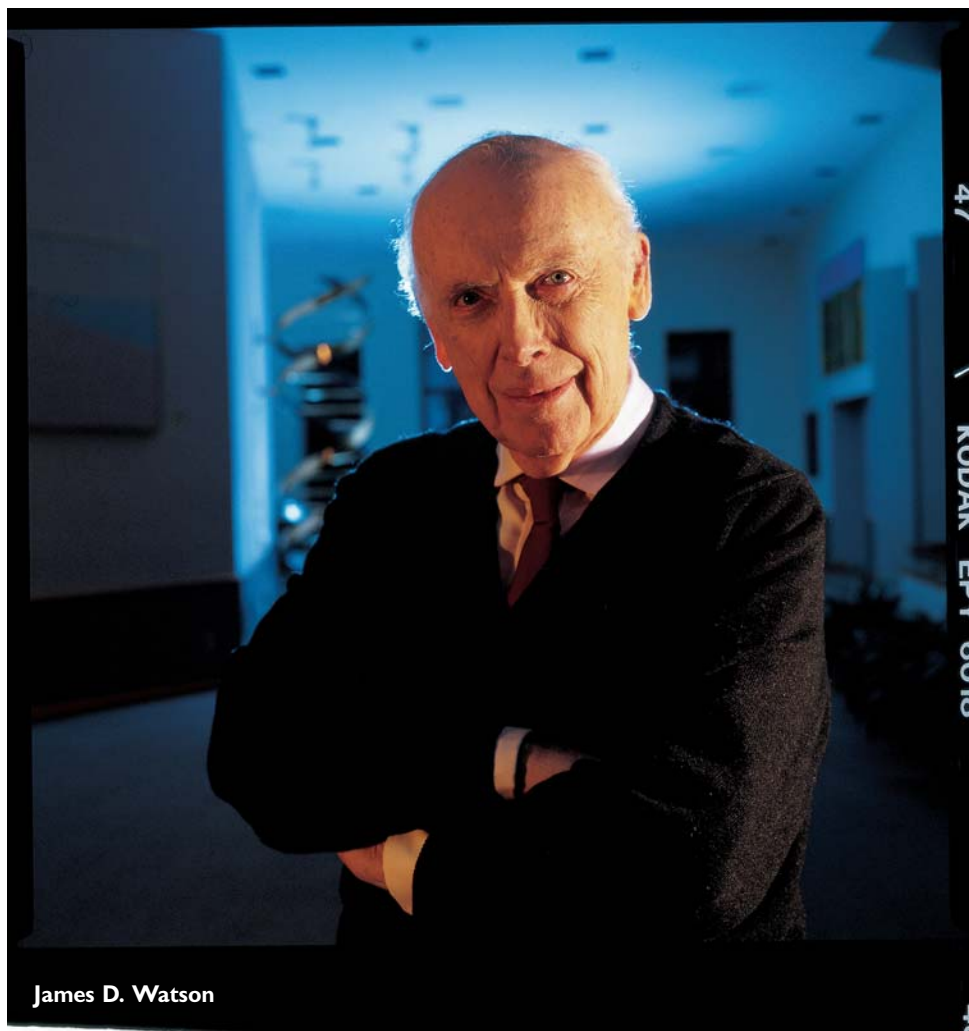
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James D. Watson

Chairman of the Bored

"Lucky Jim" Watson's unlikely book of academic manners

by STEVEN SHAPIN

IMPROBABLE as it may seem, James D. Watson—the co-discoverer (with Francis Crick) of the structure of DNA—has written a Book of Manners: the most recent contribution to a genre that stretches from Baldassare Castiglione's *The Courtier* in the sixteenth century and Francis Osborne's *Advice to a Son, or, Directions for Your Better Conduct* in the seventeenth century to Santiago Ramón y Cajal's *Advice for a Young Investigator* of 1897 and Peter Medawar's *Advice to a Young Scientist* of 1979. But Watson's most pertinent model must be F. M. Cornford's incomparable instruction manual to the aspiring academic politician, *Microcosmographia academica*: "I shall take it," the Cambridge classicist wrote in 1908, "that you are in the first flush of ambition, and just beginning to make yourself disagree-

able. You think (do you not?) that you have only to state a reasonable case, and people must listen to reason and act upon it at once. It is just this conviction that makes you so unpleasant."

When his best-selling *The Double Helix* was published in 1968, some commentators took it as evidence that Watson, formerly Harvard's Cabot professor of the natural sciences, didn't have any manners. Evolutionary biologist Richard Lewontin, professor of biology and Agassiz professor of zoology in the Museum of Comparative Zoology emeritus, wrote that Watson's warts-and-more "personal account" of the discovery of the structure of DNA had "debased the currency of his own life" and molecular biologist Robert Sinsheimer, chancellor emeritus at the University of

California, Santa Cruz, said that Watson had painted a picture of the scientific endeavor as a "clawing climb up a slippery slope, impeded by the authority of fools, to be made with cadged data..., with malice toward most and charity toward none."

In fact, Watson's reputation for poor manners long preceded *The Double Helix*. Alluding to bruising encounters in the 1950s over the proper agenda for Harvard biology, entomologist E.O. Wilson, now Pellegrino University Professor emeritus, famously called Watson "the most unpleasant human being I had ever met." But anyone who has got to the top of his disciplinary greasy pole—and Watson won his full professorship at Harvard at 30, and his Nobel Prize at 34, for work done when he was only 24—can be reckoned to know a thing or two about how to get on and up in the world of science, and so each chapter of this autobiography is identified by the "Manners" appropriate for various aspects of scientific life, and each is wrapped up by a series of "Remembered Lessons" on how to behave: "Manners Needed for Important Science," "Manners Required for Academic Civility," "Manners Deployed for Academic Zing," "Manners Maintained When Reluctantly Leaving Harvard."

The big lessons that Watson wants young scientists to learn were already clear in *The Double Helix*: be charming (when it suits), but be bloody-minded (when it's necessary); do not suffer fools, and, indeed, make sure they know that they're fools; if you are absolutely certain that you are absolutely right, then crush the opposition. All's fair in love and lab. If you're really good at science, and if you stand up for what's right, you'll inevitably make enemies, since, as Jonathan Swift said, "When a true genius appears in the world, you may know him by this sign, that the dunces are all in confederacy against him." So, in dwelling on his 20 years at Harvard—from 1956 to 1976—Watson variously describes scientific colleagues and administrators as "dinosaurs," "fossilized," "vapid," "mediocre," "dead-beats," some not even "has-beens."

Watson's campaign for Harvard backing the new molecular biology, and downgrading its investment in organismic biology, was the occasion for applying some of his most deeply felt "lessons": "multicellu-

James D. Watson, *Avoid Boring People: Lessons from a Life in Science* (Alfred A. Knopf, \$26.95)

lar organisms were best put on the backburner” until advances were made at a molecular and single-cell level. Developmental and plant biology were just “tired games,” and the sooner they went away, the better: “Never offer tenure to practitioners of dying disciplines.” Watson lectured to undergraduates “Against Embryology,” infuriating many of his colleagues, “But to sugar-coat science that is going nowhere ill prepares students for their futures.” Watson was quite serious about this: E.O. Wilson recalls that at one department meeting, Watson announced that “Anyone who would hire an ecologist is out of his mind.”

Watson became a celebrity because of the brilliant science he did as a very young man, but only about 30 pages of this book track back to those glorious few years with Francis Crick in England. Apart from a brief epilogue on Harvard’s recent institutional turmoil, the book essentially breaks off with his departure from Harvard in 1976, leaving room for a sequel that might, for example, deal with Watson’s role in the Human Genome Project, which goes unmentioned here. And there’s no way that *Avoid Boring People* can match *The Double Helix* for taut drama. A story about a great scientific discovery ends in triumph, but a story of a life necessarily ends in some sort of pathos—at most, a contented life lived in the fading glow of early triumph, all the more so since Watson seems to believe—against an abundance of counter-examples—that molecular biologists’ best years are behind them by age 40.

Some of the rest of *Boring* deals with the outstanding problems in gene regulation that became so clearly framed once the double-helical model of DNA was embraced, and with the links forged between molecular biology and cancer research. These were no mere mopping-up operations, and enormous ingenuity was needed to flesh out what Crick called the “Central Dogma” of molecular biology: DNA codes for RNA which in turn codes for proteins, and the process does not work in the reverse direction. But most of *Boring* is either personal—and other reviewers can have their say about the “full-bodied blond bombshells,” “wisps of pale, fragile flesh,” and “petite, well-shaped” socialites, princesses, and Radcliffe students who troop through its pages—or it is about the ever-increasing amounts of time and energy that Watson devoted to scientific ad-

O P E N B O O K

“Poems Are Not Position Papers”

Porter University Professor Helen Vendler grew up with her mother’s poetry books, which “stopped with the Victorians.” It was not until she was 22 that she read Yeats’s work and “was astonished by it.” She felt too young to write her dissertation on the poems; now, in *Our Secret Discipline: Yeats and Lyric Form* (Harvard, \$35), she feels “it is not absurd” to do so.

I knew that someone who was 22 could not write convincingly on the emotions and motives of someone who wrote until he was 73. Perhaps, I thought, once I had lived through the stages of life that had, in Yeats, produced the great late poems, I might aim to write about them....



like General Sherman, on a wide and constantly shifting front”). I take as my defense for this position Yeats’s remarks in a 1927 letter.... “Schopenhauer can do no wrong in my eyes—I do no more quarrel with his errors than I do with a mountain cataract [*sic*]. Error is but the abyss into which he precipitates his truth.” Here, as I comment on a poem, I aim to follow the poet’s creative thinking as it motivates the evolution of the poem. Nor do I want to argue with the poems; poems are hypothetical sites of speculation, not position papers. They do not exist on the same plane as actual life; they are not votes, they are not uttered from a podium or pulpit, they are not essays. They are products of reverie.... Each poem is a new personal venture made functional by technical expertise; the poet’s moral urgency in

writing is as real, needless to say, as his technical skill, but moral urgency alone never made a poem. On the other hand, technical expertise alone does not suffice, either. Form is the necessary and skilled embodiment of the poet’s moral urgency, the poet’s method of self-revelation....

Yeats asserted (in his elegy for the painter Robert Gregory) that the gazing heart “doubled its might” by having recourse to the artist’s “secret discipline” of form. He singled out... “that stern colour and that delicate line”—an emotional palette and structural draftsmanship—as the ingredients of that “secret discipline.” In poetry, as in all the arts, “the gazing heart” remains the center, but it doubles its might by its own proper means: diction, prosody, structural evolution, a sense of perfected shape.

[T]o my eyes, Yeats’s style was the most important of his qualities, since it was what would make the poems last. Yeats himself said, after all, “Books live almost entirely because of their style.” To undertake a book that was taxonomically focused on Yeats’s lyric styles was not entirely what I wanted to do...but it was what needed to be done....

I have put myself here in the position of the writer of the poems, attempting to track his hand and mind as he writes. I do not, therefore, argue with Yeats’s ideological or aesthetic positions (which in any case changed over time, and were never anything but complex; as my teacher John Kelleher once said, “Yeats is a poet who moved,

William Butler
Yeats, 1923

ministration, university politics, and facilitating others' research. And, surprisingly, it's in these connections that some of Watson's "lessons" are most perceptive.

So, for example, Watson notes that many intellectual conflicts in science play themselves out as contests over the control of physical space. Salaries are important, but space is even more important, since it's a publicly visible sign of your standing and power: "Always buy adjacent property that comes up for sale"; "Be prepared to resign over inadequate space"; "In the Darwinian world of an academic department, if you don't create such crises, limited resources will surely go to

the room." And most fascinating of all: "Science is highly social." Watson is quite right here: science is social—you schmooze or you lose. And, although both *The Double Helix* and *Boring* are superficially about the survival of the scientific fittest, both offer overwhelming evidence that scientific discovery, conventionally assigned to one or a few individuals, has its authentic origins in the dense, unplanned, even irretrievable interactions among many individuals. The "weak ties" represented by an overheard passing remark—perhaps even from a member of a "dying discipline"—may turn out to be as important in the creative process as the "strong ties"

ically recalls himself thinking when President Pusey called him back from an unapproved trip to California, and the wound of then-Faculty of Arts and Sciences dean Franklin L. Ford's denial of a \$1,000 raise after winning the Nobel Prize still festers more than 40 years on. Commenting on one of Harvard's present-day scientific fault-lines, Watson rakes Larry Summers over the coals for what he sees as misguided infatuation with "translational" research and the commercializing impulses embodied in the "almost Soviet-style fantasy" of the plan for Allston science. For Watson, it's the pure science of Divinity Avenue on which Harvard should concentrate its resources and which is the guardian of Harvard's soul.

But as much as *Boring* is payback time for Harvard, it's a love-song to the University of Chicago, where Watson was a bird-watching undergraduate, where he reveled in courses on literature, history, philosophy, and sociology, and where President Robert M. Hutchins presided over an institution and a curriculum designed to produce graduates capable of critical thought and morally compelled to use those critical capacities—damn the consequences. Chicago, unlike Harvard, was "virtually an officers' training school for intellectuals," and it was at Chicago, Watson recalls, that he "learned the need to be forthright and call crap crap." It is not, however, a skill entirely unknown at Harvard. ♡

Steven Shapin is Ford professor of the history of science. He has written several books on the history of early modern science and his *Science As a Vocation: Personal Virtue and Scientific Authority* will be published by the University of Chicago Press next year.

...a strong argument for why combative individualism may not always be constructive.

gutsier colleagues." And, indeed, much of the gritty detail of Watson's accounts of life at both Harvard and the Cold Spring Harbor Laboratory, to which he went full time after leaving the University, is taken up with stories about academic Space Wars. Watson persuades readers—and not just scientific readers—that he's got a fine eye for the weapons, the tactics, and the terrain of academic battle. At the Long Island laboratory, Watson turned into an effective fundraiser and administrator.

Still other "lessons" make one wonder whether they're ironically intended, whether Watson isn't blessed with a full measure of self-awareness, or whether he's just forgotten the cutthroat competitiveness commended in *The Double Helix*: "Science works better when the winners don't take all"; "Share valuable research tools"; "Never be the brightest person in

connecting an individual with teachers and like-minded colleagues.

In just this sense, "James Dewey Watson" is both a unique individual, endowed by nature with huge scientific talents, and a fortuitous historical trajectory among many institutions and the scientists who lived in them, notably including fine scientists less ambitious, abrasive, and competitive than he is. Lucky Jim, indeed. But if it's true that science is such a social activity, then Watson has inadvertently made a strong argument for why combative individualism may not always be such a constructive pose. Watson is large; he contains contradictions.

Lucky Jim is also unexpectedly traditionalist, and even Romantic, Jim. *Boring* is a voiding of long-stored rheum at Harvard and its obstructionist ways: "F___ Harvard and f___ Pusey," Watson puritan-

Marcia Chellis requests a source for "Everything is high school."

Barbara Murray would like to verify an anecdote involving Tennessee Williams's alleged reply when asked why he had stopped seeing a psychiatrist: "Well, that man kept nosing into my personal business...."

"**pot...wall**" (September-October). Eliot Kieval recognized the query as a variant of "Strive not as doth a crocke with a wall," from Geoffrey Chaucer's short poem "Good Counsel."

Chapter & Verse

Correspondence on not-so-famous lost words

"**Age is a thief**" (November-December). John T. Collins supplied, as an earlier example of this formulation, "Time, the subtle thief of youth," from John Milton's poem "On His Having Arrived at the Age of Twenty-three."

"**logical fallacies**" (November-December). Elizabeth Bernstein was the first of

many readers to recognize this reference to Max Shulman's short story "Love Is a Fallacy," from his 1951 collection *The Many Loves of Dobie Gillis*. George Sicherman added that the story was

subsequently turned into an episode of the eponymous television show (season 1, episode 22, airing on March 1, 1960, according to www.tv.com).

Send inquiries and answers to "Chapter and Verse," *Harvard Magazine*, 7 Ware Street, Cambridge 02138, or via e-mail to chapterandverse@harvardmag.com.



A Spectrum of Disorders

The urgent search to
understand the biological
basis of autism

WHEN ALISON FINALLY heard her son Matthew's diagnosis, she had already spent a night on the Web, terrifying herself, as she puts it, "for the rest of my whole life." At 18 months, Matthew showed a number of the early warning signs of autism: he didn't respond to his name or point to objects of interest, he seemed to fixate on spinning things like the washing machine, and he had developed no new words since his 12-month check-up. Alison feared her son might never develop the ability to make friends, converse at the dinner table, or live on his own. The doctor who evaluated Matthew told Alison that her son met criteria for "pervasive developmental disorder not otherwise specified" (PDD NOS), a less severe condition than full-scale autism, and one that, when caught early, often responds well to intensive therapies. "This is one of the best kinds of autism to have," the doctor explained, holding a stack of treatment referrals. Alison's grief and shock gave way to a sense of

urgency: "I got started on his treatment plan like my hair was on fire."

In recent years, diagnoses of autism have soared: to as many as one for every 166 children in the United States, according to recent estimates

published by the Centers for Disease Control. Much of this increase stems from a broadening of the diagnostic category. Clinicians now recognize a "spectrum" of autistic disorders that encompasses children with mental retardation and little or no language (low-functioning autism) as well as those with high IQs and precocious vocabularies (Asperger's syndrome). The common thread linking these disparate conditions is a deficit in social relatedness that impairs a child's ability to communicate, learn, and participate in ordinary life. While some cases improve with rigorous interventions, others remain intractable. Parents like Alison face a morass of competing theories and potential cures in their struggle to increase their children's chances of recovery.

by Ashley Pettus

Photomontages by Stuart Bradford

HARVARD MAGAZINE 27

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The growing number of families affected by autism has intensified the scientific search for answers. In the last five years, new technology and funding (much of it from family foundations) have made it possible to address the most pressing questions of causality on a large scale. Harvard researchers from a wide range of disciplines—including genetics, genomics, neurology, cognitive science, developmental medicine, and bioinformatics—have joined a collaborative effort to identify the biological roots of autistic disorders and to develop better methods of detection and treatment. Their efforts promise to yield significant findings in the very near future. But the inherent heterogeneity of autism suggests that a full accounting will likely take longer and may require investigators to look for clues in unexpected places.

“An Extreme Aloneness”

In 1943, the Austrian-born psychiatrist Leo Kanner provided a startling picture of 11 children trapped in their own worlds. The

children—all patients at Johns Hopkins Hospital in Baltimore—had previously been labeled “emotionally disturbed” or “intellectually impaired.” Kanner noticed that they shared a number of distinct behavioral and cognitive features: they all had difficulty relating to other people, delayed or unusual language, superior rote memories, and an obsession with sameness and repetition. He described their condition as an inborn disorder of social attachment, which he called “infantile autism.” “There is from the start,” he wrote, “an extreme autistic aloneness that, whenever possible, disregards, ignores, or shuts out anything that comes to the child from the outside.”

At the time of Kanner’s discovery, mainstream psychiatry was in the thrall of Freudian theory, which attributed most childhood disorders to family environment rather than biology. Autism came to be viewed as an extreme and rare condition—the result of profound emotional (and specifically, maternal) neglect. For most of the latter half of the twentieth century, clinicians used

Beyond the Genome

DURING THE PAST FEW DECADES, most scientific research into the causes of autism has been focused on the structural wiring of the brain and on the genes that control it. Evidence of chronic sickness or general physical discomfort in autistic children has largely been viewed as coincidental to the primary brain disorder or, in some instances, mistaken for the syndrome’s behavioral symptoms. But in recent years, as the number of cases has continued to rise (while the genetic pathways have remained elusive), several clinicians and researchers have begun to ask whether disturbances in children’s broader bodily systems may be influencing, or even causing, the disruption in their brains.

Associate professor of neurology and pediatric clinician Margaret Bauman has been on a crusade to ensure that children with autism-spectrum disorders receive adequate medical care. As the director of LADDERS (Learning and Developmental Disabilities Evaluation and Rehabilitation Services)—a multidisciplinary research clinic affiliated with Massachusetts General Hospital (MGH)—she spearheaded a new model for diagnosing and treating the host of physiological problems that often accompany autistic disorders. The LADDERS staff includes experts in gastroenterology, sleep disorders, and neuromuscular and metabolic disorders, as well as in psychopharmacology, neurology, and developmental pediatrics. (In 2005, Bauman cofounded the Autism Treatment Network, a national nonprofit organization of six clinical programs around the country that collaborate to promote current best practices in the diagnosis and treatment of autism-spectrum disorders.)

“Many kids with autism have gastrointestinal problems that may affect their behavior,” Bauman explains. “But because these kids are often nonverbal or hypoverbal, they have trouble conveying their discomfort or localizing their pain.” Children with intense gastritis or colitis may bang their heads or move their bodies in strange ways in reaction to physical distress. “It turns out that when you treat the medical problem, in many cases the aggressive and self-injurious behaviors abate,” she says. Bauman has also found that a subset of children on the spectrum who do not respond to standard autism therapies have a disorder involving their

mitochondria (the cellular structures that convert nutrients into energy). These kids tend to walk late, have very little energy, and undergo periodic regressions in which they lose muscle control, attentiveness, and language. Bauman was surprised to find that a complex vitamin treatment helped improve the condition of a number of such children, enabling them to benefit from behavioral therapies.

Bauman does not suggest that such biomedical interventions will cure autism, but she believes that researchers need to pay close attention to the pattern of physiological problems that attend the autistic syndromes of a significant portion of children. “We haven’t been looking at other organ systems and how they relate to this disorder,” she says. “It’s possible that we’ve been doing genotyping on apples and oranges.”

Assistant professor of neurology Martha Herbert, a pediatric neurologist at MGH, couldn’t agree more. Herbert has been at the forefront of an effort to alter the prevailing paradigm of autism research. As a resident in neurology in the early 1990s, she spent two years studying the preserved brain samples of 93 autistic individuals, hoping to find a correlation between specific structural abnormalities and autistic behaviors. What she found instead, she explains, were “abnormally large brains with more than average white matter [the tissue through which messages pass between different areas of gray matter in the brain, where the nerve cell bodies are located]. I began to think that this is not a *localized* brain disorder but a *generalized* disorder that affects the brain. It requires a different way of thinking.”

Herbert found evidence that a subgroup of children with autism experience a sudden increase in brain size a year or so after birth. The areas that enlarge are those where the myelin sheath—the fatty electrical insulator of the brain cells—forms post- rather than prenatally. The question of whether some children are born “normal” and then “regress” into autism between the ages of one and two has been at the center of the controversy over the potential role of mercury and vaccines in causing autism. Although Herbert steers clear of this debate, her findings suggest that postnatal damage may contribute to the onset of autistic conditions in a considerable number of cases.

Herbert believes that such tissue changes in autistic brains could be signs of inflammation or oxidative stress, potentially im-

the diagnosis only in cases where no other label was possible. As Margaret Bauman, associate professor of neurology and director of the Learning and Developmental Disabilities Evaluation and Rehabilitation Services (LADDERs) in Wellesley, recalls: “The majority of the cases we see today would not have been labeled autistic when I was a resident in pediatrics [in the late 1960s]. The autistic kid was a kid who sat in the corner, rocking back and forth, and made no eye contact. The rest were labeled ‘mentally retarded’ or ‘childhood schizophrenia.’”

It wasn’t until the early 1980s that a new understanding of autism began to emerge. The catalyst was an article published by British autism expert Lorna Wing that described a little-known syndrome called Asperger’s Disorder. Hans Asperger was an Austrian-born pediatrician who studied children in a psychiatric



Wing’s paper showed how the core features of autism could occur in a wide range of people, some severely mentally retarded and others highly intelligent.

hospital in Leipzig, Germany, in the late 1930s—the same time that Kanner was conducting his research in Baltimore. Asperger documented a condition in boys that he termed “autistic psychopathy,” characterized by “a lack of empathy, little ability to form friendships, one-sided conversation, intense absorption in a special interest, and clumsy movements.” His patients differed from Kanner’s in that they did not exhibit developmental delays in language or cognition (Asperger in fact referred to them as “little professors”), yet they shared key impairments in social interaction, reciprocal communication, and imagination (i.e., repetitive behaviors and interests). Wing’s 1981 paper brought Asperger’s findings to the attention of the English-speaking world and showed how the core features of autism could occur in a wide range of people, some severely mentally retarded and others highly intelligent.

In the ensuing years, the predominant view of autism as a discrete psychoemotional condition gave way to the idea of a continuum of biologically based autistic syndromes, requiring greater diagnostic specificity. By 1994, the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* listed detailed criteria for five “pervasive developmental disorders” (PDDs), including Asperger’s, that comprised the “autism spectrum.”*

The increased awareness of autism’s related conditions and their symptoms corresponded to a steep rise in diagnoses in the early 1990s. Many parents became convinced that the escalating numbers of cases stemmed from exposure to thimerosal, a mercury-based preservative used in childhood vaccines. Another theory linked the measles/mumps/rubella (MMR) vaccine, in particular, to the onset of autistic symptoms. Numerous epidemiological studies have failed to substantiate these claims, and in 2004 the Institute of Medicine of the National Academies found no causal relationship between either mercury or MMR vaccine and autism.

But even though it is not possible to get an accurate count of real cases prior to the early 1990s, there is a growing sense among researchers and clinicians that the real incidence of autism is on the rise and that environmental triggers likely play a role. The potential factors range from chemicals in food and cosmetics to

plicating environmental factors. (Oxidative stress refers to an imbalance between the rate of oxidative damage to cells and the rate of cell repair.) “Perhaps the brain is caught ‘in the crossfire’ of whole-body changes related to environmental stress,” she says. She has not proposed any particular toxin exposure as a cause of autism; rather she underscores the need to expand the investigative lens beyond the genes-brain-behavior model in order to look for broader problems in physiological functioning. “We need more study of environmentally responsive metabolic and signaling pathways,” she explains, “since these will guide us both to where to look for relevant genes and also where to look for treatment targets.”

Herbert’s ideas are not universally accepted by neurogeneticists; but among many in the mainstream of autism research there is growing support for a more biological approach to diagnosis. Susan Santangelo, associate professor of psychiatry at Harvard Medical School and an associate professor in epidemiology at Harvard School of Public Health, who also serves as director of statistical genetics and genetic epidemiology in the psychiatric and neurodevelopmental genetics unit at MGH, argues that researchers need to begin to look for more precise measures to identify and sort individuals with autism disorders.

Santangelo, an executive committee member of the Boston Autism Consortium (which links more than 50 local researchers who tackle different aspects of the disease cycle and share results), suggests that tests such as an EEG (electroencephalogram, which measures electrical activity in the brain), an ERP (event-related potential, which records brain activity during specific tasks), or a measure of blood plasma levels for certain metabolites could provide investigators with markers that they could correlate to a given set of behavioral traits, thus helping to distinguish patients’ functions on a variety of levels. “If we can start to map the genes for something more biological,” Santangelo explains, “something closer to the genetic action, then maybe we’ll have more success than [we’ve had] trying to map the genes for a very heterogeneous psychiatric classification that may bear absolutely no relation to underlying pathophysiology. We need to cast a wide net and then tunnel deep into some of these measures.”

*The pervasive developmental disorders (PDDs) comprising the autism spectrum share core deficits in social interaction, language, and range of interests or behaviors. They differ in degree of severity, number of areas of impairment, pattern of onset, and rate of prevalence. *Autistic disorder* (the most common) is four times more common among males than females and generally involves mental retardation. *Rett’s disorder*, a rare condition that occurs only in females, usually involves severe mental retardation. *Childhood disintegrative disorder* (CDD), involving a precipitous loss of abilities after at least two years of normal development, appears rarely, and more often among males. *Asperger’s disorder*, diagnosed five times more frequently in males than females, involves pronounced social deficits but no significant cognitive or language acquisition impediments. *Pervasive developmental disorder not otherwise specified* (PDD NOS), a “subthreshold category,” applies to cases in which some criteria for autistic disorder are present and the onset of symptoms doesn’t fit other PDD diagnoses. For details, visit www.nimh.nih.gov/health/topics/autism-spectrum-disorders-pervasive-developmental-disorders/index.shtml, posted by the National Institute of Mental Health.

parental age, stress, and reproductive technologies—offering no clear indication of where epidemiological studies might begin. Before scientists can isolate possible external causes, they need a clearer understanding of the biological pathways that lead to the combinations of traits and deficits along the autism spectrum.

Genetic Complexity

A 1977 STUDY OF TWINS provided the first evidence of a genetic basis for autism. If one twin had the disorder, the other was far more likely to have it if he or she was identical rather than fraternal. (Because identical twins share their entire DNA, while fraternal twins share only half on average, a disease that tends to co-occur in identical pairs indicates genetic influence.) The discovery helped undermine the prevailing psychoanalytic theories that blamed autism on bad parenting and, in particular, on cold, unaffectionate, “refrigerator” mothers.

Yet the task of identifying the culprit genes has proved daunting. Although the concordance rate for autism in identical twins is high—with recent estimates ranging from 60 percent for the same diagnosis and 90 percent for related disorders—it is not



Multiple genes may be involved; higher-functioning autism, for instance, may arise through separate genetic mechanisms than lower-functioning autism.

100 percent. The fact that identical twins do not always share the disorder indicates that environmental influences are also at play. Furthermore, the variability in the traits and deficits associated with conditions along the spectrum (and often between individuals in a single family) suggests that multiple genes are involved; higher-functioning autism, for instance, may arise through separate genetic mechanisms than lower-functioning autism.

These complexities have made cooperation among research teams and among institutions essential. “Autism is a problem that no one person or discipline can figure out alone,” explains James Gusella, Bullard professor of neurogenetics and director of the Center for Human Genetic Research at Massachusetts General Hospital (MGH). Gusella chairs the executive committee of the Boston Autism Consortium, a largely privately funded initiative that began in 2005 to take advantage of the wealth of expertise, technological resources, and patient databases concentrated in the area. The consortium brings together more than 50 researchers from Harvard, MIT, the Broad Institute, MGH, Children’s Hospital, Boston University, Beth Israel Deaconess Medical Center, and Tufts University to tackle different aspects of the disease cycle and to share results. Gene discovery is a top priority. “We’re not saying that it’s all genes,” Gusella is careful to point out, “but the genes will accelerate the search for other factors. They provide the crucial starting point.”

The pursuit of autism’s molecular roots has led Christopher Walsh, Bullard professor of neurology and chief of the division of genetics at Children’s Hospital Boston, on a cross-cultural journey. Walsh, who also directs the division of neurogenetics at Beth Israel Deaconess Medical Center, travels regularly to Dubai, Kuwait, and Saudi Arabia to study the genomes of large Middle

Eastern families. Because Arab cultures have a strong tradition of first-cousin marriage, the children in these societies have a higher likelihood than other populations of inheriting genetic mutations that can cause a developmental disorder. If both parents carry a recessive gene associated with autism, each child in the family has a 25 percent chance of getting the disease. With an average birth rate of six children per couple, a family in which both parents are carriers may well have more than one child with an autism-spectrum disorder.

Walsh uses a technique called homozygosity mapping to look for causative recessive mutations. He checks all the sets of chromosomes in each family member, searching for spots where the affected children have two identical chunks of DNA and unaffected children have something different. Walsh and his team have identified four chromosomal locations in three separate families, and they have begun sequencing the genes in these spots to look for a disabling mutation. “Once we find it,” Walsh explains, “we can sequence any kid anywhere to see if he or she is subject to the same condition.”

Inherited mutations hold the promise of explaining some, but not all, of the genetic paths to autism. Walsh points out that many genetic mutations that affect the brain—particularly those involving severe cognitive impairment—are spontaneous. “Mental retardation is frequently *not* inherited within families because it is so crippling,” he explains. “People with this condition are not likely to have children, so the mutations that cause the disorder are sporadic, rather than inherited.” (Down Syndrome, which arises from the presence of an extra chromosome, is an example of this type of nonhereditary genetic disorder.) Walsh estimates that about 15 to 20 percent of autism cases may fall into this category.

In order to identify spontaneous genetic changes that are causally significant, researchers need to look for gains or losses of DNA that are present in children but not in their parents. If they find a change in the child that they can associate with a set of symptoms that is absent in the parents, they can then conclude that the mutation caused the disorder. In the case of autism, however, the isolation of disease-causing mutations has proven particularly difficult because the genetic changes and the clusters of disease traits (phenotypes) do not present a clear one-to-one relationship. “We’ve found that sometimes some of the sub-microscopic changes in the kid’s DNA are also present in one of the parents,” Walsh notes. “And these parents may be either asymptomatic or mildly symptomatic: in some cases, some of the parent’s cells don’t show the mutation, while other cells do, which suggests that the change may have happened part-way through the development of the parent.” The first step, Walsh says, is to determine which of these sub-microscopic changes are meaningful and which aren’t.

Stalking Likely Suspects

TODAY’S RESEARCHERS DO HAVE some possible signposts to help them navigate the maze of potential routes to autism. There are 10 spots, called chromosomal “linkage peaks,” along the genome, where deletions or insertions of bits of DNA have been



statistically correlated with the presence of autistic traits. But hundreds of genes are associated with a single “linkage peak.” Teasing out the causal genes presents a formidable task.

Louis Kunkel, professor of pediatrics and genetics and director of the genomics program at Children’s Hospital, is pursuing an unconventional approach to this puzzle. He has joined forces with Isaac Kohane, Henderson associate professor of pediatrics and health sciences and technology, who directs the hospital’s informatics program, to look for irregular patterns in the way genes are expressed in the white blood cells of autistic children. “We’re asking: if gene expression is off-track in the brain, is it also off-track in whole blood?” Kunkel explains. “And can we categorize kids with autism based on gene-expression profiling in blood?” (Gene expression refers to which genes are “on”—giving instructions for how the cell should work—in a given cell.)

Tiny microarrays or “gene chips” now enable lab technicians to examine the activity of 30,000 genes at once. Kunkel and Kohane plan to draw on hundreds of thousands of samples to compare patterns of gene expression in children with and without autism-spectrum disorders. “I think we’re looking for a lot of different variants in a dozen or so genes that in combination with other genes may cause autism,” Kunkel says.

The researchers are paying particular attention to networks of genetic activity that affect 12 genes already known to play a role in autism. These are genes that regulate the brain’s response to environmental stimuli, affecting learning and memory by regulating the plasticity of connections between neurons. Here, the work of Michael Greenberg, professor of neurology and neuroscience and

director of neurobiology at Children’s Hospital, has been critical. Greenberg looks at animals to examine how experience shapes the formation and refinement of synapses during brain development. He believes that autism-spectrum disorders may result from flaws in synapse development that affect the brain’s ability to process incoming signals. During the first years of postnatal development, trillions of synapses form in the brain as a child interacts with his or her surroundings; many synapses that aren’t needed naturally fall away, while others are strengthened. One possibility, Greenberg suggests, is that this pruning process doesn’t happen effectively in people with autism. Another theory holds that autism may involve a defect in the balance between excitatory and inhibitory synapses. A deficit in inhibitory synapses causes seizures, a common problem in more severe forms of autism.

Greenberg is involved in identifying the genetic program that controls these synaptic processes: “It turns out,” he explains, “that as synapses are forming in the first years of life there are about 300 genes that get activated. We study how they get activated, how the signal goes from a synapse to the nucleus where genes get turned on, what the genes are, what they do, and how they control the program.” (One gene, *MECP2*, that has been linked to Rett syndrome—a rare autism-spectrum disorder primarily affecting girls—has already been implicated in this chain of synaptic events.) He continues, “The expectation is that, as we figure out this network of signaling, when the geneticists identify the causative genes for autistic disorders, we will be able to tell them: ‘This is why they’re important, and this is what they do.’”

The coordinated efforts of Walsh, Kun- (please turn to page 89)

Sarah Wyman Whitman

Brief life of a determined artist: 1842-1904

by BETTY S. SMITH

SARAH WYMAN WHITMAN was an original and compelling figure in late nineteenth century Boston. Very much a public personality, she was a painter, a designer of book covers and stained glass, an interior decorator, an author, poet, teacher. The notes she wrote with a quill pen, her style of dress—ostrich feathers, beaver bonnets, exuberant shades of silk and satin, unusual gems—even her exalted manner of speaking (to hide a slight impediment) reflected the ways she had joined her art and her life.

Although descended from prominent New England families, she spent her early childhood in Baltimore among her Wyman relatives, in a cultivated and philanthropic environment she treasured all her life. When she returned to Lowell, Massachusetts, at 11, she was educated at home; a gifted tutor shaped her lifelong dedication to learning. A friend of her later years, Henry Lee Higginson, founder of the Boston Symphony Orchestra, once observed that Whitman “was bent on self-cultivation in order that she might better do the work of her life as she had laid it out.”

Her plans began to take shape two years after she exchanged the dullness of Lowell for the dullness of a long marriage to Boston wool merchant Henry Whitman. With their move to Beacon Hill, she gained access to the wider world of the Boston elite: artists, writers, and educators. In 1868, she entered the studio of the socially prominent and successful artist William Morris Hunt, who had recently begun to welcome women as students.

Her professional training was astonishingly brief. She studied with Hunt for three winters, studied drawing with his colleague William Rimmer, and twice—in 1877 and late 1878 or early 1879—went to France to study with Hunt’s former master, Thomas Couture. Although she lacked “just one year in the Academy,” considered a prerequisite for a successful career, she determined to move forward. In a letter to a patron, she described her “plan of life” as balancing a successful professional career amidst her obligations “as a householder,” her philanthropic interests, and her position in society. Even she admitted it was a “strange complex web” of a life.

By 1881, one critic already judged her “as representative of successful women-painters in Boston.” But she did not limit herself to accepted feminine subjects: portraiture, still lifes, and landscapes. She turned to the field of design, an approach—encouraged by Couture, echoed in the English Arts and Crafts Movement, and actively supported by her mentor and benefactor, Harvard professor Charles Eliot Norton—that viewed art and life as inseparable. In the 1880s she began to produce a steady stream of designs for book covers, stained glass, and interiors.

She became the first professional woman artist regularly employed by Boston publisher Houghton Mifflin to give their mass-

produced book covers a sense of simple elegance through line, color, and lettering. Many of the authors were her friends, including Sarah Orne Jewett, James Russell Lowell, and Oliver Wendell Holmes. In 20 years, Whitman designed well over 200 books, frequently incorporating her design signature, a “flaming heart.”

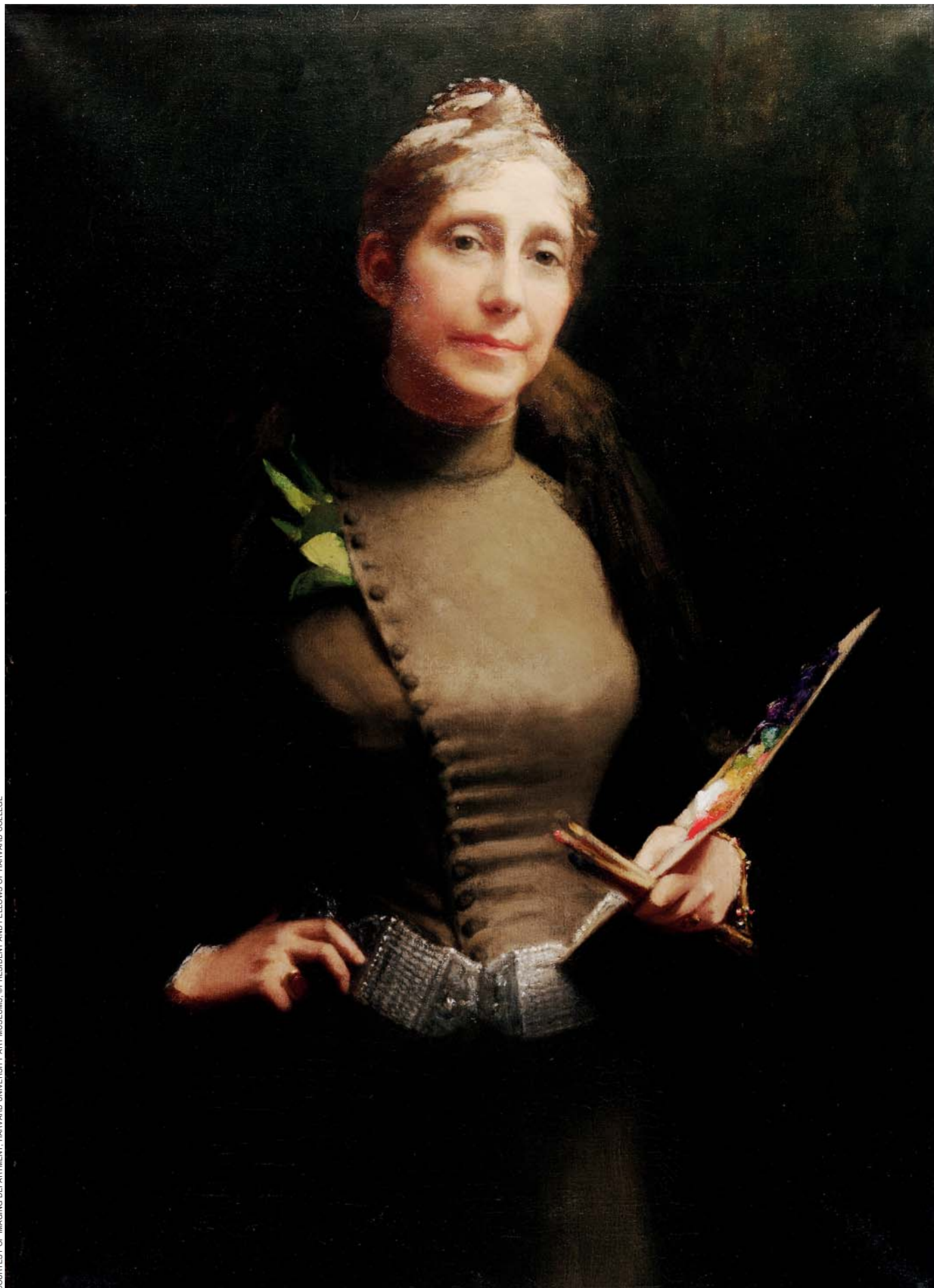
This work paralleled her career as a designer and creator of stained glass. The artist John La Farge, who asked her to create a carpet design as part of his commission to decorate H. H. Richardson’s newly completed Trinity Church in Boston, was a primary influence; her first stained-glass commission, in 1884-85, for the Central Congregational Church in Worcester, Massachusetts, was probably due to his recommendation. She designed 100 windows for Berwick Academy in Maine (Sarah Orne Jewett’s alma mater), the Phillips Brooks Memorial Window in the Trinity Church parish house, and many smaller commissions for churches stretching from New York City to Albany, and along the New England coast from the North Shore to Cranberry Island, Maine. For Harvard’s Memorial Hall she designed both the elaborate south transept window and the *Honor and Peace* window on the south side of what is now Annenberg Hall.

Meanwhile, she continued to draw together people she admired, subtly entwining friendship and patronage, welcoming visitors to enjoy her “all-embracing hospitality” at her city and country homes and her studios on Boylston Street (the Lily Glass Works) and Mount Vernon Street. She exhibited her paintings and lectured occasionally. She taught women’s Bible classes for 30 years, in winter at Trinity Church, in summer on the North Shore. She devoted time and money to innovative educational institutions, among them Tuskegee Institute, Berea College, and the “Harvard Annex,” the new women’s college in Cambridge, whose president was her close friend Elizabeth Cary Agassiz. Fittingly, her last works in glass—the panels *Courage*, *Love*, and *Patience* created for the 1904 St. Louis Exposition—are now installed in the Radcliffe College Room of the Radcliffe Institute’s Schlesinger Library.

Although Whitman’s last years were marred by illness, the result of overwork, she continued to create at a lessened pace. Her death was deeply mourned. William James wrote to his brother, Henry, “She leaves a dreadful vacuum in Boston...and the same world is here—but without her to bear witness.”

Betty S. Smith, CAS ’78, is a professional researcher.

Opposite: This posthumous portrait of Whitman by her friend Helen Merriman hangs in the Radcliffe College Room of the Schlesinger Library. The leaves in Whitman’s bodice may be laurel, symbols of victory and of artistic achievement.



Girl Power

What has changed for women—and what hasn't

by HARBOUR FRASER HODDER

Illustrations by ANNIE BISSETT

WHEN DAN KINDLON watches the Tigers play softball, he sees the legacy of feminism for girls. “My daughter’s concentrating on catching the ball, and this other girl just slams into her, slides under,” he recalls. “Julia got hurt a little bit, she got scraped up, but it was an experience that used to be exclusively the province of men and boys—to get knocked down, and then you’ve got to pick yourself back up and get back in the game, brush your tears off, and ignore the blood. She was kind of proud of herself afterwards. It was a character-building experience that very few girls growing up in an earlier generation had a chance to have. Now almost all of them have that chance.”

Kindlon is a clinical psychologist and adjunct lecturer at the Harvard School of Public Health. The more he coached his youngest daughter’s team, the more he understood he was observing a new generation of girls and young women. “People who say that girls aren’t competitive and don’t enjoy winning have never gone to a game and watched!” he says with a laugh. “My own daughters are so different from the girls I grew up with, in terms of the things they think they can do.” Linking those observations with accumulating data that show girls outperforming boys in grades, honors, and high-school graduation rates—and with the historic reversal in U.S. college enrollments (58 percent today are women, the 1970 percentage for men)—convinced Kindlon that today’s American girls are profoundly different from their mothers. “They were born into a different world,” he says of girls and young women born

since the early 1980s. He began to think of them as “alpha girls.”

These girls—Kindlon uses the term because his research focuses on female development up to age 21, the period covered by pediatric medicine—were not the self-loathing, melancholic teens at risk portrayed in such former bestsellers as *Schoolgirls: Young Women, Self-Esteem and the Confidence Gap* (Peggy Orenstein), *Failing at Fairness: How America’s Schools Cheat Girls* (Myra and David Sadker), and *Reviving Ophelia: Saving the Selves of Adolescent Girls* (Mary Pipher). Girls today “take it for granted that it is their due to get equal rights,” Kindlon says. “They never had to fight those battles over fertility control, equal educational and athletic access, or illegal job discrimination.” As a result, “girls are starting to make the psychological shift, the inner transformation, that Simone de Beauvoir predicted” in 1949 when she wrote, in *The Second Sex*, “sooner or later [women] will arrive at complete economic and social equality, which will bring about an inner metamorphosis.”

Recognizing that a new psychology was necessary to describe his daughters’ generation, Kindlon studied more than 900 girls and boys across the United States and Canada and wrote about his findings in *Alpha Girls: Understanding the New American Girl and How She Is Changing the World* (2006). This new “girl power” is characterized by what Kindlon calls an “emancipated confidence” that is raising self-esteem, reducing depression, and altering gender roles among girls and young women.

“Alpha girls” did not appear overnight, however. A century of social and economic change first tipped and then leveled the playing field, creating the circumstances for unprecedented gains for women in education and the labor force. These gains appear across socioeconomic strata, but they are less widespread among low-income and minority girls. To rectify the disparities,



some “alphas” are creating innovative programs as part of a “girls’ movement” to make such progress available to all young women. Of course, once alpha girls enter the workforce and begin families, they will no doubt encounter the same tradeoffs their mothers did; how they will cope with these challenges is uncertain, but they are already changing wage and marriage patterns in unexpected ways.

Alpha Psych 101

“THE PSYCHOLOGICAL DEMONS that used to affect girls and women in this country just don’t affect today’s girls in the same way,” Kindlon asserts. In the 1980s and early ’90s, Carol Gilligan (formerly Graham professor of gender studies at Harvard Graduate School of Education and now a professor at New York University) and other feminist psychologists wrote that girls in their teens compromise their authenticity to fit gender roles, thereby “losing their voice.” In 1992, influential American Association of University Women (AAUW) research on late-1980s data on girls born in the 1970s found that girls’ self-esteem plunged in middle school, compared to boys’, and that classroom sexism (such as teachers’ calling on boys more than girls, or more competitive than cooperative learning) was a cause. The AAUW report recognized positive trends, such as young women’s ascent in college enrollment, while recommending correctives for the continuing shortfalls.

Alpha girls are created in large numbers when the society that they are born into has sufficient equal opportunity, Kindlon says: “It wasn’t until the early to mid ’80s—when schools really started to get serious about Title IX, when women first began to outnumber men in college, when women began moving into leadership roles, such as Congress, in significant numbers—that societal conditions had changed enough to permit the alpha girl explosion.” He set out to discover how Beauvoir’s “inner metamorphosis” has changed girls’ psychology in the years since the AAUW report.

career and family aspirations) and in 2005 surveyed 700 girls and 228 boys in the sixth through twelfth grades in a range of urban, suburban, and rural U.S. and Canadian schools. He then interviewed the top 113 high-school girls, born for the most part between 1984 and 1988. These were alpha girls who had attained a 3.8 or better grade-point average and at least one leadership position, pursued 10 or more hours of extracurriculars weekly, and scored high on measures of “achievement motivation.”

Kindlon found signs of a new “alpha psychology” among *all* the girls. There were no sex differences in depressive symptoms, no drop in self-esteem across the six grades, and no lack of confidence. By tenth grade, in fact, the girls he surveyed had *higher* self-esteem than boys, and alphas had significantly higher self-esteem than non-alphas. Lower socioeconomic status tended to lower self-esteem scores for both sexes, irrespective of race or ethnicity, but Kindlon interviewed many “inner-city alphas”—the phenomenon is not confined to “elites.” (Consistent with previous research, he did find higher rates of anxiety among girls than boys—perhaps because girls “want to get things done,” he speculates, although he notes that biological factors could be involved. In either case, he cautions against overemphasizing the anxiety scores, because boys may underreport their own anxiety.)

“Loss of voice” may be a thing of the past, as Kindlon suggests, but gender pressures persist, says Wendy Luttrell, Aronson associate professor in human development and education: “We can’t talk about how girls are doing today without talking about boys and girls in relation to each other.” As a feminist ethnographer who analyzes gender, race, and class in educational settings, she believes kids today, in fact, are still “incredibly constrained” by gender. She recently observed such forces in action at the close of her youngest daughter’s summer college-prep program. The karaoke competition between sex-segregated groups was “a *Saturday Night Live* mimicry of what gender roles in contemporary society look like,” she reports. The girls performed “sexy-but-cute Britney Spears acts,” while the boys presented aggressive, sexualized, hip-hop dance

Alpha girls don’t identify with a passive-feminine sex role, yet maintain “female” skills like social networking. They also know how to do things that only men and boys traditionally did, such as “channel their aggression in a competitive situation—not to get too mad, but to get mad enough so you can play harder—and to compete and to enjoy winning.”

He knew that past and recent research in a variety of fields had already revealed gender differences in mental illness: girls and women have twice men’s risk for depression and anxiety disorders, while boys and men are twice as likely to suffer substance-use disorders and schizophrenia. Some theories attribute this depression/anxiety gender gap, which appears in adolescence, to differences in the biology of sex hormones; other explanations focus on “gender socialization.” Investigators have located numerous gender-related risk factors for depression, including passive-feminine sex-role identification, helpless coping styles, and low self-esteem. Body dissatisfaction is also key: in adolescence, boys gain muscle while girls gain fat—just as body-image pressures intensify.

To assess the psychological and social health of a new generation of girls, Kindlon designed the Adolescent Life Survey to measure 19 dimensions of teen experience (from mental health to

numbers. “Each group played off the extreme of the other,” she notes, wishing the hypermasculine and hyperfeminine performances had been far less stereotypical, with “both boys and girls crossing what we consider to be ‘male’ and ‘female’ roles.”

The alpha generation may yet fulfill that wish. “Girls are now able to play more roles,” says Kindlon. Alpha girls don’t identify with a passive-feminine sex role, yet maintain “female” skills like social networking. They also know how to do things that only men and boys traditionally did, such as “channel their aggression in a competitive situation—not to get too mad, but to get mad enough so you can play harder—and to compete and to enjoy winning.” Fathers play a big part in this psychology, Kindlon adds. He has found that alphas’ dads are more involved in their daughters’ lives than non-alphas’ dads. They can pass along “male ways of being,” such as rougher play and greater risk-taking, and “male ways of thinking.”

This “hybrid” self, an “androgynous” personality incorporating aspects of both parents, is a cornerstone of alpha psychology, he believes. The more androgynous girls in his study had higher self-esteem, were less anxious or self-conscious, and engaged in less promiscuous sex and substance abuse. Because they can choose from what feminist psychologists call “separate” (traditionally masculine) or “connected” (traditionally feminine) styles of being in the world, they have a psychological advantage. “Girls are better adapted,” he says. “They’re more flexible and have more skill. Boys haven’t changed as much—or haven’t been induced as much to play a variety of roles.”

What girls are saying, adds Kindlon, is, “I have flexibility that no other woman has ever had in history, or certainly not in any numbers, and I can play any role—‘Bring it on.’” As one “hybrid” alpha (now at Harvard) told him, “I can wear high heels to my linear algebra class. I can be sexy or I can be feminine, or I can also blow the boys away in this really tough class. I can do anything. I don’t see it as inconsistent to be wearing high heels. I don’t feel like I’ve got to dress down or dress like a man to do this class. I can still be a woman and do all these other things.”

The Rise of the Alpha Girl

LONG-EMERGING CHANGES in girls’ access to higher education and career options have prepared the ground for girls’ “emancipated confidence.” In fact, aspects of alpha girlhood aren’t new. “Girls have been ahead of boys in pre-college education for well over 100 years,” says Allison professor of economics Lawrence Katz: in high-school graduation rates and in constituting two-thirds of honors students. “What was striking in the past [was] that even though girls dominated boys through high school, boys were given greater opportunities to go on to college.”

But as the women’s movement dismantled labor-market barriers and an accelerating service economy expanded job opportunities in the 1970s, girls and young women expected and found greater economic benefits from going to college. Add the Pill and later marriage and first birth; subtract male incentives like the GI Bill and disproportionate family support; multiply by behavioral differences between girls and boys—and you have the formula for exponential change, argue Lee professor of economics Claudia Goldin and Katz in a recent journal article, “The Homecoming of American College Women: The Reversal of the College Gender Gap” (with Ilyana Kuziemko, Ph.D. ’07).

“It’s never clear why the American press wakes up suddenly and says, ‘Oh! Where are the men on campus?’ The crossover point was way back in 1980—25 years ago!” says Goldin. Headlines imply that male college attendance has dropped, yet there’s been “enormous growth in B.A. completion rates” for both sexes, she notes. The female rate of increase has been much higher, however, so the ratios of the 1960s and ’70s have flipped—to 58 percent female nationwide today. What drove this dramatic catch-up and reversal? “The playing field and the labor market are much more even,” says Katz. “That’s really what’s changed.”

Surprisingly, however, the rise of women in higher education began with college parity, early in the twentieth century. From 1900 to the Crash of 1929, women went to college in numbers equal to men. A fraction went to the “Seven Sisters,” but the majority enrolled in public institutions, such as teachers’ colleges and the large state institutions that accepted women. Then the Great Depression drove a wedge into parity. Unemployed men

needed the college advantage, and school districts’ new “marriage bars” against married female teachers made teaching degrees less valuable to women.

Male-to-female ratios peaked in 1947, after World War II. “You get this huge spike of guys coming back from Europe and Asia,” Goldin says, when there were “two and a half men” on college campuses for every woman. The GI Bill enabled men from many age groups to attend college at the same time, bolstering male enrollment until after the Korean War. More women went as well, because college benefits often included “your M.R.S.,” notes Goldin. Then came Vietnam—and draft deferment. Because more draftable men went to and stayed in college, male college graduation rates peaked for men born in the late 1940s. Women also have “a Vietnam effect,” Goldin says: “If boys go, girls go.” Women were catching up, but the gender gap in B.A. completion in 1970 still favored men, 57 percent to 43 percent.

By 1972, girls in the top socioeconomic quartile achieved college parity despite the war. In two decades, by 1992, girls at every socioeconomic level had a substantial lead. “Families are not discriminating in resources for college in favor of boys as they may have done 75 years ago,” says Katz. And in the lower half of economic distribution, the female-to-male ratio today is considerably higher than in the upper half, a reversal of traditional patterns. (The female advantage is larger among African Americans and Hispanics than among whites, but the decline in the male-to-female ratio of undergraduates during the past 35 years is not due primarily to changes in the ethnic mix of the college-aged population, write Goldin and Katz: “The bottom line is that the new gender gap favoring females is found throughout the socioeconomic distribution,” and it is similar for whites, all ethnic and racial subgroups, and the entire U.S. population.)

Girls and young women today also invest in “their own human capital” through what they choose to study in high school and college, due to dramatic changes in the labor market. Reflecting on college majors, Goldin says, “The huge shift is out of education into business.” Until the 1970s, most female undergraduates concentrated in literature, languages, and education, because most of the job opportunities were in teaching. In 1970, for example, 56 percent of working 30- to 34-year-old college-educated women were teachers, compared to only 18 percent in 2000. By 2005, 50 percent of business majors were women. And “psychology is the English of yesterday,” adds Goldin: 78 percent of psychology concentrators today are women. As their opportunities changed, girls took more high-school science and math, achieving virtual parity by 1992 in numbers of courses (and narrowing the math-score gap), while remaining ahead in foreign languages.

Meanwhile, boys’ progress relative to girls’ was less dramatic, and even stagnating at lower socioeconomic levels. In Goldin and Katz’s “cost-benefit analysis” of college returns, girls and young women have lower “nonpecuniary costs” for college-prep and attendance than boys and young men, and they earn higher economic benefits from going to college (women without college earn less than men without college). Moreover, note Goldin and Katz, boys have more learning disabilities, suffer from attention deficit hyperactivity disorder at triple the rate of girls, engage in more criminal activity, and spend less time on schoolwork than girls.

School has also become harder and more competitive since 1983, when the National Commission on Excellence in Education published *A Nation at Risk*, notes Dan Kindlon. The girls born at

that time and since “were starting to make the psychological shift predicted by Beauvoir, so they rose to the challenge,” he says. “Girls are doing the work and boys aren’t—boys are playing Grand Theft Auto.” Kindlon once asked his youngest daughter, “Is it just that girls are smarter than boys?” And at age 11 she said, “No, they’re not smarter, but they have more stamina,” which I think really does characterize it.”

Yet college-bound girls, despite their hard work, face stiffer admissions competition than boys. A *U.S. News* analysis of a decade of data from 1,400 colleges discovered that schools maintained gender balance by admitting girls at “drastically different rates”—on average 13 percentage points lower—than boys. “When a number of state universities started becoming incredibly female [70 percent or more],” explains Katz, “private universities started doing things that look like affirmative action for boys. Admissions officers basically said, ‘We were getting worried about the gender mix, so we shaded things.’ They’re bringing in on-the-margin guys who are less qualified than women in order to maintain some gender balance.”

Fertility control, meanwhile, has helped women achieve their ambitions well beyond college. As Goldin and Katz argue in another journal article, “The Power of the Pill: Oral Contraceptives and Women’s Career and Marriage Decisions,” the birth-control pill, approved in 1960 but made available to college-age single women only in the late 1960s and early ’70s, allowed young women to delay both marriage and childbearing while they pursued graduate and professional school. Women now earn the majority of M.D., D.D.S., and J.D. professional degrees, and the majority of all postgraduate degrees.

“For the first time in history, females have complete fertility control, which means they aren’t getting pregnant, dropping out, having babies,” notes neuropsychiatrist Louann Brizendine, a former Harvard Medical School resident and faculty member who is the author of *The Female Brain* and founder and director of the Women’s Mood and Hormone Clinic at the University of California, San Francisco. She believes that the “alpha” phenomenon also involves “a paradigm shift in the way parents think about their girls’ options in the world,” in part because unwanted pregnancy is out of the picture. “There’s a whole generation of girls whose creativity and intellect are being supported by their families. Their mothers and fathers are cheering them on, coaching them, and setting the bar high, so that their ambition can soar and take them high.” With a level playing field, then, in family resources, higher education, economic opportunity, and fertility control, a critical mass of girls and young women have achieved—and are achieving—the historic potential of their sex.

Strong Women, Strong Girls?

“A LOT OF THE HOPES of the feminist movement and the girls’ programming movement are being realized, but there’s a tremendous amount of work still to be done, particularly for girls without educational or economic advantages,” says Lindsay Hyde ’04, founder and executive director of Strong Women, Strong Girls (SWSG), a nonprofit organization that fosters high aspirations and success skills among low-income minority girls by involving them with strong female role models. Hyde’s inspiration was her own mother, a Miami single mom who cut the grass, tiled the bathroom floor, redid the electrical system, and “demonstrated for me that women could really do anything!”

Keen to share her own experience with young girls, Hyde designed and taught a curriculum based on historic and contemporary women at the local elementary school during her last semester of high school. When she couldn’t find a girl-centered service opportunity at Harvard that fall, she used her curriculum to start a new afterschool program through Phillips Brooks House, beginning with six undergraduate women and 30 girls from the third, fourth, and fifth grades at Roxbury and Mission Hill elementary schools. Seven years later, SWSG serves 400 mostly African-American and Latina girls at 32 schools and community centers in Boston and Pittsburgh, with 120 mentors from seven colleges and universities. (For her work, Hyde recently received the Samuel S. Beard Award for Greatest Public Service by an Individual 35 or Under, one of the five Jefferson Awards conferred annually by the American Institute for Public Service.)

To offset the effects of poverty, gender stereotyping, and low expectations that can undermine girls’ academic confidence and direct them to narrow education and career options, SWSG combines the study of diverse female role models with team-mentoring, field trips, and community service. Two or three undergraduate mentors lead 10 to 12 girls in weekly lessons built around a particular skill, such as critical thinking. Sessions begin by reading the biography of a woman exemplifying that skill, such as Sally Ride, the first American female astronaut, in order to “paint a picture of the steps she needed to take to go from being 10 years old



to being an astronaut, because that's one of the hardest things for our girls to figure out," Hyde explains. Girls then apply the skill-of-the-week in a hands-on project—using everyday objects such as paper plates and paper towel rolls to build space shuttles, for example. Lessons conclude with journal writing, with prompts like, "What are two ways that you'll use your critical thinking skills this week?" SWSG also teaches coping skills (from healthy eating and exercise to stress management), and partners with sports-focused nonprofits to provide girls with a holistic experience. During the last six weeks of the school year, the girls and their mentors create a service project for their community.

The volunteers, who serve as role models themselves, are a key element of the Strong Women, Strong Girls program. These smart, successful young women from various backgrounds introduce their inner-city students to diverse cultures, ideas, and career paths. "The girls may see a woman who's an English major,

right yet!" says Hyde, who was recently scouting wedding locations with her fiancé, Blair Baldwin '02, B '09. In the course of graduating from college, working for a couple years, going back to graduate school, perhaps starting a company or nonprofit (as she has done), and having a family, the question her cohort asks is, "How am I going to fit in all of these great things that I want to do?"

Alpha girls want to do everything—have successful careers *and* marriage and children, in sequence or combination. How will they handle the realities of the workplace and the tough choices their own mothers faced? "It won't be quite as easy as it was for them in high school and college," says Dan Kindlon. "They'll get slapped around a little when they get out into the world," he thinks, "but they're ready for the challenge." And as Hyde points out, "Some of the structural challenges around balancing work and family—maternity- and paternity-leave policies, women's

"Some of the structural challenges around balancing work and family—maternity- and paternity-leave policies, women's wages, and on-ramp/off-ramp opportunities in the workforce—have not caught up quite as fast as women's own belief in themselves and in their capacities."

who's really passionate about writing and poetry and literature, working with a woman who's a physics major, who's really passionate about science and electronics," says Hyde. "They look up to both women, who are doing very different things with very different interests and passions."

Many of these girls know few people who've gone to college besides their mentors, notes Hyde, but "they start to feel, 'Gosh, maybe college is something that I could do.'" To encourage this sense of familiarity, SWSG includes campus field trips. "We have some girls who now have been to Harvard three years in a row, and they really feel that it's a place that holds possibility for them to be there. That's a tremendous change, to go from saying, 'I don't know anybody who's ever gone to college' to walking onto the Harvard campus and saying, 'I feel like I belong here. I know where I'm going, and this is a place that feels comfortable for me.'"

The program works. Most parents feel their daughters have learned new skills (94 percent), increased their self-esteem (88 percent), and strengthened their belief in themselves as a leader (80 percent). The mentors also benefit: nearly 95 percent report greater self-confidence and empowerment. At many SWSG partner colleges, there are waiting lists of volunteers.

Strong Women, Strong Girls is helping distribute the benefits of feminism, yet the young women who volunteer often "come to the work with less of a politically oriented agenda and much more of a service-oriented agenda," reports Hyde. Volunteers frequently tell her, "I had positive experiences as a young woman, and I believe that it is incumbent on me to help other young women also have positive experiences." As a result, more inner-city girls are breaking out of gender stereotypes and gaining the "emancipated confidence" of alpha psychology to expand their educational and career opportunities.

Having It All?

"THE MYTH OF HAVING IT ALL, and having it all at once, is what my generation is working to figure out—and we haven't gotten it

wages, and on-ramp/off-ramp opportunities in the workforce—have not caught up quite as fast as women's own belief in themselves and in their capacities."

In Kindlon's research, he found that financial success was a top priority for nearly all the alpha girls surveyed, and that almost a third were determined to get rich. But they will encounter a persistent wage gap: in the United States, for each dollar earned by white men, women overall still earn only 77 cents, and African-American and Hispanic women earn even less, 64 cents and 52 cents, respectively. A recent AAUW study found that even though women earn higher grades than men, this superior academic performance doesn't translate into higher—or even equal—compensation. A year after college, women make 80 percent of the salaries of their male peers; 10 years later, the gap widens.

But alphas are starting to reverse the wage gap for the first time in large cities like New York, Boston, and Chicago. According to Queens College sociologist Andrew Beveridge, women between the ages of 21 to 30 working full time had median incomes as much as 17 percent higher than their male peers—because 53 percent of the women had college degrees compared to 38 percent of the men. "There are going to be more living college-educated women in this country in about five to 10 years than college-educated men. Historically, that's unprecedented," notes Kindlon. "We're going to see some really interesting changes in the next 20 or 30 years."

Women's educational advantage will influence work, marriage, and family in unexpected ways. African-American women now earn B.A.s at almost twice the rate of black males, for example, which is contributing to huge declines in their marriage rates, note Claudia Goldin and Lawrence Katz. Although marriage among educated whites is occurring later and more permanently, many educated black women don't just delay marriage, they don't marry at all. With potential black male partners facing jobless rates of up to 50 percent for high-school graduates and up to 72

percent for dropouts, and interracial marriage still a rarity, educated and employed black women often decide to raise their children out of wedlock. Recent reports suggest that some professional black women are starting to enter interracial relationships, however, so the alpha generation may change these marriage patterns. Meanwhile, Katz and Goldin believe the “marriage gap” reinforces an increasingly polarized and unequal socioeconomic environment for children.

“The mothering piece is really the fault line when it comes to class and race,” says ethnographer Wendy Luttrell, author of *Schoolsmart and Motherwise: Working-Class Women's Identity and Schooling* (1997). For middle- and upper-class girls and women struggling to balance rewarding work and family, “the tradeoff is about being the perfect mom and doing the perfect job—about being able to do *everything*,” she says. But for poor and working-class, increasingly single, mothers, “It’s not about tradeoffs, it’s about, ‘How am I going to support my kids and keep them safe?’” For these women, the challenge is meeting the double-duty demands of mothering and low-wage work, predominantly in service-

sector jobs and often for professional women, who employ and rely upon low-income women (disproportionately women of color and recent immigrants) to do all kinds of family-care work, says Luttrell. The current rhetoric about work-family conflicts emphasizes personal choices regarding working and/or mothering, “but this overlooks the larger mother-care-work crisis caused by unequal opportunity, declining social services, and unjust policies that pit employment demands on wage-poor mothers against the care needs of their children.”

Not all young women will choose to be mothers (26 percent of white women born in 1960 with a college degree are childless, for example), but the majority will. With 72 percent of American mothers working outside the home, the work/family challenge is widespread. “From a women’s rights point of view, that’s still the biggest hurdle to overcome,” notes Kindlon.

Work/family issues play a significant role in the wage gap. Some companies avoid investing in training women who may take time off for maternity and childrearing, according to Burbank professor of political economy Torben Iversen. Once career

From Title IX to Riot Grrrls

TODAY’S AMERICAN GIRLS AND YOUNG WOMEN may be the daughters of feminism, but their world isn’t always the one envisioned by their foremothers. “Little girls dress in pink and they’re princesses, but at the same time they’re going to grow up to wear five-inch heels and kick ass!” says Lee professor of economics Claudia Goldin, an old-school feminist who wants more equality, not difference, between the sexes. The rise of “girl power” and the celebration of “difference”—propelled by forces ranging from Title IX to feminist punk-rock bands—have changed American culture, although not all girls have benefited equally.

The struggle for women’s rights in the United States is often described in terms of “waves.” First-wave feminism culminated with women’s suffrage in 1920, while the resurgent second-wave feminism of the 1960s and ’70s focused on reproductive freedom, sexual harassment, equal pay, and access to education and jobs. The second-wave mother of the girls’ movement was Carol Gilligan, formerly Graham professor of gender studies at Harvard Graduate School of Education, whose book on women’s psychological development, *In a Different Voice* (1982), inspired countless studies on girls and sweeping educational changes. Another second-wave development was Title IX.

“My students have been *deeply* touched by Title IX” and its expectation that girls would participate in sports equally to boys, says assistant professor of studies of women, gender, and sexuality and of history and literature Robin Bernstein, when asked about girls’ self-esteem. Her work in performance studies examines “what people do with bodies.” Athletics, she says, significantly changes a girl’s relationship with her body. To help her students understand the law’s impact, she tells them that in the 1970s, “a sports bra was a specialized piece of sports equipment, not something you could buy at any department store—which speaks to a huge change in expectations for women and athletics.” People don’t recognize Title IX’s impact, she adds, “not just

on female athletes who made varsity or went on to the Olympics, but on the masses of girls who grew up with the expectation, ‘Sure, I’ll play soccer. Why not?’”

Female sports participation has skyrocketed since Richard Nixon signed Title IX of the 1972 Educational Amendments to the 1964 Civil Rights Act into law—by 450 percent in college and an astounding 900 percent in high school (to 2.9 million girls) in 2005-2006. (Not everyone has benefited as intended. For inner-city girls, for example, sports fields are often nonexistent and schools can’t afford the expense of equipment, lessons, and travel.)

Furthermore, Title IX is not just about sports. It not only bans bias (in recruitment, financial aid, benefits, and scholarships) against either sex in any educational setting receiving federal aid, it also outlaws sexual harassment and protects equal access to math and science, higher education, career training, technology, and employment. Wendy Luttrell, Aronson associate professor in human development and education and the author of *Pregnant Bodies, Fertile Minds: Gender, Race, and the Schooling of Pregnant Teens* (2003), notes that “Title IX was also initiated so that pregnant girls could stay in school.” (Public schools used to expel pregnant students and bar visibly pregnant teachers from classrooms. “Title IX got rid of the *de jure* discrimination that pregnant girls cannot be in school,” Luttrell says, “but *de facto* discrimination”—either isolating the girls from resources and regular classes, or mainstreaming them without support—“is still quite prevalent.”)

While the effects of Title IX were taking hold, a “third wave” of American feminism—advocating “difference” and “girl-ness”—was rising. Feminist performance artists like the Guerilla Girls and the V-Girls reclaimed the word “girl” in the 1980s, and in the early 1990s, the punk band Bikini Kill famously put the *grrr* into “grrrl” and helped catalyze a movement of Riot Grrrls. Young third-wavers resisted sexism through their music,

choices are taken into account, Iversen has found that “statistical discrimination” against women (basing judgments about individuals from a group on average assumptions about that group) is a major cause of the wage gap. Katz believes that among college graduates, career “choice” is likely the largest factor causing the wage gender gap, while traditional sex discrimination remains substantial but is diminishing. He suggests that behavioral differences play a secondary role: men tend to negotiate better salaries or bonuses, while women tend to accept what’s offered, and men seem to thrive on “pure competition” more than women. (Because studies have found that some employers “penalize” women who negotiate, female reluctance to negotiate may be self-protective against bias.)

According to the *Harvard Crimson* survey of the class of 2007, such factors are still in play for recent alphas. Women and men were heading to graduate school (22 percent) and finding jobs (50

percent) in equal numbers, but there was a significant gender gap in median starting salaries: men were contracted to earn \$10,000 more. “That’s entirely explained by which sectors they go into,” says Katz: 58 percent of men chose finance, compared to 43 percent of women (still a large percentage of women choosing a male-dominated field). Eleven women planned to work at non-governmental organizations, but no men, adds Goldin: “Men chose to work 80 hours a week at Goldman Sachs and make \$60,000, not including bonuses.” However, *within* banking or consulting, they report, the wage gap disappears.

Goldin is concerned about the “extremely large” economic penalty for choosing to balance family and career down the line. Female and male lawyers straight out of law school have similar salaries, she notes, but 10

the Internet, and grass-roots activism, on the one hand, and on the other, through a “girlie” feminism that championed “girl stuff,” from Barbie dolls and high heels to knitting.

“Girl Power,” the third wave’s best-known catch phrase, went mainstream as the slogan for the British pop group the Spice Girls. The U.S. Department of Health and Human Services even named its first girl-centered public-health initiative Girl Power! (www.girlpower.gov). Today girls’ programming includes cultural staples like the Ms. Foundation’s original Take Our Daughters to Work Day (now Take Our Daughters and Sons to Work Day) and organizations like Strong Women, Strong Girls (SWSG).

Even the preferred sex of infants has acquired a girl-power spin. “Now people say, ‘Oh, I’m having a boy. This is going to be so difficult,’” says Goldin. “We’ve seen a huge shift in what is considered to be the perfect child—little girls are just ‘easier,’ they’re ‘smarter,’ they ‘mature faster.’” Popular treatments of sex-difference research may be responsible: “Men, Get Ready to Develop Brain Envy,” declares the back cover of *The Female Brain*, by neuropsychiatrist Louann Brizendine, a former Harvard Medical School resident and professor.

Brizendine has found a generational divide in the response to her work on this biology-psychology connection. Girls and women under 30 send grateful e-mails, she says: “Younger women have come up in the world not thinking they have limitations on their intellect at all. They’ve embraced their own intelligence, and they’re moving forward.” But women of her own over-50 generation “don’t like it. They’re afraid the message will hurt women instead of help them. If you say anything about difference, it means *unequal*, and unequal means women lose.” Brizendine was a second-waver, but now, she says, “I call myself a third-wave feminist, which means embracing and celebrating the differences.”

Whatever the wave, few daughters of feminism identify themselves by the “f-word,” as Dan Kindlon, clinical psychologist and

adjunct lecturer at the Harvard School of Public Health, found among the alpha girls he studies. SWSG’s Lindsay Hyde ’04 reports that her volunteer mentors “have really differing levels of comfort with what feminism means.” Demonizing rants against “male-bashing *feminazis*” are partly to blame, so SWSG organizationally defines feminism, which “has become such a flash point in the political realm, as ‘ensuring that *everyone*, men and women, have access to the resources they need to make positive choices in their lives,’” says Hyde. “Using that definition, I absolutely consider myself a feminist.”



years later their earnings are very different. Many professions were structured for “the *Father Knows Best* world, when every person in the labor market had a mirror image in the home,” which freed time for the paid worker. Hence “rising to the top” (tenure, partnership, profit shares) required enormous amounts of time—on average 80 hours a week. For women, the traditional promotional clock often conflicts with their biological clock, and many who want children don’t “opt into” the partner track, says Goldin, choosing instead less demanding—and less remunerative—corporate counsel, government, or nonprofit work, or having a small firm. (Being slow to adapt to women’s realities has cost law firms dearly, however, prompting restructuring that will benefit alpha girls. To attract and retain female attorneys, some firms now offer flextime partner tracks; “lattice” rather than “ladder” careers—climbing interspersed with slower childbearing periods; on-site daycare; flat-rate or project-based compensation rather than billable hours; and part-time partnerships.)

The alpha girls Kindlon studied were aware that “having it all” isn’t easy. Most knew their career path: medicine was at the top (25 percent), followed by STEM (science, technology, engineer-

professional women comfortably “wrap together career and family,” notes Goldin. Many can even afford to “opt out” for a couple of years to be with their kids. “I have no crocodile tears for women at this level,” she says. It’s the women in their early thirties who dropped out of high school (10 percent), or graduated but didn’t do any college (25 percent), about whom Goldin is concerned. “They aren’t going to do as well.”

Strong Women, Strong Girls seeks to change those statistics for a future generation. SWSG’s Lindsey Hyde also supports flextime solutions in the present. Her female staff find creative ways to balance work and family, and their partners and spouses are assuming more domestic responsibilities, too. “Women in my generation are asking their partners to be more involved, and considering that before entering a more serious relationship,” she says. “Is this somebody who’s going to support me in the choices that I make, whatever those choices may be?”

Alpha girls won’t make the same mistake their mothers made, says Kindlon—“have a job *and* do 90 percent of the domestic stuff.” They’ll tell their husbands or partners, “We’re going to split this. If you’re home, you’re going to change diapers the same

Then comes the critical, pivotal point of turning 30, when “you’ve got about 10 years left to have kids”—and alpha confidence falters. “All of a sudden my students start to think, ‘How am I going to reserve part of my energy, my self, my creativity, and my time, to have kids?’ They get anxious.”

ing, math) fields and art/music (13 percent each), business (12 percent), and politics/law (9 percent). Medicine was the first choice, Kindlon believes, because most female physicians can and do practice part-time, allowing a lucrative, satisfying career with time for kids. By specialty, the percentage of female residents in 2003 was highest for obstetrics/gynecology (71 percent), followed by pediatrics (65 percent), dermatology (57 percent), pathology and psychiatry (50 percent each), family medicine (49 percent), and surgery (24 percent). How might subsequent choices influence alpha women’s salaries? “Women are using their market power *not* to maximize their earnings, but to get the job that allows more balance,” says Katz. They’re forming group ob/gyn practices and earning \$140,000 a year for 50-hour weeks and not coming in at night, while men are making \$180,000 for 60 hours and taking the emergency calls.

The work/family challenge involves more than wages, of course. When young women face the reality of child-rearing, there may be a psychological penalty, says Louann Brizendine. Her psychiatry-neurology residents are “two years out from hanging up their shingle,” she reports, “and I don’t see them giving a second thought to anything holding them back from what they want to do—up to age 27 or 28.” The question of children looms ahead, but “they go full steam with their ambition—the alpha female is out there doing her thing.” Then comes the critical, pivotal point of turning 30, when “you’ve got about 10 years left to have kids”—and alpha confidence falters. “All of a sudden my students start to think, ‘How am I going to reserve part of my energy, my self, my creativity, and my time, to have kids?’ They get anxious.”

Of course, with money for good daycare and good schools,

way I do. If the house is dirty, either I’ll get used to it, or you’re going to help me out with it.” This generation won’t feel “it’s *their* work to do, as a lot of women today do”; as a result, men will pick up a bigger share and women’s lives won’t feel as unbalanced.

“It’s very possible that my daughters will be the primary breadwinners in their homes,” Kindlon speculates. “They’re certainly not looking for a husband to provide for them!” Single mothers already carry that responsibility, but more married mothers will, too. In fact, “if the college-educated person is making more money and has health benefits and the other person doesn’t, who’s going to cut back on the career? There’s no question, I’ve seen it. I have nephews whose wives are working, and they’re staying home with the kids, because money’s behind it, and nothing’s stopping that trend.” (Some estimates number U.S. stay-at-home dads at 2 million.) “The real fuel for the engine is going to be that women will have more money, so they’ll have more of a say over what happens,” he adds. With parenting no longer “women’s work” alone, perhaps a true work/life balance is possible for men *and* women.

For Hyde, a different responsibility is foremost. “One of the things that is really important for women of my generation to be cognizant of is that we *have* had tremendous opportunities and that it is incumbent on us to make sure that the young women—and young men—who are coming up behind us have access to those same opportunities. As people who have been so privileged to live in this time period, we really do have a responsibility to continue to make change moving forward.”

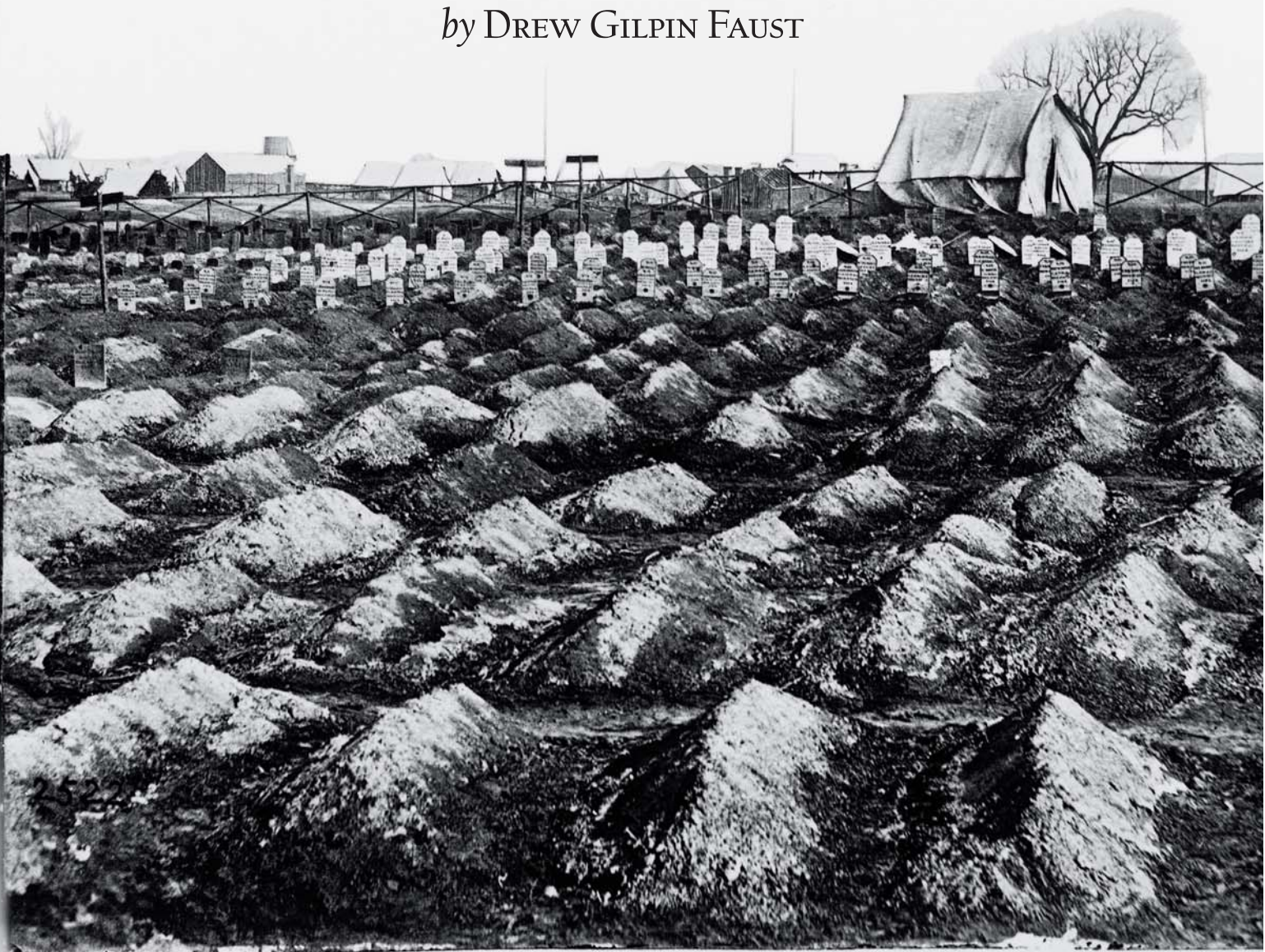
Contributing editor Harbour Fraser Hodder, Ph.D. ’91, lives in central Massachusetts.



"...In My Mind I Am Perplexed"

The Civil War and the invention of modern death

by DREW GILPIN FAUST



Soldiers' graves near General Hospital, City Point, Virginia, circa 1861-1869. Photographer unknown

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THE CIVIL WAR transformed American society and institutions. It brought about the formal end of slavery (but not of racial discrimination). It empowered central, national government, and put citizens, particularly those conscripted for battle, in a new relationship to the state. It advanced the reach of industry.

But in personal terms, the war's largest and most lingering effects lay elsewhere. "In the middle of the nineteenth century," writes Drew Gilpin Faust, "the United States embarked on a new relationship with death" as 620,000 soldiers lost their lives between 1861 and 1865. The scale of the killing—a sum equal to the fatalities in all other American wars from the Revolution through Korea—widowed spouses and orphaned children to an unimaginable degree, particularly in the Confederate states.

Beyond the sheer number of the dead, the experience of mortality itself was exploded. In place of the "Good Death"—at home, surrounded by loved ones, at peace with God—husbands and sons were cut down en masse, or literally cut up by desperate surgeons, or their remains were left to rot on battlefields, or be buried by the score in unmarked ditches. Frantic relatives had no official way, often not even informal means, to confirm the deaths. Many soldiers who survived were themselves driven nearly mad by the carnage they had caused and seen. However they were engaged, Faust writes, all were involved in "the work of death in the American Civil War." In a collective sense, the result was, in Frederick Law Olmsted's phrase, a "republic of suffering."

From sources including letters, newspapers, photographs, official postwar reports of reinterments, and literature,

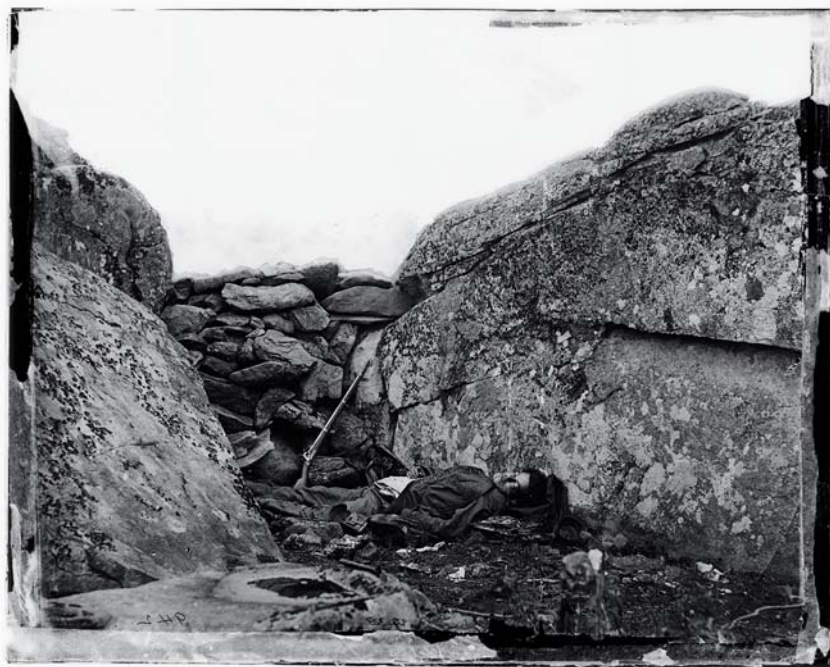
Faust, who is Lincoln professor of history, has made that "work" and its harvest the subject of her new book, *This Republic of Suffering: Death and the American Civil War*. Based on a decade of scholarship that preceded her arrival as founding dean of the Radcliffe Institute for Advanced Study in 2001 and concluded in the winter weeks just before her appointment as Harvard's twenty-eighth president last February, the book documents a society transformed. From the war's bloodshed came government responsibilities for military cemeteries (initially for the Northern dead, at least), for veterans' pensions, and other institutional changes. The ghastliness of the war impelled a search for meaning, a quest to justify what had been wrought, and challenges to religious faith that mark the beginnings of a modern, skeptical outlook on a newly fearsome and cold cosmos.

For all those reasons, this original, unsettling interpretation of the war that did so much to shape America commands attention. That *This Republic of Suffering* appears during what has now become the nation's longest war makes it unexpectedly topical, its approach unusually pertinent. That it is dedicated to the author's father, McGhee Tyson Gilpin (1919-2000), who earned the Silver Star, Purple Heart, and Croix de Guerre as a captain in U.S. Army Intelligence during World War II, underscores as perhaps nothing else the personal nature and meaning of war, even in the twenty-first century.

The excerpts that follow come from the end of chapter 2, "Killing," and the epilogue, "Surviving." ~The Editors

"A Realizing Sense of War"

IN THE AFTERMATH OF BATTLE, when the intensity and the frenzy dissipated, when the killing at least temporarily ceased, when reason returned, soldiers confronted the devastation they had created and survived—"the unmistakable evidence," as one soldier put it after Spotsylvania, "that death is doing its most frightful work." William Dean Howells later wrote of the lasting impact of the Civil War on James Garfield, a Union general and later U.S. president: "at the sight of these dead men whom other men had killed, something went out of him, the habit of a lifetime, that never came back again: the sense of the sacredness of life and the impossibility of destroying it." Dead men whom other men had killed: there was the crux of the matter. Battle was, as a North Carolina soldier ruefully put it, "majestic murder." The carnage was not a natural disaster but a man-made one, the product of human choice and human agency. Neither North nor South had expected the death tolls that Civil War battles produced, and the steadily escalating level of destruction continued to amaze and horrify. The Mexican War had claimed approximately 13,000 U.S. lives, of which fewer than 2,000 had been battle deaths; the First Battle of Bull Run in August 1861 had shocked the nation with its totals of 900 killed and 2,700 wounded. By the following spring at Shiloh, Americans recognized that they had embarked on a new kind of war, as the battle yielded close to 24,000 casualties, including approximately 1,700 dead on each side. Shiloh's number of killed and wounded exceeded the combined totals of all the major en-



Gettysburg, July 1863. Photograph by Timothy O'Sullivan

gagements of the war that had preceded it. The summer's fighting on the Virginia Peninsula would escalate the carnage yet again. "We used to think that the battle of Manassas was a great affair," Confederate Charles Kerrison wrote home to South Carolina in July 1862, "but it was mere child's play compared with those in which we have lately been engaged." By the time of Gettysburg a year later, the Union army alone reported 23,000 casualties, including 3,000 killed; Confederate losses are estimated between 24,000 and 28,000; in some regiments, numbers



Antietam, September 1862. Photograph by Alexander Gardner

of killed and wounded approached 90 percent. And by the spring of 1864 Grant's losses in slightly more than a month approached 50,000.

Faced with the Civil War's unprecedented slaughter, soldiers tried to make sense of what they had wrought. As they surveyed the scene at battle's end, they became different men. For a moment they were relieved of the demand to kill; other imperatives—of Christianity, of humanity, of survival rather than courage or duty—could come again to the fore. And now they had time to look at what was around them. Union colonel Luther Bradley described this transformation:

Of all the horrors the horrors of the battlefield are the worst and yet when you are in the midst of them they don't appal one as it would seem they ought. You are engrossed with the struggle and see one and another go down and say, "there goes poor so-and-so. Will it be my turn next." Your losses and dangers don't oppress you 'till afterwards when you sit down quietly to look over the result or go out with details to bury the dead.

Dealing with the "afterwards" required work lest, as a Confederate soldier worried after Shiloh, the spectacle "dethrone reason or pervert the judgment." Henry C. Taylor wrote to his parents in Wisconsin after a grim night collecting the dead and wounded from an 1863 battle in Kentucky, "I did not realize anything about the fight when we were in action, but the battlefield at midnight will bring one to a realizing sense of war. I never want to see such a sight again. I cannot give such a description of the fight as I wish I could.

Gettysburg, July 1863. Photograph by Alexander Gardner



My head is so full that it is all jumbled up together and I can't get it into any kind of shape." But he could draw one clear and revealing conclusion: "Tell Mrs Diggins not to let her boy enlist."

Soldiers struggled to communicate to those eager to know their fate at the same time that they themselves struggled to understand what they saw. Why indeed were they still alive? As one Indiana soldier wrote in his diary in 1864, his "best men" had fallen around him, yet "I am not better than they." William Stilwell of Georgia confessed to his wife the day after Antietam, "I am in good health this morning as far as my body is concerned, but in my mind I am perplexed." Unable to explain, soldiers tried to describe, invoking the raw physicality of carnage and suffering. Even as survivors they could not escape the literal touch of death, which assaulted the senses. First there was the smell. "The dead and dying actually stink upon the hills," W. D. Rutherford wrote his wife after the Seven Days' battles around Richmond. For a radius of miles, the "mephitic effluvia" caused by rotting bodies ensured that even if the dead were out of sight, they could not be out of mind. And

then there were the thousands of bodies. Men had become putrefied meat, not so much killed as slaughtered, with "nothing to distinguish them from so many animals." Stepping accidentally on a dead man's leg felt to James Wood Davidson's "boot-touch like a piece of pickled pork—hard and yet fleshy," and he leaped back with alarm. Soldiers looked with horror upon bodies that seemed to change color as they rotted, commenting frequently upon a transformation that must have borne considerable significance in a society and a war in which race and skin color were of definitive importance. "The faces of the dead," one northern Gettysburg veteran described, "as a general rule, had turned black—not a purplish discoloration, such as I had imagined in reading of the 'blackened corpses' so often mentioned in descriptions of battlegrounds, but a deep bluish black, giving to a corpse with black hair the appearance of a negro."

Witnesses to battle's butchery often wrote of the impossibility of crossing the field without walking from one end to the other atop the dead. "They paved the earth," a soldier wrote after the Battle of Williamsburg in 1862. Grant found the same after Shiloh: "I saw an open field...so covered with dead that it would have been possible to walk across the clearing, in any direction, stepping only on dead bodies without a foot touching the ground." With grim precision Eugene Blackford described a two-acre area at Fredericksburg containing 1,350 dead Yankees;

others estimated stretches of a mile or more at Antietam or Shiloh where every step had to be planted on a dead body. Men were revolted both by the dishonor to the slain beneath their feet and by the pollution represented by such distasteful contact with the

“I had no more feeling for him, than if he had tripped over a stump and fallen...”

dead. Like a modern snapshot, this oft-repeated representation of battle's horror graphically portrayed in the freeze-frame of a picture what soldiers could not narrate in a sequence of words. With vividness and detail, for the senses rather than for the reason or intellect, this recurrent image communicated the unspeakable.

Men wept. Even as he acknowledged that “it does not look well for a soldier to cry,” John Casler of the Stonewall Brigade knew “I could not help it.” Benjamin Thompson of the 111th New York affirmed that after Gettysburg “no words can depict the ghastly picture.” He “could not long endure the gory, ghastly spectacle. I found my head reeling, the tears flowing and my stomach sick at the sight.” Colonel Francis Pierce confessed that “such scenes completely unman me.” Battle changed the living to the dead, humans into animals, and strong men into “boys...crying like children”—or perhaps even into women with their supposed inability to control their flowing tears. As Walter Lee wrote his mother from the front in June 1862, “I don't believe I am the same being I was two weeks ago, at least I don't think as I used to and things don't seem as they did.”

One way soldiers became different men was by resisting and repressing the unbearable horror. “The feelings of a soldier walking over his first battle-field and over his second, are widely different,” a southern newspaper observed. Men wrote of “hardening,” numbing, or becoming “calloused” or even indifferent to others' deaths as well as to the prospect of their own. A Union surgeon, surrounded in Virginia by “a horrible spectacle of human misery,” saw this transformation in attitude as a blessing, regarding it as a “wise provision of divine providence that man can accommodate himself to any & every circumstance, at first no matter how revolting.” A seasoned soldier could sleep or eat amid the bodies of the dead; “all signs of emotion...or ordinary feelings of tenderness and sympathy” disappeared. With a gesture that reflected either a jocular insensitivity or an ironic anger that may well have shocked and surprised his wife, Isaac Hadden of New York invited her to join him at dinner “in the enemy's rifle pits where the dead lay around crawling away with dear little worms called maggots...I was kind of hungry and got used to the pretty sights.” Union Colonel Charles Wainwright reported that when another soldier fell against him proclaiming himself a dead man, “I had no more feel-

ing for him, than if he had tripped over a stump and fallen; nor do I think it would have been different had he been my brother.” Private Wilbur Fisk of Vermont resorted to irony in his attempt to depict soldiers' changing attitudes: “The more we get used to being killed, the better we like it.”

Soldiers acted with as little concern as if it were not men but “hogs dying around them.” Human life diminished sharply in value, and the living risked becoming as dehumanized as the dead. Soldiers perhaps found it a relief to think of themselves not as men but as machines—without moral compass or responsibility, simply the instruments of others' direction and will. As a common soldier, Angus Waddle believed he was “but a machine by which fame and glory is manufactured for some great Gen.” Texan Elijah Petty explained to his wife that “we have no right to think. Others have been appointed to think for us and we like the automation must kick (or work) when the wire is pulled.” Civilians caring for the fallen in battle's immediate aftermath adopted a similar strategy. Katherine Wormeley, who served on a hospital ship during the Peninsula Campaign, believed that to permit herself to “feel acutely at such times is merely selfish.” It was imperative

“to put away all feeling. Do all you can, and be a machine—that's the way to act; the only way.”

While many soldiers welcomed this numbing as a means of escaping the horrors around them, others worried about the implications of such detachment. “The fact that many men get so accustomed to the thing, that they can step about among the heaps of dead bodies, many of them their friends and acquaintances[.] without any particular emotion, is

the worst of all,” a Federal officer observed. Indifference to suffering and death was “demoralizing,” a failure to care about what should matter most in human life. A religious tract widely distributed in the Confederate army issued a stern “warning to soldiers.” “Guard against unfeeling recklessness,” it cautioned. “By familiarity with scenes of violence and death, soldiers often become apparently indifferent to suffering and anguish, and appear to be destitute of the ordinary sensibilities of our humanity.” Hardening represented in the eyes of the church an abandonment of the compassion that lay at the core of human and Christian identity. Loss of feeling was at base a loss of self—a kind of living death that could make even survivors casualties of war.

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KILLING WAS THE ESSENCE OF WAR. But it also challenged men's most fundamental assumptions about the sanctity of their own and other human lives. Killing produced transformations



Gettysburg, July 1863. Photograph by Alexander Gardner

that were not readily reversible—the living into the dead, most obviously, but the survivors into different men as well, men required to deny, to numb basic human feeling at costs they may have paid for decades after the war ended, as we know twentieth- and twenty-first-century soldiers from Vietnam to Iraq continue to do; men who, like James Garfield, were never quite the same again after seeing fields of slaughtered bodies destroyed by men just like themselves.

“The Whole of Life Has Been Not-Dying”

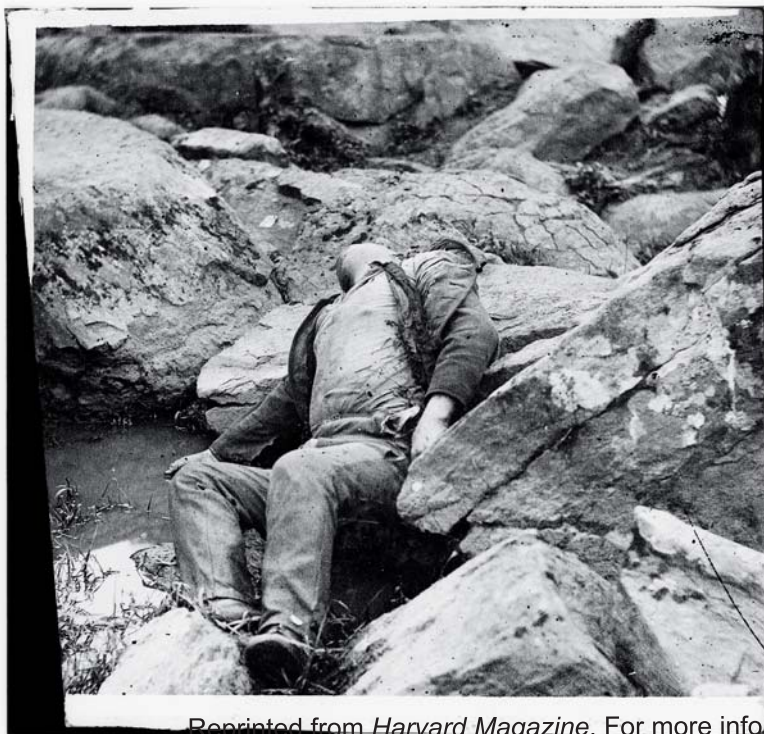
*Then with the knowledge of death as walking one side of me,
And the thought of death close-walking the other side of me,
And I in the middle, as with companions, and as holding the hand of com-
panions...*

Walt Whitman, “When Lilacs Last in the Dooryard Bloom’d”

JOHN PALMER carried the bullet that killed his son with him to the grave; Henry Bowditch habitually wore a watch fob fashioned from his fallen son’s uniform button; Mary Todd Lincoln dressed in mourning till she died; Walt Whitman believed the war had represented the “very centre, circumference, umbilicus” of his life; Ambrose Bierce felt haunted by “visions of the dead and dying”; Jane Mitchell continued to hope for years after Appomattox that her missing son would finally come home; J.M. Taylor was still searching for details of his son’s death three decades after the end of the war; Henry Struble annually laid flowers on the grave that mistakenly bore his name. Civil War Americans lived the rest of their lives with grief and loss.

More than 2 percent of the nation’s inhabitants were dead as a direct result of the war—the approximate equivalent of the population in 1860 of the state of Maine, more than the entire population of Arkansas or Connecticut, twice the population of Vermont, more than the whole male population of Georgia or Alabama. These soldiers had experienced what many Americans called “the great change,” the uncharted passage from life to

Gettysburg, July 1863. Photograph by Alexander Gardner



Collecting bones, Cold Harbor, Virginia, April 1865. Photograph by John Reekie

death. No longer fathers or brothers or sons, they had become corpses and memories, in hundreds of thousands of cases without even identifiable graves.

But the fallen had solved the riddle of death, leaving to survivors the work of understanding and explaining what this great change had meant. And the living had been changed too, by what they had seen and done, what they had felt, and what they had lost. They were, like Bierce, “sentenced to life” and to making sense of how Civil War death had redefined what life might be. Sidney Lanier, the Confederate poet who had fought in the bloody Seven Days’ Battles in 1862 and later suffered in a Union prison camp, commented in 1875 that for most of his “generation in the South since the War, pretty much the whole of life has been not-dying.”

Managing Civil War death was made all the more difficult by the mystery that so often surrounded it. Nearly half the dead remained unknown, the fact of their deaths supposed but undocumented, the circumstances of their passage from life entirely unrecorded. Such losses remained in some sense unreal and thus “unrealized,” as the bereaved described them, recognizing the inhibition of mourning that such uncertainty imposed. The living searched in anxiety and even “phrensy” to provide endings for life narratives that stood incomplete, their meanings undefined.

This crisis of knowledge and understanding extended well beyond the problem of the unidentified dead to challenge, in Melville’s words, “the very basis of things.” Individuals found themselves in a new and different moral universe, one in which unimaginable destruction had become daily experience. Where did God belong in such a world? How could a benevolent deity countenance such cruelty and such suffering? Doubt threatened to overpower faith—faith in the Christian narrative of a compassionate divinity and a hope of life beyond the grave, faith in the intelligibility and purpose of life on Earth. Language seemed powerless to explain, humans unable to comprehend what their deaths—and thus their lives—could mean.

Man had been at once agent and victim of war’s destruction. Both as butcher and butchered, he had shown himself far closer to the beasts than to the angels. The vaunted human soul had seemed to count for little in the face of war’s fearsome physicality, its fundamental economy of bodies, of losses and casualties, of wounding and killing. Mutilated and nameless corpses challenged notions of the unity and integrity of the human selves

The meaning of the war had come to inhere in its cost.
The nation's value and importance were derived from
and proved by the human price paid for its survival.

they once housed, for by the tens of thousands these selves had fragmented and disappeared. Death without dignity, without decency, without identity imperiled the meaning of the life that preceded it. Americans had not just lost the dead; they had lost their own lives as they had understood them before the war. As Lucy Buck of Virginia observed, "We shall never any of us be the same as we have been."

The nation was a survivor, too, transformed by its encounter with death, obligated by the sacrifices of its dead. The war's staggering human cost demanded a new sense of national destiny, one designed to ensure that lives had been sacrificed for appropriately lofty ends. So much suffering had to have transcendent purpose, a "sacred significance," as Frederick Douglass had insisted in the middle of the war. For him, such purpose was freedom, but this would prove an unrealized ideal in a nation unwilling to guarantee the equal citizenship on which true liberty must rest. Slavery had divided the nation, but assumptions of racial hierarchy would unite whites North and South in a century-long abandonment of the emancipationist legacy.

Instead, the United States' new and elevated destiny became bound up with the nation itself: its growing power, its wealth, its extent, its influence. Debates about nationalism had caused the war; national might had won the war; an expanded nation-state

with new powers and duties emerged from war's demands. And both the unity and responsibilities of this transformed nation were closely tied to its Civil War Dead.

The meaning of the war had come to inhere in its cost. The nation's value and importance were both derived from and proved by the human price paid for its survival. This equation

cast the nation in debt in ways that would be transformative, for executing its obligations to the dead and their mourners required a vast expansion of the federal budget and bureaucracy and a reconceptualization of the government's role. Na-

tional cemeteries, pensions, and records that preserved names and identities involved a dramatically new understanding of the relationship of the citizen and the state. Edmund Whitman had observed with pride after his years living among the dead that the reinterment program represented a national commitment to a "sentiment." In acknowledging that decent burial and identifiable graves warranted such effort and expense, the United States affirmed its belief in values that extended beyond the merely material and instrumental. Soldiers were not, as Melville articulated and so many Americans feared, "operatives," simply cogs in a machinery of increasingly industrialized



Union dead buried and Confederate dead unburied, where they fell. Antietam, September 1862. Photograph by Alexander Gardner

warfare. Citizens were selves—bodies and names that lived beyond their own deaths, individuals who were the literal lifeblood of the nation.

Without agendas, without politics, the Dead became what their survivors chose to make them. For a time they served as the repository of continuing hostility between North and South,



Antietam, September 1862. Photograph by Alexander Gardner

but by the end of the century the Dead had become the vehicle for a unifying national project of memorialization. Civil War death and the Civil War Dead belonged to the whole nation. The Dead became the focus of an imagined national community for the reunited states, a constituency all could willingly serve—"the dead, the dead, the dead—*our* dead—or South or North, ours all (all, all, all, finally dear to me)," Walt Whitman chanted.

In 1898 President William McKinley announced to the South, in a much-heralded speech in Atlanta, that "the time has now come in the evolution of sentiment and feeling under the providence of God, when in the spirit of fraternity we should share with you in the care of the graves of the Confederate soldiers." The sons and grandsons of "these heroic dead" had in the preceding year risked their lives in a new American war; the brave Confederates should be officially honored alongside their Union counterparts.

To Frederick Douglass's despair, the reasons for which men had died had been all but subsumed by the fact of their deaths. "Death has no power to change moral qualities," he insisted in a Decoration Day speech in 1883. "Whatever else I may forget," the aging abolitionist declared, "I shall never forget the difference between those who fought for liberty and those who fought for slavery." But many even of those who had fought felt otherwise. "The brave respect the brave. The brave/Respect the dead," Ambrose Bierce wrote in a poem chiding one "Who in a Memorial Day oration protested bitterly against decorating the graves of Confederate dead."

*Remember how the flood of years
Has rolled across the erring slain;
Remember, too, the cleansing rain
Of widows' and of orphans' tears.*

*The dead are dead—let that alone:
And though with equal hand we strew
The blooms on saint and sinner too,
Yet God will know to choose his own.*

*The wretch, whate'er his life and lot,
Who does not love the harmless dead
With all his heart and all his head—
May God forgive him, I shall not.*

And Oliver Wendell Holmes, who had as a young soldier facing death so resolutely rejected the solace of Christianity, came to embrace war's sacrifice as the one foundation for truth. His "Soldier's Faith" speech, delivered on Memorial Day 1895, became emblematic of the elegiac view of the war that hailed death as an end in itself. "I do not know the meaning of the universe," Holmes baldly declared. "But in the midst of doubt, in the collapse of creeds," he had found one certainty: "that the faith is true and adorable which leads a soldier to throw away his life in obedience to a blindly accepted duty, in a cause which he little understands, in a plan of campaign of which he has no notion, under tactics of which he does not see the use." The very purposelessness of sacrifice created its purpose. In a world in which "commerce is the great power" and the "man of wealth" the great hero, the disinterestedness and selflessness of the soldier represented the highest ideal of a faith that depended on the actions not of God but of man. "War, when you are at it," Holmes admitted, "is horrible and dull. It is only when time has passed that you see that its message was divine." War may have shattered the young Holmes's beliefs, but for the old man, war became the place where man's confrontation with annihilation had made him "capable of miracle, able to lift himself by the might of his own soul." Man's ability to choose death became for both Holmes and Bierce the most important experience and memory of the war.

• • •

WE STILL LIVE in the world of death the Civil War created. We take for granted the obligation of the state to account for the lives it claims in its service. The absence of next-of-kin notification, of graves registration procedures, of official provision for decent burial all seem to us unimaginable, even barbaric. The Civil War ended this neglect and established policies that

For a time the Dead served as the repository of continuing hostility between North and South.

led to today's commitment to identify and return every soldier killed in the line of duty. But even as the Civil War brought new humanity—new attentiveness to "sentiment"—in the management of death, so too it introduced a level of carnage that foreshadowed the wars of the century to come. Even as individuals and their fates assumed new significance, so those individuals threatened to disappear into the bureaucracy and mass slaughter of modern warfare. We still struggle to understand how to preserve our humanity and our selves within such a world. We still seek to use our deaths to create meaning where we are not sure any exists. The Civil War generation glimpsed the fear that still defines us—the sense that death is the only end. We still work to live with the riddle that they—the Civil War dead and their survivors alike—had to solve so long ago.



JOHN HARVARD'S JOURNAL



Look what I found! A failed interception attempt by Yale defensive back Steve Santoro (14) turned into a catch for Harvard receiver Corey Mazza, flat on his back at Yale's six-yard line. See page 71 for an account of Harvard's 37-6 triumph in *The Game*.

Approaching the Arts Anew

HARVARD PRESIDENT Drew Faust made the inaugural performance at the New Col-

lege Theatre, on November 1, the setting for her announcement of a University-wide arts initiative. A faculty task force involving several Harvard schools will explore the role of creativity, performance, and artistic practice; implications for the curriculum; and

the changes in administration and facilities that might be entailed in implementing any recommendations. This appears to be the broadest effort to examine performing arts and artistic creation at Harvard, inside the classroom and beyond (as compared to an almost exclusively extracurricular pursuit for thousands of students), since the 1950s.

Cogan University Professor Stephen Greenblatt, general editor of *The Norton Anthology of English Literature* as well as a playwright, chairs the task force. He is widely known for his research on Shakespeare and his milieu (see "The Mysterious Mr. Shakespeare," September-October 2004, page 56). Last fall, he introduced a new humanities general-education course that uses interactive and multimedia technologies to con-

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nect students with the burgeoning world cultures of the seventeenth century.

Other members include Rothenberg professor of the humanities Homi Bhabha, director of the Humanities Center (www.fas.harvard.edu/~humcentr); Diana Sorensen, Rothenberg professor of Romance languages and literatures and of comparative literature, and dean for the humanities in the Faculty of Arts and Sciences (FAS); Graduate School of Design dean Mohsen Mostafavi, newly arrived from Cornell, where his brief as dean included the arts; Mallinckrodt professor of physics Melissa Franklin, and FAS peers in art history, the visual arts, and music; leading figures from the Graduate School of Education, the Office for the Arts (OFA), the University Art Museums, and

the American Repertory Theatre (ART); undergraduates and a recent graduate student; and others. (For the news release on the task force, see www.news.harvard.edu/gazette/2007/11.08/99-arts.html.)

Beyond its explorations on campus, Faust asked the task force to examine programs at other educational institutions, and to consult the "large external network" of alumni involved in the arts. Comments may be sent to arts_task-force@harvard.edu.

"HARVARD HAS ALWAYS HAD enormous strengths in the arts—and never more so than today," Faust said in the announcement of the initiative, "but we have had equally strong ambivalence about the role of performance and practice in the curriculum and in the life of the University."

Despite the individual strengths of the "nearly 150 undergraduate student organizations," plus museum collections, art studios, the Harvard Film Archive, the ART and the OFA, she said, these and

Theatrical Debut

Hasty Pudding Theatricals (HPT) returns to its historic home this year for its 160th production. (Since the inaugural show in 1844, the group has missed only four years, taking a hiatus during each of the two world wars.) But the theater at 10-12 Holyoke Street looks quite different than it did when students last performed there in 2005. The University has renovated the space, keeping the 1888 Georgian Revival façade but demolishing almost everything inside. The building's modernized, and Modern, in-nards—designed by Leers Weinzapfel Associates of Boston—comprise 25,119 square feet of space on six stories, three above ground and three below.

Because the building was surrounded on three sides by other buildings and on the fourth by the old façade, all materials had to be brought in by crane. That and the high water table (the new building requires two sump pumps, one running continuously, to keep water out) pushed up construction costs: the Corporation eventually approved spending \$31 million. The University has kept the building's name nondescript, hoping the naming rights will attract a donor.

But the New College Theatre itself is anything but nondescript: it has consider-

ably more accouterments than the old building, where actors had to duck under support beams to get to the stage. Electrical and ventilation systems occupy the sub-subbasement; the floor above houses a laundry room, set-painting space, a prop shop, and an electrical shop. The theater itself spans two levels, with the entrance at ground level and seats sloping down to the stage a floor below. Features include a counterweight fly system and a movable thrust stage that is deeper, front to back, than the old stage. The new theater is smaller: it seats 256 to 280, instead of 350, depending on whether the production includes an orchestra and whether space is reserved for audience members with disabilities. (The entire building, except for the catwalks, is accessible.) It also features state-of-the-art technology, including audiovisual plug-ins to facilitate media coverage of HPT's annual Man and Woman of the Year awards. Soundproofing in the upstairs dance space allows performances or practice to occur even during a show downstairs.



The intimate performance space, seen from the stage, is equipped with thoroughly modern theater technology.

The upper floors hold classroom space as well: first-semester offerings included Dramatic Arts 40, "Introduction to Stage Combat," which instructed students in the art of realistic-looking yet innocuous slaps, punches, kicks, pushes, chokes, and hair grabs. In light of the emphasis President Drew Faust is placing on the arts (see page 51), Jack Megan, director of the Office for the Arts at Harvard, predicts an increase in the number of professors of the practice of dramatic arts, and more outside faculty and theater professionals visiting to hold workshops. "We're excited about the potential" the new space offers "for students to connect with faculty," he says. "It's not just a theater to do yet another 12 shows."

There is also office space for both staff members and student groups, including HPT and the Harvard Krokodiloes and Radcliffe Pitches, two a cappella groups affiliated with the Institute of 1770, HPT's parent organization. (Harvard bought the

other units “remain fragmented, less well-understood, less well-supported, and less integrated than their importance warrants.” Compared to the “central role” the arts play “in the lives of so many students and faculty at Harvard...their role in the life of the University remains uncertain and undefined. I hope that this task force will attempt such a definition.”

The rationale for doing so now in part reflects interest in visual ways of thinking and communication, use of new digital tools, and developments in neuroscience and the understanding of cognition—all elements in a vision of arts and creative work as essential to the critical thinking the University has aimed to encourage in many realms. In part, it reflects contemporary students’ participation in a vast

array of musical and theatrical performances—traditionally not part of Harvard’s academic, curricular landscape—as well as in creative writing and newly expanded work in film (see “Cinema Veritas,” November-December 2005, page 34).

Such issues are not confined to FAS professors and students. Serious interest in creativity, broadly defined, appears, for example, in a December 7-8 colloquium (part of Harvard Business School’s centennial celebration), a faculty research conference on “Creativity, Entrepreneurship, and Organizations of the Future.”

Finally, there are competitive considerations. As Faust noted in her charge to the task force, “Many of our peer institutions have, in recent years, undertaken serious expansion in arts programming, offering us both models to consider and a challenge to act.” Broad inquiries into creativity, work in the arts, and performance are taking place at several universities—with some making large commitments to such programs.

Among such institutions, Yale has perhaps the most fully developed curricular offerings. It has schools of architecture, art, drama, and music; \$500 million has been budgeted for those units and its art museums and art-history department as part of its current capital campaign. Princeton aims to fund a \$300-million arts precinct, designed by Renzo Piano, near its existing repertory theater company; at a minimum, the development is expected to encompass new theater,

dance, and museum facilities.

The Stanford Arts Initiative, a quarter-billion-dollar part of that university’s campaign, embraces a broad range of the sorts of measures Harvard might consider. Stanford already offers undergraduate-degree programs or tracks in studio art, musical performance, creative writing, drama, dance, and film, and graduate-degree programs in several of those areas. Under the Stanford Institute for Creativity and the Arts (SICA), an umbrella organization formed in 2006 and now directed by a university assistant vice president for the arts, Kären Nagy, the campaign is seeking new resources to expand across the spectrum. The plan envisions augmenting the current 50 or so tenured and tenure-track creative-arts faculty by about 20 percent; funding graduate-student fellowships; greatly increasing artist-in-residence programs and visits, and placing students in arts internships; and underwriting course development and interdisciplinary work—ranging from the intersection of engineering and technology with the arts to exploring world cultures in a creative-arts context (see <http://givingtostanford.stanford.edu/get/layout/tsc/Arts>).

Alongside these program investments, Stanford plans extensive new facilities and renovations of those Nagy calls “substandard”—the need for which she understands from two perspectives: she was a professional flutist before arriving at Stanford in 1986, and most recently was executive dean of the School of Humanities and Sciences (Stanford’s equivalent of Harvard’s FAS)—the overseer of budgets and buildings. When fully realized, the result will be an integrated “arts district,” extending from the existing art museum and a new performing-arts center (with a 900-seat concert hall and a 500-seat theater; Polshek Partnership Architects is the designer) to a new art and art-history building (complete with film capabilities), among other facilities. The whole complex will extend on either side of the main road from the surrounding communities into the central campus, inviting town-gown interaction. Finally, the initiative aims to equip studio spaces in student dormitories. In light of these ambitions, it is promising for the initiative that Stanford president emeritus Gerhard Casper chairs

site from the Institute in 1986, and the building in 2000, when the group faced financial troubles. The Hasty Pudding social club, also affiliated with the Institute, has found a new home elsewhere, because its “punch” practices do not comply with College policies.)

As the first theater built for students since the Loeb Drama Center opened in 1961, the shiny new building fits well with President Faust’s goals for the arts at Harvard. Completed in June, it opened in September for the weeklong arts program that precedes freshman orientation week and for common casting (the process that allows student actors to try out for several shows in one fell swoop). Student drama and dance productions were also staged in the fall. Coming in January: a student production of *Children of Eden*, a musical loosely based on the Book of Genesis, with music and lyrics by Stephen Schwartz, whose other works include *Wicked* and *Godspell*. And in February, tradition returns to the theater in the form of the annual men-in-drag extravaganza, which this year is titled *Fable Attraction*.

The New College Theatre fits behind, above, and below the old Hasty Pudding venue, preserved in the façade.



the executive committee charged with realizing the university's arts aims.

STANFORD'S PLAN obviously reflects circumstances different from Harvard's situation: it has existing degree programs and a significant nucleus of creative-arts faculty members; its initiative proceeds with more

central direction than is the norm in Cambridge; even its suburban location, well removed from cultural facilities in San Francisco, means that its needs are different.

But the plan raises many of the issues Harvard's task force will need to address. The University has already made scattered investments in facilities such as the New

College Theatre (see page 52) and is about to embark on an enormous, complex, and costly renovation of the Fogg Art Museum (see page 62). The College residential houses are nearing a potentially extensive and expensive renovation of their own; knowing what kinds of creative (and other) spaces they should have must be

Theatrical Software

For a while, all seemed to go well at the ribbon-cutting ceremonies for the New College Theatre on October 17. As a jazz trio played in the balcony, a full house settled into the comfortable, red-upholstered seats in the steeply raked auditorium. President Drew Faust made a few remarks, noting, for example, that five U.S. presidents and a justice of the Supreme Court had performed in the building in its previous incarnation: "Perhaps they discovered that politics is mostly theater," she put in, drawing one of the first laughs from the new stage. And then, along with Faculty of Arts and Sciences dean Michael D. Smith and

after which Faust was finally permitted to carry on.

The interloper—in drag, of course—was David Andersson '09, cast vice president of the Hasty Pudding Theatricals, and his spectacular intrusion (Faust had been warned to expect an interruption) added both a theatrical note and a nod to the long history of the newly renovated building. That accomplished, Robert Brustein, founding director and creative consultant of Harvard's American Repertory Theatre (ART) hailed Faust: "Anyone who has the name of a great English play by Marlowe and a great German play by Goethe surely will look favorably on the theater." He then moderated the discussion as distinguished playwrights John Guare, Melinda Lopez, Adam Rapp, and Paula Vogel addressed the query, "Does Playwriting Have a Future?"

Guare, author of *Six Degrees of Separation* and many other stage works, who teaches at Yale, raised a point that the panelists seemed to agree on. "The future of American playwriting takes care of itself," he said. "But what's the future of American producing?" Brustein observed that readings, meetings, and workshops were fine, but "What the playwright really needs is help getting his play produced. In America right now we have 35 or 40 major playwrights. We don't have the audiences, but we do have the plays." Rapp, author of *Nocturne* and *Animals and Plants*, worried that "there's an atrophy to the audience—the audience for plays is getting older."

The playwrights pointed to the rise of the multimedia entertainment industry as a major factor affecting live theater. "We are going further and further toward entertainment and toward plays that look more like TV," Rapp said. "I saw a play with 52 scene changes—and I disconnected 52 times." Vogel, who won the 1997 Pulitzer Prize for *How I Learned to Drive*, declared, "It feels very much like the entertainment industry is producing entertainment for a gladiatorial empire." Lopez, whose *Sonia Flew* won the Eliot Norton Award for best new play and who teaches theater and performance (she is also an actress) at Wellesley, suggested that commercial entertainment spares audiences the risks and uncertainties of fresh drama: "With [the Broadway show] *Little Mermaid*, it's a relief to know what you're getting when you spend your money."

In that context, Rapp said, "Maybe the next five or 10 years of exciting things to happen in theater will happen in universities." Lopez might have voiced the evening's most reassuring conviction. "You tell stories that you have to tell," she said. "At our core, we are animals. And we need something from each other that we can't get from a screen."



dean of Harvard College David Pilbeam, she approached the wide ribbon that stretched across the proscenium, scissors in hand.

Suddenly a large blonde in a red-sequined dress and red-feather headdress charged down the aisle, yelling, "Wait! Stop! Don't cut the ribbon!" The obstreperous interloper quickly declared Faust's scissors utterly inadequate and another, suspiciously tall, woman instantly appeared with a giant three-foot-long pair. The blonde called for better lighting, and the theater's high-tech system showed off some of its textures and gels. She next critiqued the administrators' clothes, finding Smith's so hopelessly bland that she planted her headdress on him. Finally, she called for music, and buglers appeared at the sides of the stage to play a fanfare,

Playwrights on playwriting: (right to left) John Guare, Melinda Lopez, Adam Rapp, Paula Vogel, and Robert Brustein.

taken into account before any work can proceed. And the plans for Allston campus development more generally have always included elements of arts and cultural facilities, but the details await clearer academic and intellectual underpinnings.

In the Harvard context, too, such University initiatives will have to be grounded in the faculties, particularly FAS. The news release on the formation of the task force included comments from Dean Michael D. Smith, welcoming the prospective “University-wide perspective in a domain that is so directly pertinent to the work of FAS” and promising his close cooperation with Faust and the many FAS professors directly engaged.

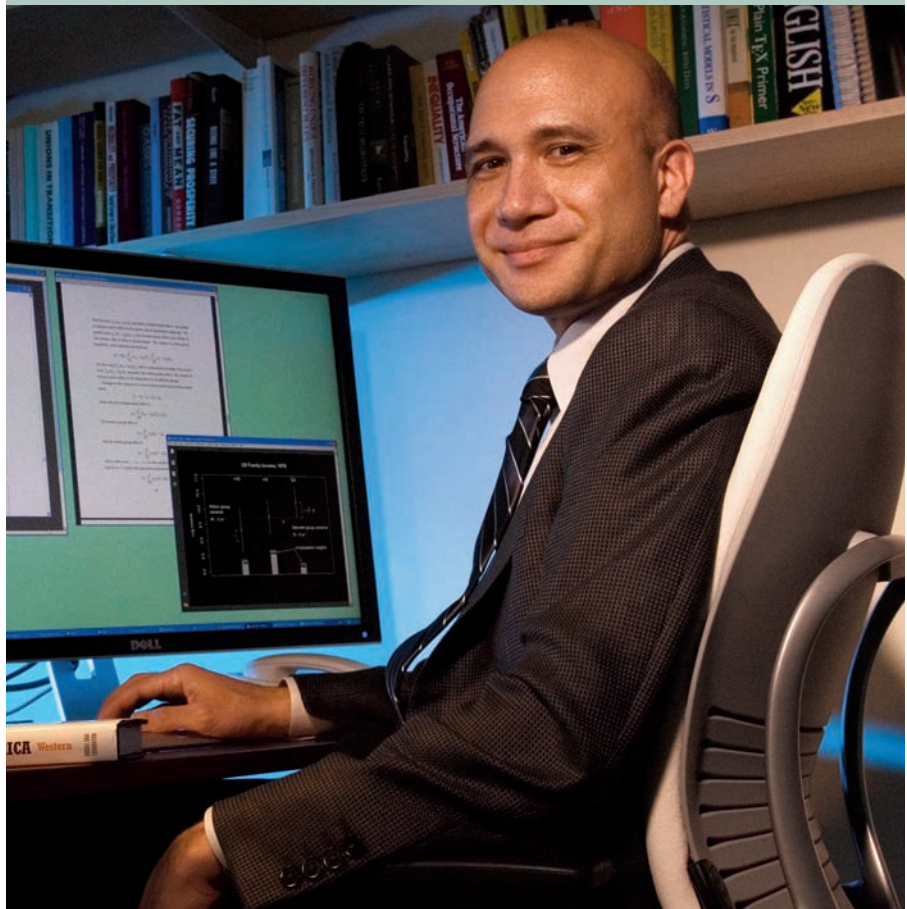
As the task force strains to meet Faust’s deadline that it report in the fall of 2008, it clearly has a huge assignment. It begins with fundamental questions: as the president has repeatedly put it, “What should the place of the arts be in a research university? What should the place of the arts be in a liberal-arts education?” Whatever their answers, the task-force members will then proceed to the details of advocating expanded or new academic programs, faculty growth, and facilities large and small.

If the result resonates in the community, it will go a long way toward advancing Faust’s aim of bringing Harvard units together as one university. The recommendations will no doubt shape Harvard’s own forthcoming capital campaign. In these senses, Faust has asked the task force to think both expansively and urgently, recognizing that through its work, a new vision of the arts could affect the design of teaching and learning across the campus, and of the very campus itself.

The Rise of Faculty Centrism

POLITICALLY, U.S. professors are less liberal than many people believe, but their ranks also include fewer conservatives than in the early 1970s. Meanwhile, centrism is ascendant among faculty members under the age of 35. These are among the conclusions of a major new national study of professors and their politics, also the topic of an October 6 symposium at

HARVARD PORTRAIT



Bruce Western

His interest in prisons began “almost by accident,” says the new director of the Kennedy School of Government’s Multidisciplinary Program in Inequality and Social Policy. Bruce Western, a sociology professor hired away from Princeton in 2007, once studied organized labor. He recalls a pivotal conversation with a colleague about the way many European states use social-welfare programs to manage disadvantaged populations, while the United States, whether by design or accident, has used prisons for the same purpose. That exchange grew into a vocation: Western is now author or coauthor of more than a dozen articles on the causes and consequences of incarceration, has written one book and edited two others on the topic, and has testified before Congress on options for reforming the criminal code and prison policy. Although his work challenges the notion that higher incarceration rates have caused a major decrease in crime, he says it has not stirred much controversy; the desperate need to deal with surging prison costs and recidivism seems, he says, to keep people off political and moral soapboxes. Western—who hails from Australia and lives in Brookline with his wife and three daughters—taught a course on the sociology of crime and punishment for inmates at a maximum-security prison in New Jersey and says he’d like to do something similar here, perhaps joining student volunteers who teach classes at the Suffolk County jail. Because most jurisdictions have chosen to cut prisoner-reentry programs as prison costs have grown, “An elite university like Harvard,” Western says, “really has a role to play.”

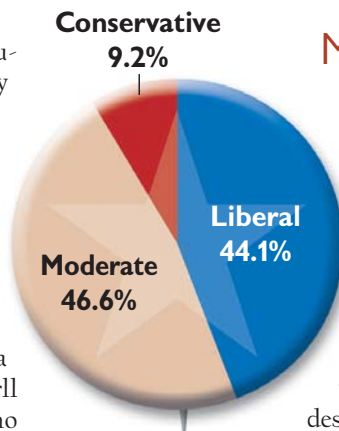
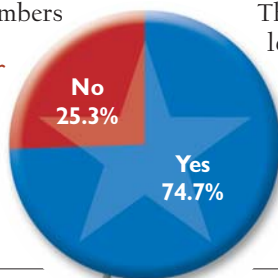
Harvard organized by the study's authors, assistant professor of sociology Neil Gross and Solon J. Simmons, assistant professor of sociology at George Mason University.

The study, says Gross, was intended to move discussions about professors' political views "away from partisan polemic and back toward rigorous social science." The seminal comprehensive survey in this area was conducted in 1969 by Everett Carl Ladd and Seymour Martin Lipset, who found that professors were more liberal than members of many other occupations: at that time, "46 percent of professors described their overall political identity as left or liberal, 27 percent as middle of the road, and 28 percent as conservative, with younger faculty members more liberal than older ones."

But recent decades, Gross and Simmons argue, have brought a reactionary targeting of liberal academicians: "[a] conservative strategy of attempting to influence public opinion on a wide variety of matters by starting think-tanks—most independent of academe—funded by conservative foundations that build and then leverage ties to the increasingly consolidated mass media in order to get their message across; and...the rhetorical strategy that accompanied this institution-building effort, of calling into question the legitimacy of intellectuals on the other side of the political aisle who would contest conservative claims." A wave of faculty studies that appeared in the context of this new order were, according to Gross and Solon, "closer to thinly disguised works of political advocacy intended to back up the charge of liberal bias in academe" than to "thoughtful scientific investigations."

Their own study, which the *Chronicle of Higher Education* described as "arguably the best-designed survey of American faculty beliefs since the early 1970s," found that 44 percent of faculty members

Should it be possible for a pregnant woman to obtain a legal abortion if the woman wants it for any reason?



today are self-described liberal, 46 percent are moderate, and 9 percent are conservative. Only 20 percent voted for George Bush in 2004. The rise in centrism, the study authors say, seems to have come at the expense of conservatives.

While the nearly steady number of liberals teaching in higher education might have been expected, there were surprises. On the question of affirmative action in college admissions, for example, the study (with funding from the Richard Lounsbery Foundation) found, after surveying 1,417 faculty members at 927 colleges, that professors are nearly split on the issue. As compared to the general population, they are also more conservative on certain issues of economic policy. Less than half agreed with the statement, "Business corporations make too much profit," compared to two-thirds of the American public. In other ways, however, faculty members lean sharply left. Eighty percent believe President Bush misled the American people about the reasons to go to war in Iraq, and 75 percent think having an abortion should be legal "if a woman wants it for any reason."

The highest concentration of left-leaning academics, the study found, appears in liberal-arts colleges (61 percent liberal), while the lowest (37 percent liberal) is found in community colleges, where conservatives reach their zenith (19 percent

Moderates Emergent

Political Orientation by Age

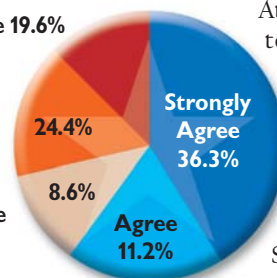
Age	Liberal %	Moderate %	Conservative %
26-35	32.5	60.0	7.5
36-49	41.5	49.9	8.6
50-64	49.4	42.7	7.9
65+	36.9	52.3	10.8

Business corporations make too much profit.

Strongly Disagree 19.6%

Disagree 24.4%

Neither Agree nor Disagree 8.6%



conservative). Only 4 percent of professors at liberal-arts colleges identify as conservative. Elite Ph.D.-granting institutions fall in the middle.

Patterns of political belief track disciplines, write Gross and Simmons: for example, more than half of professors in health sciences voted for Bush in 2004, while only 15 percent of humanities faculty members did so. They also track age: 60 percent of professors aged 26 to 35 are moderate, as compared to 50 percent of professors aged 36 to 49, and 43 percent of professors aged 50 to 64.

At the symposium held to discuss the study, some participants emphasized different interpretations of the data. Eliot University Professor Lawrence H. Summers (who three weeks earlier had been disinclined to address the board of regents of the University of California because of faculty pressure) said that he was surprised to find in the survey data "even less ideological diversity in the American university than I had imagined." This led him "naturally" to question whether professors' politics affect their students. Bass professor of English

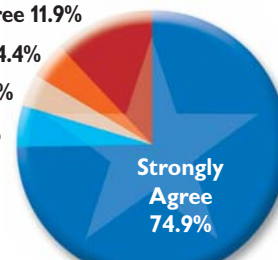
President Bush misled the American people about the reasons to go to war in Iraq.

Strongly Disagree 11.9%

Disagree 4.4%

Don't know 3.7%

Agree 5.1%



and American literature and language Louis Menand worried that convergent political beliefs among faculty and students, whether caused by self-selection or conformist socialization—in combination with the long time commitments required to earn a Ph. D.—might stifle beneficial “ferment” and “iconoclasm.”

For their part, the authors hope their work will lay the foundation for “serious social-scientific scholarship” that could explain the “social mechanisms and processes that account for the relative liberalism of the faculty.” What are the effects of professors’ politics, they ask, not only on students, but also on “the structure of intellectual fields?” To what extent, they ask, do the “political propensities” of “the contemporary professoriate...both reflect and feed into broader social and cultural dynamics?” These are questions they hope will be the future “subject of lively—and empirically informed...debate.”

Retooling Tech Transfer


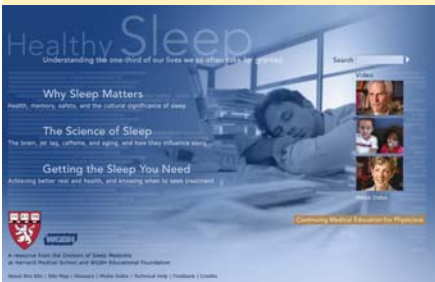
WHEN PHYSICIST Eric Mazur’s research group created a new material called black silicon one day in 1998, he knew right away they were on to something. The material absorbs 50 percent more visible light than regular silicon, making possible uses easy to imagine—in solar panels, for instance. But the material also has unusual capacity to detect infrared light, giving it potential applications in the defense, automotive, telecommunications, and electronics industries (see “A Sponge for Light,” May-June 2002, page 12).

Mazur, now Balkanski professor of applied physics and professor of physics, remembers approaching someone in what was then the University’s Office of Technology and Trademark Licensing (OTTL) about patenting his discovery. The response was, “No, this is not interesting.” Mazur dropped the idea. A few months later, he spoke about black silicon at a meeting of the American Physical Society: “I said, ‘It could be used for this. It could be used for that.’ I was freely talking about it, because”—supposedly—“it wasn’t worth

Science and Sleep on Line

The University’s Office of News and Public Affairs has debuted **HarvardScience** (<http://harvard-science.harvard.edu>), a website on scientific, medical, and engineering research—and the people who conduct it—throughout Harvard. The site reports science news, profiles researchers, and follows Harvard people out into the field. There are also links to affiliated hospitals and research institutes; a directory of science researchers (although links to their labs and home pages may be found more readily, in many instances, directly through their departmental and school listings); and topical indexes. These aids may even prove useful within the University to connect researchers with common interests or emerging queries.

Separately, Harvard Medical School’s Division of Sleep Medicine (<http://sleep.med.harvard.edu>) has joined with WGBH Interactive, an affiliate of Boston’s PBS channel, to create an on-line sleep and health education program, www.HealthySleep.hms.harvard.edu. The first unit, on healthy sleep, appears in January, with interactive content explaining the science of sleep, why it matters, and how to get it. Coverage of disorders—such as insomnia, apnea, narcolepsy—will follow. The timing (just after New Year’s Eve revels) and the home venue (a research university where students seem barely able to get to bed before sunrise) seem especially apt.

patenting.” But with each statement, by putting his ideas in the public domain, Mazur was unknowingly closing off a possible patent for Harvard. “When I came out of my talk, the *Los Angeles Times*, *The Economist*, *Discover* magazine—they were all there to interview me,” he recalls. The word was out.

After the media flurry, OTTL had second thoughts, Mazur says. “They came to me and said, ‘Well, maybe we *should* do something.’ But it was too late. We lost the chance of protecting the basic idea.” Harvard now holds patents to two applications of black silicon and continues to apply for more, but the University is still paying for that sin of omission; Mazur planned to travel to the U.S. Patent Office in December to defend an application.

Mazur’s experience may stem from one bad decision, but it is also emblematic of a subsequent transformation. During the last five years, the University has completely retooled the way it handles com-

mercializing professors’ inventions and innovations, a process known as technology transfer. The metamorphosis involved combining two offices and rechristening the merged entity the Office of Technology Development (OTD, <http://otd.harvard.edu>), hiring a new director, and systematically updating Harvard’s intellectual-property policies.

Mazur has a unique vantage point as someone hampered by the old office and helped by the new one. He has been on the Harvard faculty since 1984, but his name was on just one patent application prior to 2002; since 2002, his lab has filed a dozen. In 2005, with funding from three venture-capital firms, he founded a company called SiOnyx that is developing applications for black silicon and expects to launch its first product soon. Now, Mazur’s name appears on a list of OTD “success stories”—recent start-ups spun off from work in University labs—as evidence of a burgeoning entrepreneurial spirit at Harvard. With OTD’s help,

Yesterday's News

From the pages of the *Harvard Alumni Bulletin* and *Harvard Magazine*

1913 The *Alumni Bulletin* welcomes the founding of the Harvard University Press as an "eminently appropriate [way to] powerfully advance the general cause of learning."

1923 President Lowell's refusal to let the son of a black alumnus live, as other freshmen must, in the freshman dormitories creates a furor in the *Bulletin's* letters section and in the public press.

1938 After 40 and 13 years, respectively, on the research staff of the Harvard Observatory, astronomers Annie Jump Cannon and Cecilia Payne-Gaposchkin receive Corporation appointments.

1943 The presidents of Harvard, Yale, and Princeton issue a joint statement agreeing to forgo "athletics as usual" for the duration.

1953 Students voice disgust when the faculty approves new rules that allow women to stay in undergraduate rooms until 11 p.m. instead of 8 p.m. on Saturday nights, but completely eliminate the visiting hours of 1 p.m. to 4 p.m. for the rest of the week.

1958 The Harvard Corporation issues the go-ahead on the construction of Harvard's eighth undergraduate House, Quincy.

1968 A letter calling for de-escalation of the war in Vietnam, with 4,000 signatures representing 54 percent of the faculty and 51 percent of Harvard and Radcliffe undergraduates, has been presented to President Lyndon Johnson. University Professor Edwin O. Reischauer, former ambassador to Japan, and one of the project organizers, calls it "a remarkable fact that 54 percent of the Harvard faculty signed anything."

1998 In response to student demands, the College replaces one-ply toilet paper in undergraduate residences with the more luxurious two-ply variety. Dean Harry R. Lewis explains that a "high-level committee, called the Harvard College Toilet Paper Commission, consisting of the Administrative Board, the Faculty Council, the Committee on House Life, the Committee on College Life, and the Masters of the Houses...met weekly all fall to consider this important issue."

he is negotiating with "a major established company" that wants to develop another idea from his lab into a product. The difference between the new OTD and the old OTTL, Mazur says, is "black and white."

THAT WAS THE GOAL. "Harvard has a remarkable research presence," says Steven E. Hyman, a professor of neurobiology who was appointed provost in 2001. "We produce an enormous number of important and highly cited new papers every year. But we had been relatively slow to commercialize our discoveries, and as a result, many potentially important discoveries...sat on library shelves....I actually think that it is part of the mission of a research university not only to publish papers, but also to get discoveries out into the world."

Hyman assembled a faculty committee in 2004 to set priorities for changing technology transfer at Harvard and mounted a search for someone to lead the charge. In May 2005, Isaac T. Kohlberg became the University's associate provost and chief technology development officer. Kohlberg, who has an LL.B. and an M.B.A., had held analogous positions at the Weizmann Institute of Science in Israel, New York University, and Tel Aviv University.

At Harvard, Kohlberg integrated the separate technology-transfer office at the Medical School into a unified operation that would report to Hyman. (OTTL had reported to the vice president for finance.) He expanded the office's staff by 40 percent, to 35 people—about the same size as MIT's office—and focused on hiring colleagues who understand science and business and take a proactive approach. (Here, too, Mazur's story is illustrative. He says someone from OTD visits him "every couple of weeks, if not more...constantly trying to connect us to companies to see if there are mutual interests, and I think that's great.")

Kohlberg has emphasized formal networking, but also the informal interactions that may unearth unrecognized

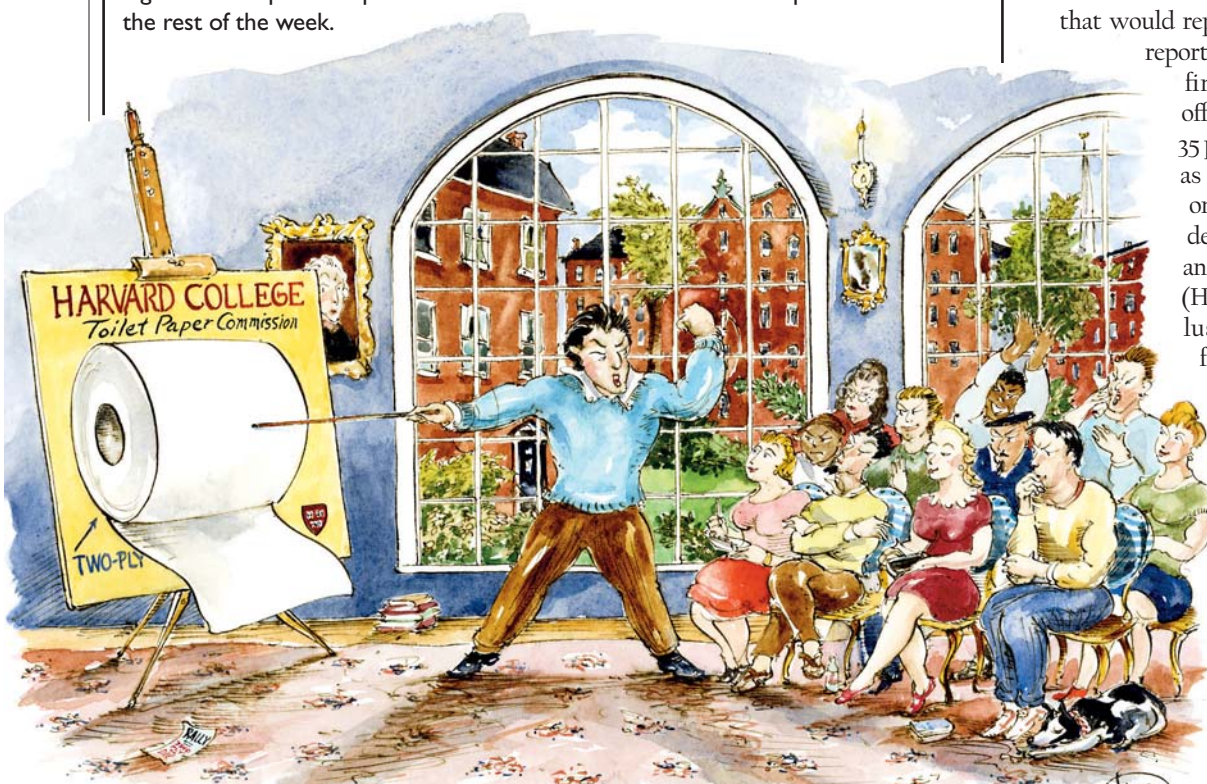
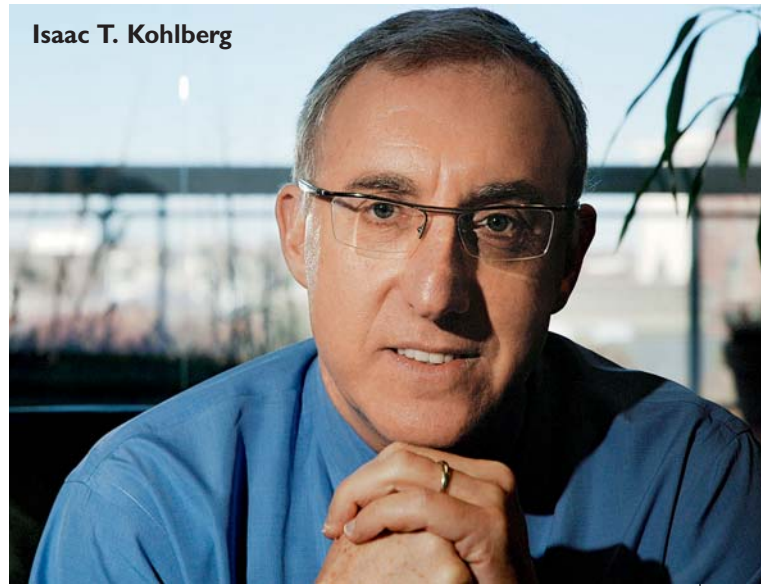


Illustration by Mark Steele

Isaac T. Kohlberg



nized opportunities, and lead to trust. (He keeps an espresso machine in his office to fortify professors and business leaders who drop in.) He hopes to involve more alumni, too—as faculty mentors, angel investors, chief executives, or enthusiasts who spread the word to friends and thereby increase the chance of making a match between an idea and a company to develop it. “If you look at any major corporation or any venture-capital group, in the country or internationally, you will always find a Harvard connection,” Kohlberg says. “The question is, how do we build on this? How do we leverage this?”

Since Kohlberg arrived, licensing revenue—the amount of money the University makes from agreements for the use of technology on which it holds patents—has actually declined from \$27.9 million in fiscal 2005 to an estimated \$15 million for fiscal 2008, mostly reflecting the expiration of a patent for Cardiolite, a technology for diagnosing coronary-artery disease. Either number is low compared to some of Harvard’s peers. The Wisconsin Alumni Research Foundation, the licensing arm of the University of Wisconsin, reported income of \$48.9 million in 2005, largely because of patents to the anticoagulant drug Coumadin, to vitamin D, and to technologies related to stem cells. Columbia—which holds patents to a technique for inserting foreign DNA into host cells to cause them to produce specific proteins, for pharmaceutical applications—reported \$116 million in licensing income for 2005, and Stanford reported a whopping \$384 million, \$336 million of which it earned by selling Google stock. (Google’s founders developed the search technology while they were graduate stu-

dents at Stanford, so the university holds the patent.)

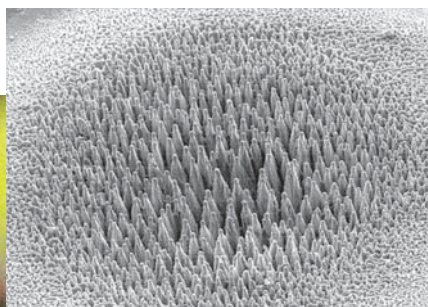
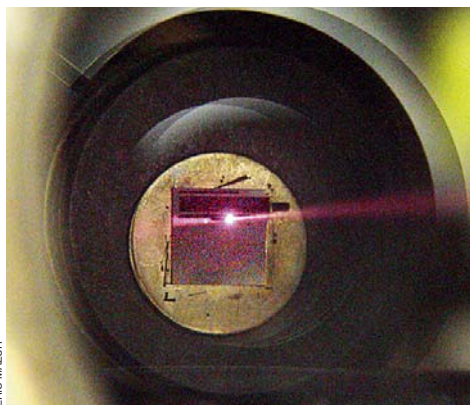
But Kohlberg says this is not the measure that matters. For one thing, licensing revenue is a lagging indicator; changing the way Harvard handles licensing won’t produce noticeable results for about a decade. He tracks success in other ways. The number of invention disclosures, for instance, has jumped from 160 in fiscal 2004 to 222 in 2007. That’s far below the 520 invention disclosures filed at MIT in fiscal 2007, but Kohlberg considers the trend a vote of confidence. Professors are not required to file the forms, which might be considered precursors to patent applications, so when they do, it indicates trust in OTD to weed through the paperwork and file for a patent if warranted.

Harvard now has an “accelerator fund” to advance research that holds commercial promise, but which isn’t yet at the “Kitty Hawk point,” as Kohlberg calls it—ready for takeoff. The initial round of funding allocated \$1.3 million among six life-sciences projects, including research by professor of chemistry and chemical biology Andrew Myers, who is developing an anticancer drug derived from marine fungus. Even though such a drug holds huge potential for healing (and profits), pharmaceutical firms won’t commit to developing it until

there’s a reasonable probability they’ll be able to create a product that works. Harvard’s funds will pay for initial studies—for instance, on toxicity—so there’s less likelihood of a late-stage finding that would make marketing the drug impossible. (There are plans to extend the accelerator fund to engineering and the applied sciences, and to bioengineering.) In another effort to address the so-called “development gap,” Partners HealthCare—the parent organization for two of the Medical School’s largest teaching hospitals, Brigham and Women’s and Massachusetts General Hospital—has set up its own internal innovation fund (www.partners.org/civ), like OTD’s, to nurture early work on medical devices and therapies emanating from its researchers’ labs.

IN A SEPARATE PROJECT, Myers is one of the founders of Tetrphase, a company that is developing antibiotics with potential to fight infections resistant to the drugs already on the market. Myers’s lab was the first to develop a completely synthetic form of tetracycline, rather than start with biological material. Kohlberg’s efforts have helped jump-start entrepreneurial thinking at Harvard and encourage ventures like SiOnyx and Tetrphase, says Richard Hamermesh, MBA Class of 1961 professor of management practice, who has written a case on technology transfer at U.S. universities. “It’s in the DNA of MIT,” Hamermesh says. “It’s in the DNA of Stanford. It’s not in the DNA of Harvard.”

What it lacks in genes, Harvard is trying to contribute through environment. With presenters from OTD and the business world, Harvard Business School (HBS) held a day-long symposium for pro-



Irradiating a silicon wafer with laser pulses in the presence of certain gases (left) causes clusters of spikes to form (above). The resulting material, called black silicon and developed in Eric Mazur’s physics lab, captures almost all light that strikes it.

Refining the Allston Master Plan

A year ago, Harvard filed three sets of plans for building in Allston with the City of Boston: a master plan for the new Allston campus, plans for a science complex, and a proposal for an art museum. "The City cried 'Uncle' and said, 'We can't do all of this at once,'" says Christopher M. Gordon, chief operating officer of the Allston Development Group (ADG), "and the community said, 'We can't process all this,' so...we focused on [the science complex] and slowed down the other stuff." With the one-million-square-foot science project approved and site work preparatory to construction already under way, and the art museum on temporary hold as Harvard undertakes a comprehensive review of the arts (see pages 62 and 51), the focus has shifted to fine-tuning the University's master plan. "We are working very hard to get that refined so we can get back in front of the City, back in front of the community, the faculty, and the staff here...." says Gordon. "We'll start meetings in January and then sometime later in the year, when everybody starts to be comfortable, we will formally file the master plan again."

As part of that effort, detailed program (what goes into each building) and strategy (what moves when) studies are under way for the Schools of Education and Public Health, both of which contemplate moves to Allston. The Medical School has begun its academic planning vis-à-vis allocation of research space there, and a separate study is looking at how University museums might relate to each other in a new location, if they were to move. An agreement has finally been reached to relocate residents of the Charlesview affordable-housing complex, freeing up a 4.5-acre parcel of land strategically located at the intersection of Western Avenue and North Harvard Street. And then there is the infrastructure: Gordon's ADG team has finished the first draft of the master plan's underground components: water, sewer, telecommunications, steam, and electrical lines. Aboveground, his group has finished the conceptual design for all the streetscapes, including medians, sidewalks, intersections, and landscaping. Because of the way the relevant Boston ordinance is written, most of this road work can begin as soon as regular approvals are in hand.

The next step, Gordon says, is lining up the financing. "We have done an estimate of ballpark numbers on most of these projects," and now "we're trying to put them in a schedule, see how fast they could be built. Is it five years, 10 years, 15 years?" The capital plan being worked out now will be one factor that determines how fast an Allston campus will rise. Demand will be another. As Gordon puts it: "When do you really want all this stuff?" In the case of athletic facilities, for example, "We've got a schedule, we think we could do it, but Harvard has to decide whether we kick that off or not."

In fact, the biggest challenge of the next six months may well be figuring out how this campus-building project will unfold. "We're starting to get some pretty good data to figure out what it is going to take [in practical terms] to do all this.... There is great interest in... undergraduate houses, athletics, more museums, more science, the school of education, the school of public health. That is a lot of stuff," Gordon emphasizes. "Harvard has really got to get focusing. It is not a dream anymore."



fessors last spring on "Realizing the Potential of Your Innovations." Sessions explored the anatomy of a start-up deal, the roles of patents and licensing, and ethical considerations; about 80 people attended. Also at HBS, a course titled "Commercializing Science and High Technology" is in its fourth year. Taught by assistant professor Lee Fleming, the course enrolls students from across the University—the Faculty of Arts and Sciences and the schools of law, medicine, engineering, government, and public health, as well as business. The students evaluate real invention-disclosure forms from Harvard professors, with the aim of turning some of them into businesses.

Kohlberg and Hyman have also nudged the University out of its ambivalent posture toward industry-sponsored research. Harvard recently signed a deal with Cambridge-based Vertex Pharmaceuticals under which Vertex will fund research in oncology, infectious disease, immunology and inflammation, and neurodegenerative diseases. The company and OTD have already solicited proposals from Harvard labs and will soon announce funding awards.

Vertex president and CEO Joshua Boger, Ph.D. '79, says the firm will not influence what happens in Harvard labs any more than the National Institutes of Health and the National Science Foundation do through their choices of which projects to fund. Harvard retains intellectual property rights to any discoveries made with Vertex money. There are no restrictions on publication or disclosure of the results. Vertex will get some preference in licensing future inventions that result from its funding, but the advantage, Boger says, is "very weak." Why do it if there is no guaranteed payoff for Vertex? "These are areas of science that we think need to advance for us to do things that we're interested in," he replies.

Boger notes that he founded Vertex in

Renderings of Harvard's new four-building science complex in Allston. Above: Building I looking southwest from Western Avenue. The ground floor will include retail space and other public amenities, such as an atrium and conference center. Left: Looking west into the "yard" between Building I and Building II from the proposed new road, Stadium Way.



Making a Case against the Courts

How will Americans know that their Supreme Court is truly dedicated to interpreting the Constitution as the Founding Fathers would wish? Attorney, activist, and author Phyllis Schlafly, A.M. '45, offered some guidelines while discussing "The Culture War in the Courts" on October 15 as part of the 2007-2008 Dean's Lecture Series at the Radcliffe Institute for Advanced Study. Homeowners won't face seizure of their property by municipalities eagerly seeking to increase the local tax base, she said. "Unborn babies" will be entitled to protection under the Fourteenth Amendment, while gun-control laws and federal funding of K-12 education will be abandoned. And public-school students will spend more time saying prayers than learning how to use a condom.

A polished, impeccably prepared speaker, Schlafly provided a torrent of legal references, snappy comments, and vivid anecdotes to make her case to an audience of roughly 150, including Radcliffe's interim dean, Higgins professor of natural sciences Barbara J. Grosz, and former dean, Harvard president Drew Faust. The presentation drew on research and arguments Schlafly has amassed in 41 years of writing a monthly newsletter and 35 years of leading the Eagle Forum, a national organization of "citizens who participate in public policymaking as volunteers" (see "Two Women, Two Histories," November-December 2007, page 29). She began by invoking Hamilton and Lincoln—the former's view that the courts would be the least dangerous branch of government because Congress holds all legislative power and assigns their jurisdictions, and the latter's assertion, after the *Dred*

Scott decision of 1857, that the Supreme Court cannot be allowed to set the law.

"Activist" judges who see the Constitution as a "living document" have used that claim incrementally to take away the supremacy of the people, she charged. Thus the Fifth Amendment prohibition against governmental seizure of private property except for public "use" was sufficiently diluted by a 50-year-old judicial wording shift to public "purpose" that in 2005 a Supreme Court majority could allow New London, Connecticut, to seize homes to make way for a business venture that might generate more taxes. She provided similar examples, in her speech and in reply to subsequent questions, covering other areas of concern to her: parental rights, pornography, religious freedom, and homosexuality. Her comments on the latter prompted a small group of people to walk out.

Schlafly argued that the nation needs judges for the same reason baseball needs umpires—jurists who call the balls and strikes, but don't change the rules of the game. She praised Justice Clarence Thomas for setting the proper example, and said citizens must strive for judicial appointees who represent the ideal expressed almost 800 years ago in the Magna Carta, a forerunner of the Constitution: individuals who "know the law of the realm and are minded to keep it well." (Video coverage of the lecture appears at www.radcliffe.edu/events/lectures/2007_schlafly.php.)



1989 and has a certain fondness for his doctoral alma mater, but had not previously worked with the University because, he says bluntly, "Harvard has long had a reputation as one of the most difficult institutions in the country to work with."

That is changing. The dollar value of industry-sponsored research at Harvard increased by 70 percent from 2006 to 2007 alone, and there is more to come. In another recently announced deal, the multinational chemical company BASF will support 10 postdoctoral fellows and inject \$20 million during five years into labs at the School of Engineering and Applied Sciences. Merck has agreed to fund basic research in six programs at the Medical School. Such collaborations will grow more common as the University's historic ambivalence toward corporate funding of scientific research diminishes and as trends in federal funding necessitate them. "I can't overstress the im-

portance of this kind of funding...at a time when the federal government is really in the doldrums" in terms of support for scientific research, Hyman says.

He says he has not encountered the resistance he expected from the faculty. "I was told when I got here that I would meet a firestorm of protest about having a more aggressive technology-transfer office," Hyman says. Instead, he says, "I'm getting a different kind of complaint. ...I've heard from some venture capitalists that Isaac drives too hard a bargain on Harvard's side. I can live with complaints like that."

The University's agreements with industry have passed muster because Harvard has been extremely judicious in the way it structured them, Kohlberg says. As with the Vertex deal, he says, "All the projects are faculty-initiated. They are not contract research. There is no limitation on the public dissemination of the results

of the project. There is no direction by the company on the project." Indeed, the terms of these deals differ significantly from corporate partnerships some other universities have signed—notably, Berkeley's agreements with BP and Novartis. The Novartis agreement, reached in 1998 and already concluded, gave the drug company veto power over the university's ability to patent the findings of research the company funded, and the first rights to negotiate on any patents coming out of the university's department of plant and microbial biology—whether or not the company funded the underlying research. The BP agreement, which is new, involves proprietary labs on university property.

Kohlberg also aims to make Harvard a leader in what is called "socially responsible licensing"—enabling the developing world to benefit from innovative research. This is where it becomes clearly apparent that con-

trol over how an invention is used, and not profits, can be the chief motivation for seeking a patent. OTD recently licensed a new vaccine technology developed by Lehman professor of microbiology and molecular genetics John Mekalanos to a China-based venture-capital company for commercial development—but retains the rights to license the technology to governments and humanitarian groups in the developing world. With regard to an inhaled tuberculosis vaccine spray invented by McKay professor of the practice of biomedical engineering David A. Edwards, Harvard is forgoing royalties from sales in developing countries and donating royalties from sales in developed countries to Medicine in Need, a nonprofit Edwards founded.

Academic ambivalence toward commercialization largely stems from a fundamental misunderstanding, says Flowers University Professor George M. Whitesides, a

chemist whose name is on more than 50 Harvard patents and 160 patent applications, and whose work has spawned more than a dozen startups, including Genzyme, over the years (see “Patent Portfolio,” September-October 2007, page 70). Whitesides, who is one of the directors for the BASF project, spent two decades on the MIT faculty before coming to Harvard in 1982. “The idea that there’s something intrinsically better about doing things that are useless, as opposed to doing things that have the potential to be useful, is an incorrect formulation,” he says. Seeking to apply research is “not getting your hands dirty. I mean, what’s dirty about trying to help your mother live for another five years, or trying to make a better communications system, or trying to make engines that are twice as efficient?” he asks. “Society pays us not to write papers, but ultimately to solve societal problems.”

Art Museum Two-Step

THE MUSEUM of modern and contemporary art that Harvard plans to build in Allston will have to wait. In September, the Harvard Corporation decided that the project, once fast-tracked for rapid construction ahead of Harvard’s 50-year Allston master plan, was not so pressing a priority as the renovation of 32 Quincy Street in Cambridge, home to the Fogg and Busch-Reisinger art museums. The roof leaks at the Fogg, and the building is more than 50 years overdue for attention to its antiquated electrical, plumbing, and climate-control systems.

The Harvard University Art Museums (HUAM) had focused on the Allston project as a way to address the absence of modern and contemporary art exhibition space on campus—a serious structural deficiency for an institution whose collections rival in size those of the public museums of Chicago and Philadelphia. But last March, the Allston project was put on hold for at least a few months in order to allow the neighborhood community time to focus instead on plans for a science complex (see “Off the Fast Track,” May-June 2007, page 64). Residents raised “legitimate, valid”

concerns, says Cabot director of the museums Thomas W. Lentz, who nevertheless felt most issues could have been “resolved through the design process.” (One community objection centered on the amount of public gallery space as compared to non-public space in the original design).

Now, with a comprehensive review of the arts at Harvard under way, with its own implications for Allston (see page 51), Harvard will instead proceed with the Quincy Street renovation, a massive and complex undertaking that will begin on June 30 with the yearlong process of emptying the building of all its artwork and staff. (Artworks and personnel will move to an offsite location in Greater Boston.) Construction is expected to begin in late fall 2009. The project will be extraordinarily expensive, not only because of the multiple moves of objects and personnel required, and the challenges of working on an urban site, but also because of the building’s landmark status, the need to capture underground space, and the requirement for complex fire, security, and climate-control systems. The total cost may run a few hundred million dollars.

When 32 Quincy Street reopens in 2013, it will serve as home to all three of the University art museums: the Fogg, the Sackler, and the Busch-Reisinger. (During the clo-

Nobelists of Note

Five alumni—two of them former faculty members—and the recipient of an honorary doctorate were among those to whom Nobel Prizes were awarded during the annual rite, which took place this year between October 8 and October 15. In addition, four faculty members were leaders in the scientific work cited in the awarding of the Nobel Peace Prize (see below).

- **Medicine.** Mario R. Capecchi, Ph.D. ’67, who studied biophysics and was a member of the Society of Fellows, shared the prize with two other researchers for their work on developing



Mario R. Capecchi

genetic “knockout” technology that has enabled scientists to model diseases in mice—a technique that has broad applications for modifying DNA and working with embryonic stem

sure, HUAM will use the nearby Sackler building, one-third the size of the Fogg, for a limited installation of artworks from all three collections). Architect Renzo Piano is working on the plans, now in the conceptual phase, as the museum seeks approval from Cambridge boards and community groups. Once the renovation is complete, all the collections will be represented in the new building, but only some of the staff and the collections will return. The Fine Arts Library will move to the Sackler building, joining the already-resident history of art and architecture department. Gallery space in the renovated Fogg will increase, but office space will be reclaimed, so only the curatorial, conservation, and director’s staff will remain.

With one of the great collections in the United States, “Harvard is not only in the major art-museum business, it is in it in a very big way,” says Lentz. “We want to make the collections far more accessible than they have ever been in the past...for all students,

cells. Capecchi, now a Howard Hughes Medical Institute investigator and Distinguished Professor of biology and human genetics at the University of Utah, was on the Harvard faculty until 1973.

- Economics. Eric S. Maskin '72, Ph.D. '76, and Roger B. Myerson '73, Ph.D. '76, shared the prize with Leonid Hurwicz, G '41, for "mechanism design theory"—essentially, studies of when markets work and when they do not, and ways of modeling the conduct of auctions and other allocation systems given differences in the information available to individual participants, their differing incentives, and other issues. The work has applications to problems ranging from auctioning rights to emit carbon dioxide to matching organ donors with recipients. Maskin studied mathematics as an undergraduate, and Myerson applied mathematics. Both did their graduate



Eric S. Maskin



Leonid Hurwicz

work in applied mathematics. Maskin was a professor of economics at Harvard from 1985 to 2000, before moving to the Institute for Advanced Study. Myerson was at Northwestern University from 1976 to 2001, when he moved to the University of Chicago. Hurwicz, now Regents Professor emeritus of economics at the University of Minnesota, studied at Harvard briefly after immigrating to this country following the outbreak of World War II.

- Peace. Al Gore Jr. '69, LL.D. '94, former vice president of the United States, was named co-recipient of the prize, with the Intergovernmental Panel on Climate Change—recognition for his work in publicizing and prompting action on global warming. Among the scholars who played leading roles in the panel's work are Daniel J. Jacob, Vasco McCoy Family professor of atmospheric chemistry and environmental engineering; James J. McCarthy, professor of biological oceanography; Steven C. Wofsy, Rotch professor of atmospheric and environmental sci-



Daniel J. Jacob

ence; and Robert Stavins, Pratt professor of business and government at the Kennedy School of Government. The four were recognized by Dean Michael Smith at the first Faculty of Arts and Sciences meeting of the year, on October 16. (For previous coverage of their work, see "The Great Global Experiment," November-December 2002, page 34, and Harvard Portraits of McCarthy [September-October 1992, page 71] and Jacob [May-June 1995, page 63].)

- Literature. Doris Lessing, Litt.D. '95, the English novelist best known for *The Golden Notebook*, was recognized as the laureate, "that epicist of the female experience, who with skepticism, fire, and visionary power has subjected a divided civilization to scrutiny."

Detailed descriptions of the laureates' work are available at <http://nobel-prize.org>.



James J. McCarthy



Robert Stavins

all faculty, and the communities where we operate, both Cambridge and Allston, not simply for the specialists we always have and always will train; and we want to do it with a model that encourages collaboration in working across disciplines."

Lentz's vision is to use the museum collections as a resource to "teach through works of art in ways that the rest of Harvard can't. If works of art are viewed as more than just pretty objects," he explains, "if they are understood as the material embodiment of ideas and values and traditions and emotions and attitudes, then all of a sudden a collection like this turns into a very powerful educational and teaching resource. What we are trying to do is reposition the museums within Harvard's educational mission."

This vision for renewed curricular engagement is driving the physical plan. "We are moving to a two-site operating model," Lentz says. "When I first came here, we tackled in a very fundamental way" the

question of whether to maintain a presence in Cambridge, "because we will never have the space we need here: the site is too tight." After much discussion, "we decided unanimously we'd be insane if we ever moved from this location...[W]e're in the center of a visual-arts corridor that sits right on the edge of Harvard Yard: Houghton Library's rare books and manuscripts; the Barker humanities center; the Carpenter Center, where the practice of art takes place; Sever Hall's brand new facilities for film and video; the film archive next door; and the Graduate School of Design."

In addition, he points out, "We have this great mission—we are not driven by attendance or revenue generation. We are all about teaching and research and education and learning." Recognizing the limitations of the Cambridge site, Harvard will try to maximize its utility, rather than move all the collections to a new museum in Allston.

"When the dust settles and Renzo Piano is through, we're going to have in place

what we think is going to be, in many ways, a different kind of art museum," Lentz says. "It is going to be an integrated balance of exhibition galleries, study centers, classrooms, seminar rooms, lecture hall, auditorium, as well as, in the Straus Center, one of the great conservation laboratories in the world. So in many ways, we are setting this up as our major public presentation and teaching platform."

Lentz hasn't forgotten Allston, where HUAM already has a public-education program underway with the Gardner elementary school. Allston will be "a really healthy thing for this museum," he believes, "because we are going to have to go out and engage with and build an entirely new audience over there. At a time when the visual is so privileged in this society—think of how information is conveyed and communicated—not having the tools and resources that help people foster critical looking and thinking skills, I think, is a huge deficiency."

Global Gains

HARVARD'S ENGAGEMENT with the world widened significantly during the fall term. New or enlarged programs of scholarship and study involving Brazil, Egypt, and South Asia were launched. A professional school extended financial aid to international students. Data on study abroad and foreign students coming to Harvard during the last academic year showed traffic increasing in both directions (see graphs below). And Madero professor of Mexican and Latin American politics and economics Jorge I. Domínguez, the vice provost for international affairs—the post was created in mid 2006—put support in place to continue the momentum.

- **Brazil.** The Brazil Studies Program, launched within the David Rockefeller Center for Latin American Studies in May 2006, was boosted by the opening of a São Paulo office two months later. The initiative spurred an immediate surge of student and faculty exchanges—nearly 50 undergraduates did academic work or held internships in that country in the 2006-2007 academic year—as well as a series of speakers and *conversas* (lunchtime symposiums) on campus.

Now such activities have been supplemented substantially by an eight-figure endowment gift from the family of Jorge Paulo Lemann '61, announced in early October. A Brazilian investment banker and philanthropist, Lemann has previously backed education initiatives ranging from a professorship at Harvard Business School to comparable gifts and fellowships for other universities in the United States and in his native country.

The Harvard initiative (<http://drclas.harvard.edu/brazil>) enables a full range of intellectual work on Brazil—"We went broad rather than narrow," said visiting professor of history Kenneth Maxwell, director of the program. But it has in particular prompted public-service-oriented research, training, and education. Lemann Fellowships underwrite Brazilians' graduate study in education, public health, or public policy at Harvard, as well as dissertations on Brazil by Graduate School of Arts and Sciences students. The eight current fellows are pursuing work in child development, poverty reduction, the

education of low-income students, ethnomusicology, environmental chemistry, and other subjects.

The first formal Brazil-Harvard symposium, held in São Paulo last May, brought 35 University and Brazilian public-health specialists, administrators, and Lemann Fellows together for three days of working discussions. One outcome is a Harvard School of Public Health (HSPH)-Santa Casa Medical School course on infectious disease, scheduled for January 6 to 21 in Brazil; participants include 15 Harvard and 17 Brazilian students, faculty members from the public-health and medical schools, and counterparts from 11 Brazilian institutions. The 2008 symposium, in northeastern Brazil this August, will enable Harvard and Brazilian specialists to address the environment and sciences.

- **Egypt.** In mid November, Youssef Boutros Ghali, Egypt's minister of finance, met in Cambridge with President Drew Faust to sign his government's \$10-



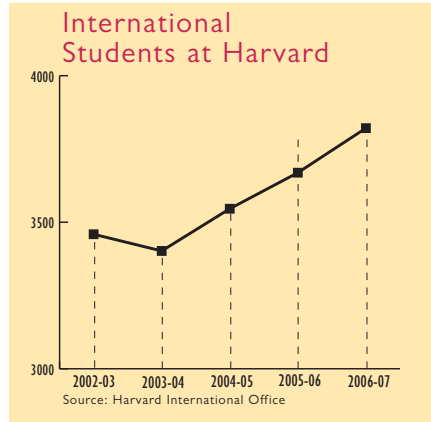
million endowment to fund "Egypt Fellowships" for students from that nation who study in HSPH, the Graduate School of Education, and the Kennedy School of Government (KSG).

- **Scholarships.** A few weeks earlier, Graduate School of Design (GSD) dean Alan

Altshuler announced that financial aid would become available to international master's-degree students, beginning in the fall of 2008. Heretofore, the school had been able to offer aid to doctoral students and U.S. citizens and permanent residents—but the gap in master's aid excluded about one-third of the student body. Altshuler credited Domínguez for advocating the change—which brings the GSD into line with other Harvard schools, Domínguez noted.

- **South Asia.** On a larger scale, Domínguez helped bring together an eight-member steering committee—from the Faculty of Arts and Sciences (FAS) and the business, Kennedy, and public-health schools—for the formal launch of the South Asia Initiative (www.southasia.harvard.edu), unveiled in November after several years of academic planning. This new venture focuses on the quarter of humanity in India, Pakistan, Bangladesh, and surrounding nations, where economic growth is rapid but unequal, and where there are major issues of health, the environment, and peace and security. Like other regional-studies programs, it aims to expand research, increase financial aid for international students, facilitate Asian travel for Harvard faculty members and students, and form partnerships abroad.

This academic year, Domínguez said, India has supplanted the United Kingdom as the fourth-largest home of international students at Harvard. The business school operates a research office in Mumbai, GSD faculty are planning for urban renewal there, KSG faculty are training Indian public administrators, and HSPH has broad relationships with public-health professionals throughout India—all activities highlighted during visits by President Lawrence H. Summers and the Harvard Alumni Association in March 2006. The number of undergraduates doing





Public Health Dean Steps Down

Barry R. Bloom, dean of the Harvard School of Public Health since 1999 (and thus the University's senior dean) will relinquish

Barry R. Bloom

his post on June 30. Doing so, he said in an announcement on November 15, will enable a new leader to plan the school's relocation to the Allston campus. For the rest of this academic year, Bloom intends to focus on new programs in genes and the environment, quantitative genomics, and global health. The latter has long been a personal priority: Bloom, who is Jacobson professor of public health, is a specialist in tuberculosis and infectious diseases—work he expects to continue as a Distinguished Service Professor. The magazine will examine his tenure in more detail in a future issue.

Calendar for Curriculum Change

Wolfson professor of Jewish studies Jay M. Harris, master of Cabot House, reported to the Faculty of Arts and Sciences that the undergraduate general education curriculum, legislated last spring (see "College Curriculum Change Completed," July-August 2007, page 64), will offer new courses beginning this fall and take full effect in 2009, for the entering College class of 2013. Speaking November 13 as chair of the standing committee on general education, Harris said early efforts are focusing on the creation of complex multidisciplinary courses. Core curriculum courses will be available at least through 2012, supplemented by departmental offerings. Students entering Harvard this fall would likely have the opportunity to complete either set of requirements; current freshmen and sophomores will find it difficult to do so.

Brevia



HARVARD HALO: Anticipating the release of the Halo 3 video game, MIT pranksters in late September equipped John Harvard with the suitable helmet—and assault rifle.

National Humanities Medalists

President Bush has conferred the National Humanities Medal on Baird professor of history emeritus Richard Pipes and



Ruth R. Wisse

Peretz professor of Yiddish literature and professor of comparative literature Ruth R. Wisse (profiled in "Mame-loshn' at Harvard," July-August 1997, page 32). In the White House ceremony on November 15, the president cited Pipes for "peerless scholarship on Russia and Eastern Europe and for a life of service to freedom's cause." He recognized Wisse, author of the current *Jews and Power*, for scholarship that has "illuminated Jewish literary traditions."

Interim Endowment Executive

Harvard Business School (HBS) profes-

sor of management practice Robert S. Kaplan, M.B.A. '83, has been appointed interim CEO of Harvard Management Company (HMC), effective November 12. HMC, which manages the University's endowment, pension, and other assets, is conducting a search for a permanent successor to Mohamed El-Erian, who has returned to Pacific Investment Management Company (see "An Unexpected Risk Factor," November-December 2007, page 64). Kaplan is a senior director of Goldman Sachs Group, where he became partner in 1990, led international and domestic investment-banking and corporate-finance units, and served as vice chairman from 2002 to 2006, with responsibility for investment banking and investment management. Separately, HBS's Schiff professor of investment banking, Josh Lerner,

and two MIT colleagues published "Secrets of the Academy: Drivers of University Endowment Success," interpreting the market-beating performance of large, elite universities' endowments during the past two decades in terms of their commitment to alternative investments: venture capital, hedge funds, and real estate (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1027450).



Robert S. Kaplan

Nota Bene

VATICAN ENVOY. Hand professor of law Mary Ann Glendon has been appointed United States ambassador to the Holy See. She was appointed to the Pontifical Academy of Social Sciences in 1994 and named its president in 2004, and led the Holy See's delegation to the 1995 United Nations Conference on Women.



Mary Ann Glendon

THE COMPETITION. The University of Pennsylvania launched a \$3.5-billion capital campaign in late October. The University of California, Berkeley, has received a \$113-million challenge gift from the Hewlett Foundation to support 100 new faculty chairs and to attract graduate students. The University of Michigan has announced a \$30-million program to hire 100 new interdisciplinary junior faculty members. MIT alumnus David H. Koch has given that institution \$100 million to jump-start construction of an integrative cancer-research center. And on the financial-aid front, Williams College eliminated loans from students' aid packages, effective this fall, and Tufts University has introduced a program to pay the loans of its college alumni who go on to pursue public-service careers.



Elizabeth J. Perry

CONNECTING TO CHINA. Rosovsky professor of government Elizabeth J. Perry, who studies grassroots governance and social protest in China, has been appointed director of the Harvard-Yenching Institute effective July 1. She succeeds Tu Wei-Ming, Harvard-Yenching professor of Chinese history and philosophy and of Confucian studies, director since 1996. The institute (see "Where East Meets West," January-February

2006, page 67) promotes cultural and social-sciences studies in Asian higher education, in part through extensive visiting fellowships at the University.

SCHOLAR ROSTER. Pole-vaulter Clara L. Blättler '08, who is concentrating in earth and planetary sciences, won a Rhodes Scholarship, as did Sammy K. Sambu '08, as a Rhodes Scholar from Kenya. A biomedical science and engineering concentrator, he intends to work on vaccine-delivery systems that can be used in developing nations that lack refrigeration and sterilization equipment. Shayak Sarkar '07, who received a bachelor's degree in applied mathematics and a master's degree in statistics last June, was the College's third Rhodes; he aims to apply analytical techniques to problems such as affordable housing. Megan Galbreth '08, a joint concentrator in French and linguistics, won a Marshall Scholarship; she will study at Oxford.

COURAGEOUS JURIST. In the wake of Pakistan's state of emergency, the Harvard Law School Association awarded that



Clara L. Blättler



Sammy K. Sambu

country's chief justice, Iftikhar Chaudhry, who was put under house arrest, its highest honor, the school's Medal of Freedom, along with an invitation to visit to receive the honor when he is free to travel.

TOUCH OF GLAMOUR. *Glamour* magazine's "women of the year"

(December 2007) included Ivy presidents Drew Faust, Amy Gutmann (Penn), Ruth Simmons (Brown), and Shirley Tilghman (Princeton).

ENERGY INITIATIVE. Shell Exploration & Production Company is funding a five-year, \$3.75-million University energy-policy program to be coordinated by the Kennedy School of Government.

MISCELLANY. With Harvard, Princeton, and Virginia having abolished early admissions for undergraduate applicants, competing institutions such as Yale, Chicago, and Georgetown saw their early-applicant rosters rise 20 percent to 45 percent. Admissions officials expect a more complicated sorting out of which accepted students ultimately choose to enroll in which schools come this spring....The American Association for the Advancement of Science has named four faculty members fellows: Brooks professor of international science, public policy, and human development William C. Clark; Clowes professor of anthropology Peter T. Ellison; Hessel professor of biology Naomi E. Pierce; and McKay professor of environmental engineering Peter P. Rogers....Susan Fliss was appointed associate librarian for Harvard College for research and instruction, effective October 15; she will focus on aligning library programs with teaching and research uses of the collections....The Institute of Medicine has elected these new members from Harvard faculties: Massachusetts General Hospital professor of anaesthesia Emery N. Brown; professor of medicine William G. Kaelin; Jordan professor of medicine David T. Scadden; Bugher Foundation professor of genetics Jonathan G. Seidman; and professor of health policy and economics Katherine Swartz....The Coop is celebrating its 125th anniversary year with monthly events and promotions; see www.thecoop.com for details.



TWENTY-FIRST CENTURY 400TH: To celebrate John Harvard's 400th anniversary, President Drew Faust and actor Richard Davia blew out the candles on a Veritas-themed cake at the Murr Center, site of a post-Princeton-game party on October 20. Harvard Alumni Association executive director John P. Reardon Jr. supervised.

work in India rose from 3 in the academic year ending in 2005 to 57 last year.

The initiative, Domínguez said, has attracted a gift for a new Mehra Family professorship of South Asian studies, to be used in various faculties (Sanjeev K. Mehra '82, M.B.A. '86, and Karen Petersen Mehra '82 are the donors), and several other leadership gifts for a South Asia Founders Club.

• *Advancing the agenda.* Behind the scenes, Domínguez's office is underpinning

global Harvard by creating databases that will track all personnel abroad (for security purposes), and a Web resource that will detail every Harvard international initiative, so students and researchers can determine common interests and available resources. Area-studies centers have also moved toward a common application form for undergraduate work abroad, and for graduate students whose research requires exploratory travel. With the Board

of Overseers restructuring its visiting committees into an integrated body that will examine international and area centers within FAS, the elements are falling in place to align and administer Harvard's two-way discourse with the world.

Indeed, Domínguez said he sees evidence of Harvard's ability to make "vast intellectual commitments" to important research and teaching opportunities around the globe during the twenty-first century.

Teaching—and Learning—Abroad

MOLLIE WRIGHT '09 expected to spend her summer in Costa Rica teaching English. She was, after all, a volunteer for WorldTeach, a nonprofit, nongovernmental organization affiliated with the Harvard Center for International Development that places volunteer teachers in developing countries throughout the world. But Wright, stationed in a small rural pueblo in "the northwest 'cowboy-country'" as the *profesora de Inglés* of nearly 100 teenage students, didn't expect to find herself a teacher without a classroom.

The town had begun construction of a new, all-purpose building next to the overcrowded school, but lack of funds had prevented its completion. "They said, 'We're missing doors, hinges, windows—and you see that part of the roof that should be meeting the wall? We're missing that, too!'" she recalls. After a meeting with other WorldTeach volunteers in a nearby city, Wright sprang into action. She helped raise the funds to complete the project by e-mailing friends and relatives for contributions and, along with community organizers, her fellow teachers, and her students, she worked to help make the building usable. When she left, with the *salon* nearing completion, she says she "had to fight them to stop them from naming it after me. It had nothing to do with me but everything to do with being lucky: because WorldTeach put me there, that's what allowed this opportunity to exist."

It's an opportunity, says Helen Claire Sievers, executive director of WorldTeach, that exists for all the organization's volun-



teers. "They're doing everything they can in regular scheduled classes," says Sievers, "but also [they're participating] in international development. They are, more than simply teachers, special guests to provide outside understanding and support in these communities."

WorldTeach (www.worldteach.org) got its start in 1985, when Michael Kremer '85, Ph.D. '92, then a new social-studies graduate, decided to spend some time in a rural part of a developing country and found his way to Kenya. Before long, and much to his surprise, he was called before the head of the local village government. "I didn't know if I was in trouble, but it turned out he was starting a school, and I was asked to teach there. I stayed for a year, then started to look for someone to replace me."

Kremer did not have to look far. In 1986, with Daniel Levy '88 and Sydney Rosen '87, M.P.A. '95, he founded WorldTeach under the auspices of the Phillips Brooks House Association at Harvard.



Mollie Wright had to construct not only a teaching style but a physical classroom to secure her Costa Rican students' education.

Today, Kremer is Gates professor of developing societies, a member of the economics department in the Faculty of Arts and Sciences: a position he credits, at least in part, to his year in Kenya. "It certainly deepened my interest in development," he notes, "and I think it was useful to combine the more academic study of development with the experience of working in a developing country. I'm sure that shaped the research I do as an academic."

Since Kremer's serendipitous experience in Kenya, WorldTeach—despite receiving no funding from the U.S. government and no significant sustained funding from other sources—has placed thousands of volunteers throughout Africa, Eastern Europe, Latin America, Asia, and the Pacific Islands. Currently, Harvard and non-Harvard students alike participate in seven- to eight-week summer programs in Costa Rica, Ecuador, Namibia,

Poland, China, and South Africa, while older volunteers can spend an academic year in other countries, including American Samoa, Bangladesh, Chile, Guyana, Venezuela, Mongolia, the Marshall Islands, and Micronesia. The organization charges its volunteers a significant fee (\$3,990 for a summer, and anywhere up to \$5,990 for a full year)—“your contribution to the overall costs of preparing and supporting a teacher in a developing country”—but various regional study centers provide fellowships for Harvard undergraduates: the Center for International Development, the David Rockefeller Center for Latin American Studies, the Center for European Studies, the Asia Center, and the Committee on African Studies all help defray the cost of travel and in-country work.

WorldTeach offers an international experience altogether different from Harvard's study-abroad programs, and draws an accordingly unique pool of applicants. “A handful of our volunteers may go on to do work at the [Harvard Graduate School of Education (HGSE)],” says Sievers, “but in general they don't intend to become teachers, even though a non-negligible number will go on to work in international education.” The large majority simply “want to do something really different, and want to do something meaningful.”

The organization is constantly considering new partnerships with host countries, a process involving a careful consideration of each country's individual concerns and needs. While volunteers in Costa Rica and Ecuador focus on teaching English, for example, the volunteers in Namibia work to incorporate computer technology into its education system and those in South Africa focus on the economic empowerment of their students.

But whatever the volunteers' focus, WorldTeach takes teaching seriously. Every volunteer now goes through an intensive two-week in-country training program (four weeks for the yearlong programs) that covers everything from the



Tom Wooten improvised a tutoring program for students in Cape Town.

basics of the native language and culture to the techniques of teaching. Each volunteer also receives a 45-hour teacher-training manual, the text for their orientation training, written by interns from the HGSE with staff member Nicole Watson. Sievers hopes eventually to offer 125 hours of training, even though the current session is a respectable 65 to 70 hours. “We try to train them as well as we can,” she says, “and to be as supportive as we can.”

But what WorldTeach volunteers often find the most rewarding aspect of the experience are their activities outside the classroom. “We strongly encourage them to pursue community-service projects,” says Sievers, pointing to the photographs of enterprising volunteers covering the walls of the WorldTeach offices in Cambridge. One volunteer raised the funds to provide mosquito nets and bed sheets for the children in her Namibian village. Another built a theater for children in the Marshall Islands, while a volunteer in Guyana provided her school with its own photocopier. Libraries, playgrounds, even a basketball court built from scratch in Costa Rica—there are few things that haven't been built or pursued by WorldTeach's “teachers.”

Professional improvisers might be a better job description. In Cape Town, South Africa, during the summer of 2005, Thomas Wooten '08 spent a few weeks leading a “microfinance initiative for teenagers” with the Foundation for Economic and Business Development. When his subsequent assignment with an environmental organization fell through, Wooten and a fellow volunteer threw to-

gether an informal after-school tutoring program for local high-school students. “Only one of them had a textbook, and I didn't even have a blackboard, but they were some of the most motivated students I could have asked for,” he reports. When he wasn't teaching, Wooten assembled interviews for an oral-history project about apartheid, headed by the director of WorldTeach South Africa, Roddy Bray.

“It is amazing,” says Sievers, “to see what our volunteers can do in two months, let alone a year.” Even so, she sees the time each volunteer spends with WorldTeach as more of a beginning than an end. “We are, at least to Harvard students, a sort of ‘International Living and Working 101,’” she adds. “We want to help our volunteers become dedicated international citizens. And I think we've been very effective in that.”

For Mollie Wright, the difficulties of teaching under a tree in Costa Rica haven't deterred her in the slightest from further work in international development and education; a tour in the Peace Corps, she says, is not out of the question. Wooten, inspired by his work in the shantytowns of Cape Town, sought out classes in MIT's urban studies and planning department when he returned for his sophomore year, and conducted thesis research on the disaster-recovery efforts in New Orleans this past summer.

Even the simple rewards of being a world citizen have not been lost on Alton Buland '04, who spent a summer with WorldTeach Poland, then worked for two years at the Woodrow Wilson International Center for Scholars, and is now pursuing a master's at the Nitze School of Advanced International Studies at Johns Hopkins. “I've learned,” he says, “that knowing a little Polish can go a long way with expats, students, or diplomats from Warsaw—usually leading to a vodka shot and a heartfelt *Na Zdrowie!*”

—SAMUEL BJORK

Applying Yourself

by LIZ GOODWIN '08

ON A HOT SEPTEMBER DAY in 2004, President Lawrence H. Summers was addressing the large group of newly arrived freshmen and their parents about the wonders of the Harvard community. He mentioned Olympians, politicians, and dazzling professors. Then he began to speak of the “miracle” that Harvard performs on its students: an anecdote I later found printed in full on a Harvard website, if not in my memory.

Year after year we seem to deny the laws of mathematics. Here’s how we do it. We survey the freshmen, and we ask them, do you think you’re in the top half of the class or in the bottom half of the class? About 60 percent say that they’re in the bottom half of the class. We also survey seniors. Are you in the top half of the class or are you in the bottom half of the class? And almost two-thirds say that they are in the top half of the class. It’s really quite remarkable what we are able to do for you.

I remember parents and students laughing politely at this joke, enchanted by this easy promise of success. Summers seemed both avuncular and glamorous—impressive in his own towering success, yet welcoming us to Harvard in a way that was reassuring without being patronizing. *Perhaps at first it will be hard and you will be discouraged*, Summers seemed to say from his perch. *But by the end of four years you’ll be one of us: the confident, the elite, the educated.*

I grasped the magnitude of the challenge, already intimidated by the applications required for freshman seminars, the thought of taking classes with people smarter than I was, and the social marathon of integrating into a college of thousands of talented people my own age. But I had no idea of—and Summers did not mention—the emotional logistics of the “miracle” he claimed Harvard works upon its freshmen. I did not even wonder what might be involved in the transition from underestimating to overestimating one’s abilities.

SEVEN MONTHS LATER, I was lying in the bottom bunk of my cramped freshman double when I realized that I was a complete and utter failure. I simultaneously began to cry and reach for the medication I had just been prescribed for an unfortunate case of mono, which I would later refer to as “a disease without dignity.” After an auspicious start to my first year, there I was, flat on my back, diseased, and—even more shameful—unemployed for the coming summer. It seemed as if everyone else I knew had an impressive job already lined up, yet even thinking about trying to plan my own summer, a concept previously foreign, made me exhausted and sad.

My freshman year thus far had hinged on the unstoppable energy I brought to the task of adaptation and survival. I worked tirelessly to stay, as Summers might put it, above the bottom half. Joining the *Crimson*, excelling in English courses, and making friends, while all truly important to me, also served as reassuring checkpoints whenever I raised the internal question of my own inadequacy. In order to assuage my doubts, I applied for things with an almost manic energy: grants, student groups, jobs, and enrollment-limited classes. The opportunities for rejection are endless at an institution that prizes merit-based exclusivity, and I sought out an impressive number of them,



hoping for affirmation instead of denial.

If I saw a line, I got in it. Rushing for a sorority at the end of my freshman year was a symptom of this frantic need to join. Unsure of whether I liked the girls in the group, I still turned on the charm at the recruiting events and gained a spot among them. Yet despite all the groups I belonged to, I remember feeling utterly alone in my confusion and illness, as if my physical weakness made me an automatic outcast in an environment where to slow down was to be left behind. Recalling brutal images from old Discovery Channel programs of injured and dying animals being abandoned by the herd, I was certain that I would have to take time off or accept the fact that I had failed.

I could not understand why I was having so much trouble emulating their easy perfection.

It was not just the mono that had me feeling so defeated. As the youngest of four feisty siblings, my main survival skill has always been rapid and seamless adaptation. Complaining was never tolerated, so my first instinct is to adjust silently and quickly to whatever situation I am in. At Harvard, I instantly understood that to adapt successfully meant to excel at classes, social life, and preprofessional development, all with minimal discernible effort. I thought I saw this being accomplished everywhere—by roommates, by friends on the *Crimson*, by classmates—and I could not understand why I was having so much trouble emulating their easy perfection. In my frustration I left unexamined the question of what I actually *wanted*, too concerned with my fears about keeping up with everyone else to care about understanding my own desires.

What surprises me now about how disconnected and inept I felt then was my absolute assumption that I was alone in my fears of inadequacy. Alone, I berated myself for getting caught up in destructive comparisons of myself to my peers, or for not knowing what I wanted to do after college, or for not getting a stellar grade. I worried occasionally that I was

the only person I knew without a summer job lined up by November. I clammed up in sections, sure that my comments would be the least valuable of the discussion. Every small rejection or failure felt immeasurably personal, and it would have shocked me if someone had told me that other people had similar thoughts. Hiding my insecurities became almost another extracurricular activity, but one that nobody would put on a résumé.

To escape this unpleasant feeling, I decided to run away. I applied for a summer study-abroad program in Argentina and within months was taking classes in Buenos Aires, far from the environment that had so confused me. Abroad, I felt free to make mistakes, be imperfect, and

admit how much I did not know. Much of the crushing pressure that had weighed upon me during the spring was gone, and I returned to school confident of my

ability to stay out of a competition for perfection that I was doomed to lose. But there were still pitfalls. Only a few months later, I found myself crying again, clutching the *University Gazette's* description of that year's Marshall Scholars. Their collective accomplishments felt oppressive. My instinct to adapt banged around, frustrated, inside of me, and I lacked the courage to seek advice from friends who I assumed would not be able to relate.

There was no one defining moment at which I made the switch from insecure freshman to cocky senior that Summers so confidently predicted. In fact, I am still not sure I would feel comfortable picking my own percentage-based place in the class of 2008. It smacks of the very comparisons and sidelong appraisals that contributed to my feeling so lost for two years. Yet, in gradually broaching the almost taboo subject of failure with my closest friends, it became harder and harder for me to assume infallibility in my peers and hopelessness in myself. That way of thinking began to look both self-pitying and unrealistic. Naturally and almost imperceptibly, my instinct to adapt and succeed stopped ruling my actions and thoughts, and space opened

up in my life to explore, to learn, and to breathe.

AND THEN, early this semester, I hit a wall again. About halfway through my belabored thesis proposal, in a moment of desperation, I decided that I needed a mentor, any mentor. After combing my inbox for a few minutes I found the desired e-mail—a notice, full of hope and exclamation marks, sent out over my House listserv about a program that matches undergraduates with a Radcliffe Institute fellow. I followed the link and filled out a brief form about my interests, motivation for seeking a mentor (procrastination?), and hopes for our future relationship.

A few weeks later, long after having forgotten I had ever applied, I received an e-mail politely informing me of my rejection from the mentor program. Alas, the letter explained, the number of qualified potential mentees was overwhelming, and the number of mentors sadly small, but I should certainly apply another time. I immediately walked out into our common room to tell my roommates.

"Another Harvard rejection!" I yelled.

They laughed, and we spent a good five minutes reminiscing about the numerous programs, grants, student groups, and classes from which we had been rejected over the past three years. Even before setting foot on campus, we discovered, many of us already felt inadequate and doomed to mediocrity. Stephanie mentioned that she had wanted to come to Cambridge early for the Freshman Arts Program, one of several optional orientation activities for incoming freshmen, but was told no. Avis said she was rejected from freshman seminars in her very first week. Kim remembered the grueling process of trying to land a summer job. Jenny cringed at the memory of her French language placement exam the first week of school.

Yet, somehow, as wizened seniors lolling about on hand-me-down futons, we found ourselves laughing about these rejections as if they never really mattered. And, perhaps, they didn't. ▢

*Berta Greenwald Ledecy Undergraduate Fellow
Liz Goodwin is slowly but steadily writing her senior thesis, with or without a mentor.*



Hoisting the Ivy League trophy: (clockwise from lower left) quarterback Chris Pizzotti, captain and defensive end Brad Bagdis, head coach Tim Murphy, and fullback Noah Van Niel

SPORTS

Storybook Ending

A rout of Yale brings another Ivy League trophy.

REBOUNDED from a rocky start, the football team defeated its first six Ivy League opponents and scripted a stunning finale by routing a previously unbeaten Yale squad, 37-6. The Yale Bowl upset dashed Old Eli's hopes of completing a perfect season, and brought Harvard its fourth outright Ivy title since 1997. Not since the grand opening of the Bowl in 1914, when Harvard spoiled the occasion with a 36-0 shutout, had Yale been so abjectly humiliated by a Crimson squad.

The lopsidedness of The Game was a source of wonder even to those responsible for it. "People had pretty much left us for dead [when our record was] 1-2," said head coach Tim Murphy. "We dreamed we'd get this result, but we didn't dream we'd get this kind of dominance." Harvard's ferocious defense, led by end and captain Brad Bagdis '08, held high-scoring tailback Mike McLeod to 50 yards rushing. Senior quarterback Chris Pizzotti, in his first start against Yale, completed 27 of 41 passes for 316 yards—the most for any Harvard passer in a Yale game—and four touchdowns. The Crimson offense ran 91 plays to Yale's 56. "This is the ultimate, perfect, storybook ending," said Bagdis. "It's just phenomenal."

THE TEAM'S stellar Ivy campaign began with a 24-17 defeat of Brown in the first

night football game ever played at the Stadium (see "Lights! Camera! Action!" November-December 2007, page 83). That win was bracketed by hard-luck losses to two Patriot League teams, Holy Cross and Lehigh, each in the last half-minute of play.

In another stroke of adversity, a shoulder injury at Lehigh ended quarterback Liam O'Hagan's season. O'Hagan had put up league-leading total-offense numbers as a sophomore, but had struggled the next year. This fall he'd begun well, passing for two touchdowns and running for a third in both the Holy Cross and Brown games.

But better times were at hand. Pizzotti, who'd started five games a year earlier, took over at quarterback and excelled. The Crimson defense had already shown its mettle, coming up with three drive-breaking interceptions against Holy Cross, making three more against Brown, and denying Lehigh an offensive touchdown. Fierce defensive play would be a consistent strength during the season.

In the team's second Ivy League test, the defense forced five Cornell turnovers in a 32-15 victory that marked the start of a seven-game winning streak. Back at the Stadium, in the team's last nonleague

game, Harvard defenders intercepted four Lafayette passes, with cornerback Steven Williams '08 returning the fourth for a 91-yard score. The defense had another four-interception day a fortnight later, picking off one Dartmouth pass at the Harvard three-yard line and another in the end zone to arrest scoring drives. Senior safety Doug Hewlett had three of the steals, the most in one game for a Harvard player since 1967. At Columbia, the defense had six quarterback sacks.

Picking up where O'Hagan had left off, Pizzotti quickly established himself as the league's best passing quarterback. He had a big day against Princeton, completing 23 of 35 passes for two touchdowns and 365 yards—the fourth-highest single-game passing yardage in Harvard annals. The footwork of sophomore back Cheng Ho, who ran for more than 100 yards against Holy Cross, Princeton, Dartmouth, and Columbia, helped balance the Crimson offense.

With the season's end two weekends away, only Harvard and Yale were still unbeaten in league play. Every other team had at least two losses, ensuring that The Game would decide the Ivy championship.

Penn—always a tough team, but with three league losses on its record—was Harvard's last Stadium opponent. Quaker back Joe Sandberg, the Ivies' second-ranking rusher, injured a knee on the game's first play, and without him Penn was held to 198 yards in total offense—Harvard's best defensive effort so far. With 43 seconds left in the first half, a 20-yard pass from Pizzotti to wide receiver Corey Mazza '07 ('08) staked Harvard to a 7-0 lead. Receiver Matt Luft '10 made a leaping catch in the end zone for a second-half score, and Ho broke off tackle for a 20-yard touchdown to clinch it, 23-7.

Yale extended its unbeaten streak with a 27-6 victory at Princeton. Co-titlists with the Tigers in 2006, the Eli were now

Running the Table

at Holy Cross	L	28-31
Brown	W	24-17
at Lehigh	L	13-20
at Cornell	W	32-15
Lafayette	W	27-17
Princeton	W	27-10
Dartmouth	W	28-21
at Columbia	W	27-12
Penn	W	23-7
at Yale	W	37-6

within range of Yale's first outright Ivy title since 1980, its first unbeaten-untied season since 1960, and its first 10-victory season since 1909. But it wasn't to be.

FOR THE FIRST TIME since 1968—the year of the storied 29-29 tie—Harvard and Yale went into The Game with spotless records in Ivy play. The prospect of an epic clash between archrival teams stirred excitement in the media and elsewhere. “This is going to be a game people will talk about forever,” Yale coach Jack Siedlecki told the *Boston Globe's* John Powers '70.

Yale had a right to be cocky. The previous year's team had treated Harvard to a 34-13 mauling. The Blue had the Ivies' best rushing attack and its top-rated defense. Junior tailback McLeod led the nation in rushing with 174 yards per game, and had scored 23 touchdowns. Yet almost nothing went right for the Eli.

Not even the coin toss. Harvard won it

and chose to receive. Pizzotti came out throwing, and just 68 seconds into the game he had Harvard on the board with a 40-yard pass to Luft in the end zone. Late in the quarter Luft scored again on a 33-yard aerial. The Crimson added points on its next two possessions, with Ho diving in for a one-yard touchdown and sophomore receiver Mike Cook snaring a 15-yard pass at the goal line. In Yale's previous five games, its defense had allowed a total of 47 points. By halftime Harvard had 27. Yet things could have been worse: the half ended with the Crimson at Yale's one-yard line.

A third-quarter field goal by sophomore kicker Patrick Long and an early-fourth-quarter touchdown pass to tight end Jason

Final Ivy League Standings

	Ivy and overall records		Points for/against	
Harvard	7-0	8-2	266	156
Yale	6-1	9-1	294	137
Brown	4-3	5-5	312	291
Penn	3-4	4-6	231	193
Princeton	3-4	4-6	201	265
Dartmouth	3-4	3-7	271	347
Cornell	2-5	5-5	270	301
Columbia	0-7	1-9	184	320

Miller '09 completed Harvard's scoring spree. With four minutes to play, Yale reaped six consolation points on an 87-yard sideline punt return by freshman back Gio Christodoulo. The extra-point try went wide.

The Yale offense

never got untracked. Slowed by a toe injury, McLeod netted only 36 yards in the first half and left the game after three quarters. Quarterback Matt Polhemus threw two interceptions and hit on just two out of 18 pass attempts.

“We had a horrible day,” Yale coach Siedlecki said afterward. “They seemed to be in our backfield every play, whether we were running or throwing.... We got outplayed and outcoached.”

Gyrobball Historian

In the fall, the Tokyo publisher Asahi Shinsho released a new title in Japanese, loosely translated as *The Unknown Story of Matsuzaka's Major League Revolution*, a 250-page paperback recounting the saga of star pitcher Daisuke (DICE-kay) Matsuzaka's rookie year as a starting pitcher with the Boston Red Sox. The book follows Matsuzaka (and his mythical “gyrobball” pitch) through the regular season month by month, with commentary on such topics as the globalization of baseball and how sports can build group pride. The author is Folger Fund professor of history (and avid baseball fan) Andrew Gordon '74, Ph.D. '81. Gordon is currently a fellow at the Radcliffe Institute, working on a book about the penetration of the sewing machine into Japanese society in the twentieth century. “I thought I'd venture into sportswriting,” he says. “A new thing.”

In November 2006, the Red Sox produced a 10-minute DVD expressly for Matsuzaka, as part of their campaign to woo him to the team. It featured Japanese relief pitcher Hideki Okajima, who had already signed with Boston, saying, “This is a great town” in Japanese. Gordon, who is fluent in Japanese after two years of study in college and several years of living in Japan, told the camera something similar in Japanese while standing in front of the John Harvard statue in the

Yard. A Japanese book-editor friend of Gordon suggested writing the book, and threw in a press pass. “I'd have to write only 20 pages a month for six months,” Gordon says, “then do a wrap-up.”

He went to nearly all of Matsuzaka's starts and the press conferences afterwards; Matsuzaka was very sparing with one-on-one interviews, and Gordon didn't get such access, but he was able to speak with some senior Red Sox figures, including general manager Theo Epstein, and with pitching coach John Farrell, who was “very forthcoming.” Gordon already knew Matsuzaka's translator Masa Hoshino '02 (see May-June 2007, page 73), who had taken one of his courses on Japan.

The historian believes that Matsuzaka, who consistently gave an impression of immense seriousness during the season, “is a lot more interesting and fun-loving than he lets on.” Gordon also agrees with the sports-media consensus that, after his year of adjustment, Matsuzaka will probably improve considerably on the 15-12 record and 4.40 earned-run average (ERA) he posted in 2007; in the American League, he made three or four more starts than he would have in Japan, where the travel time is also much less wearing. Even so, the rookie recorded the best ERA in the American League during a two-month stretch; when he seemed to tire later in the year, the Red Sox helped energize him for the playoffs, Gordon says, by giving him “a sabbatical.” The strategy worked. He won the American League pennant-clinching game and became the first Japanese pitcher to start and win a game in the World Series.



Indeed, Yale's play was a study in futility. The respective times-of-possession reflected the Crimson dominance: 37:59 for Harvard, 22:01 for Yale. The Eli made just six first downs, giving up 25. Yale was limited to 66 net yards rushing and 43 in the air—109 yards of total offense against 434 for Harvard. Yale's offense never got inside Harvard's 25-yard line. If a single play epitomized Yale's horrible day, it was defensive back Steve Santoro's near-interception of a Pizzotti pass just before half-time. Santoro juggled the ball, lost control of it, and saw it land in the hands of Harvard's Corey Mazza, flat on his back at the Yale six-yard line (see page 51).

The Harvard faithful may talk about this one forever. Yalies will try to forget it.

TIDBITS: Harvard has won six of the last seven Yale games, and four straight at Yale Bowl. Since the formalization of Ivy League play in 1956, Harvard leads in the series, 27-24-1....And since 1960, when Yale last went unbeaten and untied, Harvard has robbed the Blue of a perfect season four times. In 1968 the Crimson scored 16 points in the last 42 seconds to gain the now-legendary 29-29 tie. In 1974 a 95-yard drive gave Harvard a 21-16 win with 15 seconds to play. And in 1979 the unbeaten Bulldogs were upset, 22-7, by a Harvard squad that had won just two games.

Déjà vu: Yale dedicated the Bowl on November 21, 1914, the day of that year's Harvard game. The visitors had the bad grace to pin a 36-0 defeat on the Bulldogs, and the next day's papers jested that "Yale had the Bowl but Harvard had the punch." After a \$21-million renovation, Yale rededicated the facility before the 2007 game. Again Harvard supplied the punch. ...The official attendance was 57,248, the Bowl's biggest crowd since 1989.

End of the line: Mike McLeod brought an 18-game scoring streak into The Game, but there it died. Harvard remains the only team on Yale's schedule to have deprived McLeod of a 100-yard game.

Good right arm: Now 11-1 as a starter, Chris Pizzotti finished the season with 2,134 passing yards, 164 completions, and just four interceptions—the second-best single-season passing numbers in Harvard history....Having missed the 2005 season with a herniated disk, Pizzotti will seek

an injury waiver in order to play again next year. The waiver provision will also allow this season's other starting quarterback, Liam O'Hagan, to return.

Ace receiver: Fifth-year senior Corey Mazza's touchdown catch in the Penn game was the twenty-eighth of his career, tying the Harvard record set by two-time all-American Carl Morris '03....Fellow wideout Matt Luft caught eight passes for a record 160 yards against Yale.

Pickoffs: Cornerback Steven Williams, who ranked first in the nation in passes defended, tied a Harvard record by making his eighth interception of the season against Yale. It was the sixteenth of his Harvard career, breaking the record of 15 established by Ken O'Donnell '49 in 1948.

Well-rounded: The fullback's role in Harvard's offense is to block, but Noah Van Niel did it all. The 250-pound senior had 25 carries, scored two touchdowns in the Lafayette game, caught 18 passes, and was a long-snapper for the kicking team. Snapping in the Penn game, Van Niel raced downfield and recovered the ball when it glanced off a Quaker defender. His alert play set up Harvard's third score of the day....Van Niel hopes to pursue an operatic career (see November-December 2007, page 84). En route to the Columbia game, he was interviewed live on CBS's *The Early Show*, and sang the tenor aria *Una furtiva lagrima* from Donizetti's *L'elisir d'amore*.

Good grades: Six Harvard players were named to the *ESPN The Magazine* academic all-district first team—the most from any school in the country.

Postseason honors: Pizzotti received the Crocker Award as the team's most valuable player, and was one of 11 Harvard players selected for the all-Ivy first team. Named to



Cornerback Steven Williams went airborne to snare a third-quarter pass intended for Yale's Jarrett Drake. With 15 breakups and eight interceptions, Williams was the nation's top pass defender in 2007.

the offensive team were Pizzotti, Mazza, and linemen Andrew Brecher '08, David Paine '08, and James Williams '10. The defensive selections were end and captain Brad Bagdis, lineman Matt Curtis '09, linebacker Glenn Dorris '09, and backs Hewlett, Williams, and Andrew Berry '09. Nine others received second-team or honorable-mention citations....Curtis, of Peabody, Massachusetts, and Pforzheimer House, will captain the 2008 squad. A government concentrator, he has been a two-year starter at tackle.

Seven and counting: Crimson teams have now won seven games or more in each of the last seven seasons—an Ivy League record, and Harvard's best seven-year run since 1904-1910. ~"CLEAT"

Ski Team, Waxing

IN THE NORTH COUNTRY of New Hampshire, skiers from Dartmouth, the current NCAA champions, reign supreme, while the Green Mountains are home to the University of Vermont ski team, another perennial powerhouse. On the intercollegiate ski trail, Harvard has lagged behind such competition for decades. Even though the Crimson typically field the best college team in the Boston area, the

squad, which finished ninth among 17 colleges in the Eastern Intercollegiate Ski Association (EISA) last year, has strained to keep pace with top-funded programs to its north and out west.

But 29-year-old Tim Mitchell, now in his second year as Harvard's head Alpine ski coach, vows to turn that around. "I'm rebuilding the entire program from scratch," the soft-spoken, caffeine-driven coach says. "The word is out."

Mitchell is reviving a Crimson program



that had been in disarray—lacking a coach and adequate training facilities, and running a deficit. He's attracting top young skiers to an urban—and woefully flat—setting. In the big-mountain-dominated cosmos of skiing, recruiting for Harvard is an uphill battle, so to speak, but one that Mitchell is starting to win.

His credentials help. A five-time all-American racer at New Hampshire's Plymouth State University, Mitchell has been near the summit of the brutally competitive, dangerous world of Alpine (downhill) ski racing. He has also fallen to its depths.

His coaching career took off, quite literally, by accident. In the winter of 2003, while cranking out a high-torque giant slalom turn in an elite race at the Sunday River ski area in Maine, Mitchell broke his back. The painful crash into an unyielding race gate ended his ski-racing career. (He does, however, compete as a pro bicycle racer and at amateur skiing venues like the night league at Wachusett Mountain Ski Area in Princeton, Massachusetts.)

For many summers, Mitchell had mentored young athletes on the glacier at Mount Hood, Oregon, the mecca of American ski racing, so after his injury, he threw himself into coaching. He was an assistant coach at Brown in 2004-2005,

and then enrolled in the University of Utah's master's program in exercise physiology. At Mount Hood in the summer of 2006, racer Matt Basilio '08, then the ski team's de facto coach, recruited Mitchell for the open job at Harvard.

Unfortunately, tragedy would soon set back the team's fortunes. Starting in 2005, ski-team alumnus Nicholas Rhineland '88 became chair of the Friends of Harvard Skiing and quickly turned a \$60,000 deficit into a \$250,000-to-\$300,000 annual operating budget, on par with the top teams. But this past April, Rhineland died in a car accident after a day of spring skiing at Sugarbush, Vermont. The team banquet, traditionally a joyful end to winter, turned into a requiem for him.

Yet Mitchell clung to his goal of catapulting Harvard into the realm of the top Northeast NCAA Division I programs that forgo athletic scholarships—like Dartmouth and Williams—and into the top five in its EISA league. His strategy involves seeking out young racers who might have had a bad year or a serious injury, but who have outstanding potential. And his contacts in the obscure circles of junior ski racing have paid off, netting two elite recruits from the ski boarding academies that turn out the nation's best racers: Chris Kinner '10 from the Green Mountain Valley School in Waitsfield, Vermont, and Margie Thorp '11, from Salt Lake City's Rowmark Academy. "When I got here, I was really excited to see Tim," says Kinner, a former New England junior slalom and grand slalom (GS) champion from Greenwich, Connecticut. "He's just got so much energy he's put into the program. He knows people in the business."

Mitchell, who inherited a squad dominated by walk-on athletes, hopes to field a fully recruited team within four years while bringing along talented lower-tier athletes on a development team, as Dartmouth does. And if Harvard Square has no mountain vistas in sight, there are decent local training spots close by at the Blue Hills Ski Area in Canton and at Wachusett.

The team also does preseason training in Canada alongside national teams.

NCAA Division I ski racing is one of the highest levels of ski competition in the world. Alpine and Nordic (cross-country) racers make up a single team. Each college fields men's and women's Alpine and Nordic squads, with each squad starting six athletes per race. The top three finishers in each discipline score team points that add up to the total team score.

College Alpine racing features two events: slalom, in which competitors snake technical, tight turns around closely placed poles, and the more open GS, which demands equally precise but much larger arcs down a 200- to 450-meter course (measured in vertical drop). Nordic athletes vie in "classic" races, characterized by the traditional running-stride action of cross-country, and in separate races utilizing the modern "skate" technique that resembles ice-skating.

Harvard's Nordic coach, Peter Graves, is working with Mitchell to build a cohesive team. Their first concrete step is a newly opened, enlarged ski-preparation and training room at 145 North Harvard Street, near the Stadium, where team members can sharpen and wax skis, mount bindings, and undertake physiological training and testing, such as performing cardiopulmonary exercises while monitoring their blood-oxygen levels.

Graves, 55, now in his sixth year at Harvard, is an eminence in both Nordic and Alpine skiing. A former cross-country racer at Fort Lewis College in Colorado, he is a well-known television commentator and announcer for World Cup and Olympic events. "I learn so much more about Alpine by talking to

Tim, and he's got such an outstanding background in physiology," Graves says. "We've got a very good vibe going between the two squads. Over time, we're really establishing Harvard as a player." ~SHAUN SUTNER

Shaun Sutner is a reporter for the Worcester Telegram & Gazette.



ALUMNI

Fighting for Afghanistan

A former journalist offers a glimmer of hope for a struggling country.

by NICOLE BRANAN

THE SOUND of a bomb detonating breaks the stillness of Kandahar's morning hours. To Sarah Chayes '84, in her office in the small building that is home to the soap and body-oil cooperative she has founded, the blast sounds like heavy boxes cascading onto an upstairs floor. Like everyone in the southern Afghan city, Chayes is accustomed to the sound of gunfire or the dull throb that accompanies suicide and roadside bombs, but this time the shock wave that usually rattles windows is missing. "That means that the explosion must have been quite far away," she says. But its impact becomes clear moments later when ambulances, taxis, and private cars rush through the streets carrying the injured to hospitals. The scenario is not unusual, Chayes says. "The thing is, you live with it and it starts to feel normal."

It's been six years since Chayes, a courageous and energetic Cambridge native, first came to Kandahar as a reporter. As a National Public Radio "smoke jumper"—a foreign correspondent dispatched to crises—she had left her Paris base numerous times to report on the conflicts in the Balkans and in Algeria during the 1990s. But Afghanistan kindled a deep fascination in her. Rather

Sarah Chayes in a war-ravaged village near Kandahar



than staying in hotels with other international journalists, she moved in with a Kandahar family, learned Pashto, and formed close friendships with the locals, including President Hamid Karzai's family. But she was increasingly frustrated by the fact that she wasn't contributing to how the conflict turned out. "As a journalist I was only there, holding my microphone in people's faces, but I wasn't part of the story."

She also felt a growing disillusionment with Western culture and its current emphasis on dividing the world into two opposing blocs: the West versus Islam. "I don't believe in the clash of civilizations," she says. "I believe that most human beings share some basic aspirations and basic values." The extent to which different people have achieved their aspirations depends on what has befallen them over time, and not on some irrevocable cultural difference, she adds. So when President Karzai's uncle asked her, in early 2002, to stay in Kandahar to help get the country back on its feet, she didn't think twice. "That was the opportunity I had been waiting for," she remembers. "I could talk to people on both sides of this alleged divide and help them hear each other."

Chayes first served as field director for the non-governmental organization Afghans for Civil Society (www.afghansforcivilsociety.org), which has helped rebuild a village destroyed during the war, launched successful income-generation projects for Kandahar women, and conducted various socioeconomic studies. But in 2004, she chose to move into the economic sector because it seemed critical to the country's rehabilitation. The following spring she opened Arghand (www.arghand.org),

which manufactures natural skin-care products from the abundant fruits and nuts of the orchards of southern Afghanistan and exports them to the United States and Canada. To date, the cooperative supplies more than a dozen stores; others are waiting in line.

Arghand, which is Persian for "triumphant" or "conquering," tackles one of Afghanistan's most dangerous problems: its dependence on the opium poppy. The country is the world's leading supplier of opiates and its drug trade is booming. "That criminalizes politics and puts Afghanistan's people at the mercy of armed gangs," Chayes says. Growing the drought-resistant, high-value poppy plant is often the only choice for poor farmers in the south who have no other access to credit in a region where water is scarce and expensive and the value of licit produce fluctuates dramatically.

In this dire situation, Arghand is a glimmer of hope. The cooperative buys roses and produce such as pomegranates,

almonds, and apricots directly from farmers at prices that compete with opium. Arghand also provides employment opportunities. Currently the cooperative consists of eight women and four men from different walks of life and varying educational backgrounds, including the former bodyguard of an assassinated Kabul police chief and several women who are single parents or have disabled husbands.

Life is harsh. Chayes, who lives in the same building that houses her cooperative, keeps a Kalashnikov AK-47 rifle in her room and Arghand's male employees take turns spending the night in the building as a security measure. Chayes no longer drives unaccompanied to the U.S. military base from which she ships Arghand's products. "The base is half an hour away," she explains, "so if I have a flat tire, that becomes a life-threatening experience, because I'm immobilized and could become a target of opportunity."

She plans to stay in Afghanistan at least

until Arghand is able to operate without her: perhaps in three to five more years. But the region has become increasingly volatile and violence has surged, leading her to wonder how much longer she can safely do her job. "The situation around us is quite grim," she allows. "Kandahar and the Afghan south really feel like they are falling apart." Just before she left for a two-month fundraising tour in August, three Afghans with known connections to "internationals" or the government were killed and their bodies were hung at three-day intervals in the village of one of Arghand's members: "part of a massive intimidation campaign run by the Taliban," she says. She is exploring ways to direct the cooperative remotely from her home in Paris more of the time. "That's not just because of my own safety," she notes, "but because my mere presence in Kandahar makes life much more dangerous for my cooperative members."

Still, Arghand offers a source of encouragement for Chayes and others. "There is

AN EVENING WITH THE EDITOR

On November 15, 2007, loyal magazine donors gathered at Loeb House in Cambridge, Massachusetts, to hear *Harvard Magazine* editor John Rosenberg present "The Making of *Harvard Magazine*: How Your Alumni Magazine Is Edited, Written, and Produced." A lively Q&A followed.

To learn how you can become a Friend of Harvard Magazine, please visit www.harvardmagazine.com/friends.



FROM BOTTOM LEFT: Lionel B. Spiro '60, M.Arch. '63 and *Harvard Magazine* deputy editor Craig Lambert '69, Ph.D. '78; Mrs. Paula Budlong Cronin '56, *Harvard Magazine* managing editor Jonathan S. Shaw '89, Joseph S. Vera '50, and Mrs. Jane C. Vera; ABOVE: Professor Jill M. Hooley, Warren M. Schur '69 and *Harvard Magazine* regional advertising account manager Myha Nguyen; Top: editor John S. Rosenberg.



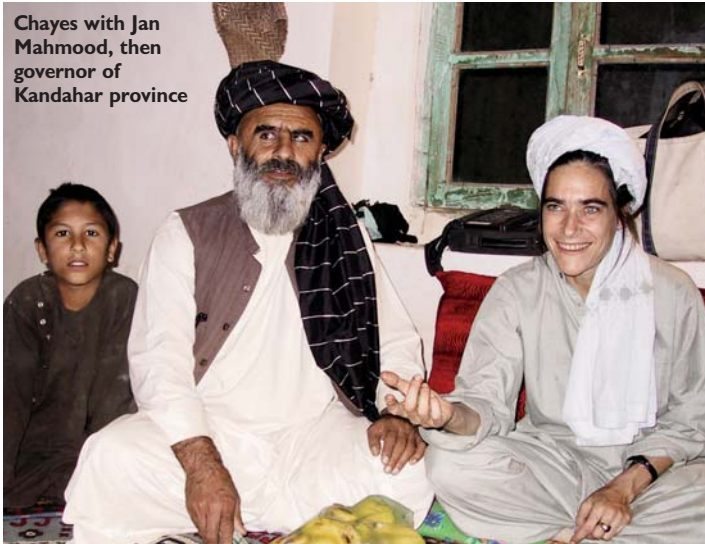
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always something positive to fall back on," she says. "Even if what's happening at Arghand is small, it's a positive development."

The work is challenging. "What makes a really great Bordeaux is a mixture of different varieties of grapes in different proportions," she explains. "It's the same with soap." She and her team experiment constantly with different seed oils to develop new formulas. Chayes even got in touch with the curators of a perfume museum in Grasse, the center of the French perfume industry, for expert advice.

The cooperative has enjoyed continuous growth and success since its inception. Last year, it was among 12 finalists in the BBC's World Challenge, a global competition that seeks out projects and businesses that not only make a profit, but also give back to their communities.

Chayes with Jan Mahmood, then governor of Kandahar province



But Chayes's work reaches far beyond Arghand. Because she has relationships with Afghan leaders as well as with international officials and organizations, she is in a unique place to foster communication between them. "Since I started working in Afghanistan, I have encountered problems that I never would have seen as a reporter," she says. "I am immersed in this incredible microcosm through which I can examine

and analyze the policy context, and because I have access to people in decision-making positions, I can then take this analysis to them."

Access to electricity, for example, is frequently a concern. Power lines that run through battle zones are frequently damaged and need constant repair. But when power didn't return for several days in the winter of 2006, Chayes started to inquire. "I talked to the local electricity lineman and I learned that the Taliban were demanding money to fix the lines. In other words, they were holding electricity hostage." She spoke to the political adviser to the NATO troop commander, who hadn't known about the electricity problem. Subsequently, NATO troops launched a military operation to clear the Taliban out of an area they had controlled, thus securing the power lines



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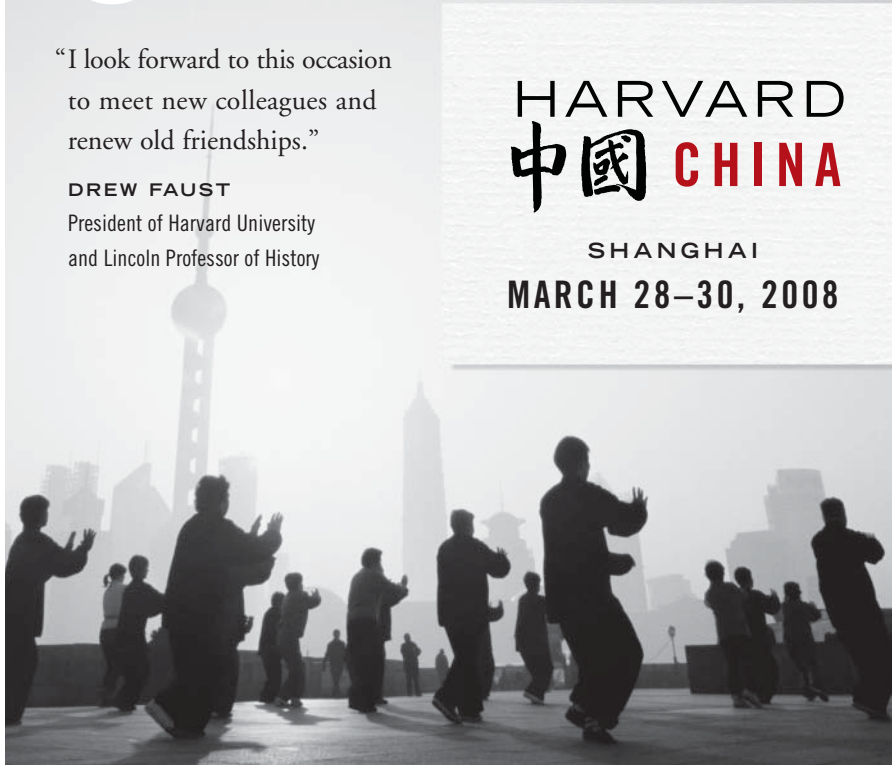
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For an updated list of speakers and registration information, please visit
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in the region. "If I hadn't come up against this problem myself," she adds, "I never would have found out about it."

Although Chayes no longer works as a radio reporter, she hasn't abandoned journalism entirely. Her first book, *The Punishment of Virtue* (2006), chronicles her experiences in Afghanistan and explores Near Eastern history, the subject she studied as an undergraduate and during two years in a doctoral program at the Center for Middle Eastern Studies. In the process of writing the book, she found herself revisiting her Harvard professors, including Gurney professor of history Roy Mottahedeh, whose "moral and material support was precious."

"I am glad these different threads of my life knitted themselves together," she says. "Interestingly, what I studied at Harvard has become the absolute foundation of what I have done with my life." (A self-described "Harvard baby," she is the daughter of the late Frankfurter professor of law, Abram Chayes '43, LL.B. '49, a pioneer of international law, and Antonia Handler Chayes '50, a legal scholar, mediator, and former federal administrator who is now a visiting professor of international politics and law at the Fletcher School of Law and Diplomacy.)

She sees herself as a bridge between Islamic culture and the United States. "I discovered in the process of doing Arghand that the beneficiaries of our actions are just as numerous in the U.S. as they are in Afghanistan," she says. Building relationships with retailers and other audiences, such as those she meets during fundraising tours throughout the United States and Canada, improves the reputation of Afghanistan in America and vice versa.

Arghand offers Americans a way to get involved and a way to help, she says. "I hope that this will influence the direction that our societies are going to take: whether we are going to live in a bipolar world consisting of two irrevocably hostile civilizations, or whether are we going to live in a world made up of interconnected civilizations that are different but not mutually exclusive. I think that is one of the biggest issues that our generation is confronted with in this century." That's a lofty goal, she acknowledges. "I know that whatever I have to offer is a drop in the bucket," she says. "But I may as well put my drop in a crucial place. And Kandahar is such a place." ▢

Nicole Branan is a freelance writer based in Colorado.

Eye on Harvard

Eye on Harvard is an Internet talk show "for and about Harvard people" that appears on InTimeTV.com. The subject matter is broad—topics so far have ranged from stem cells and evolutionary biology to adventure travel and North Korean politics. But the aim is specific: to "bring together like-minded individuals who share a background, certain interests, and a history," says Chicago-based host Ogan Gurel '86. "It's not just another TV show. It really represents a confluence of important social and technological trends."

A medical doctor, Gurel also hosts *Insights in Medicine*, another InTimeTV show that targets physicians. On the Web, he says, "You have to build shows around specific niches, rather than for mass appeal." *Eye on Harvard's* guests have included Gurel's classmate, Paul Kent '86, assistant professor of pediatric hematology/oncology at Rush University Medical Center, who discussed the politics and ethics of research on stem cells and cord blood; evolutionary biologist Neil Shubin, Ph.D. '87, now at the University of Chicago; and Nancy Collins, M.B.A. '99, CEO of Global Adrenaline Inc., who talked about her transition from investment banking to travel entrepreneurship.

The show's audience has grown steadily, from a few hundred to a few thousand viewers during the last several months. If the increasing popularity of Internet TV is any indication, the trend will continue. "Graduating from Harvard," Gurel explains, "you always want to do the next best thing, and really make a mark."

Comings and Goings

UNIVERSITY CLUBS offer a variety of social and intellectual events, including Harvard-affiliated speakers (please see the partial list below). For further information, contact the club directly, call the Harvard Alumni Association at 617-495-3070, or visit www.haa.harvard.edu.

On January 17, the Harvard-Radcliffe Club of Southern California hosts "A Case-Study Discussion on K-12 Education Today," based on the Long Beach Unified School District. Speakers from the Graduate School of Education include Dean Kathleen McCartney, academic dean Robert B. Schwartz, and associate professor Monica Higgins. On January 28, the Harvard Club of the Palm Beaches presents Robert A. Lue, professor of the practice of molecular and cellular biology and director of life-science education, for a discussion on "The Transformation of Teaching and Learning in the Life Sciences." On January 28, Doyle professor of cosmology John P. Huchra talks about "The State of the Universe" for members of the Harvard Club of San Diego.

On February 20, the Harvard Club of Cincinnati examines "The Challenges of Globalization" with speaker George C. Lodge, Chua Tiampo professor of business administration emeritus. On February 23, John Palfrey, the executive director of the Berkman Center for Internet and Society at Harvard Law School, examines "Digital Natives" for the Harvard Club of Maryland.

Old and New in Chicago

UNIVERSITY PRESIDENT Drew Faust stopped in Chicago on November 9 for a black-tie dinner to celebrate the 150th anniversary of the city's Harvard Club—the oldest continuously operating alumni club anywhere, according to the Harvard Alumni Association (HAA). (A Boston club was founded in 1855, but did not survive, and the current Boston club traces its roots only to 1908. The Cincinnati club, with an 1858 founding date, trails Chicago by just one year.) Although the club's five founding fathers—two physicians, a lawyer, an insurance-agency owner, and the city surveyor

(elected in 1855 on the Know-Nothing ticket)—were all from somewhere else, the membership quickly filled out with Chicago natives as the city's population mushroomed.

Today, the club is among the largest (it has more than 1,300 members) and the most active within the HAA, sponsoring two to four events each month. Recent offerings have included a discussion on the future of higher education with University of Illinois president B. Joseph White, M.B.A. '71, and a dialogue with Peter Sellars '80, who was in town to direct an opera. The club's leaders say it also has a unique level of engagement with the city's non-profit and cultural institutions, including a special relationship with Walter Payton College Prep, a highly diverse public school where club members provide college counseling, one-on-one tutoring, and coaching for the math and sports teams, as well as the debate team, which won a national championship last year. Local alumni have also endowed scholarship funds, with a combined market value of more than \$6 million, for Chicago-area students at the College, one of the largest such programs established by a Harvard club.

Club members readily tell stories of renowned alumni. Samuel Johnston, A.B. 1855, the donor for whom Johnston Gate in Harvard Yard is named, was a Chicago financier and real-estate developer. The College's first African-American graduate, Richard Theodore Greener, A.B. 1870, lived in Chicago after his retirement from the

A Special Notice Regarding Commencement Exercises

Thursday, June 5, 2008

Morning Exercises,

To accommodate the increasing number of those wishing to attend Harvard's Commencement Exercises, the following guidelines are proposed to facilitate admission into Tercentenary Theatre on Commencement Morning:

- Degree candidates will receive a limited number of tickets to Commencement. Parents and guests of degree candidates must have tickets, which they will be required to show at the gates in order to enter Tercentenary Theatre. Seating capacity is limited, however there is standing room on the Widener steps and at the rear and sides of the Theatre for viewing the exercises.

Note: A ticket allows admission into the Theatre, but does not guarantee a seat. The sale of Commencement tickets is prohibited.

- Alumni/ae attending their major reunions (25th, 35th, 50th) will receive tickets at their reunions. Alumni/ae in classes beyond the 50th may obtain tickets from the Classes and Reunions Office, 124 Mount Auburn Street, sixth floor, Cambridge.

- For alumni/ae from non-major reunion years and their spouses, there is televised viewing of the Morning Exercises in the Science Center, and at designated locations in most of the undergraduate Houses and professional schools. These locations provide ample seating, and tickets are not required.

- A very limited supply of tickets will be made available to all other alumni/ae on a first-come, first-served basis through the Harvard Alumni Association, 124 Mount Auburn Street, sixth floor, Cambridge 02138.

Afternoon Exercises

The Harvard Alumni Association's Annual Meeting convenes in Tercentenary Theatre on Commencement afternoon. All alumni and alumnae, faculty, students, parents, and guests are invited to attend and hear Harvard's President and the Commencement Speaker deliver their addresses. Tickets for the afternoon ceremony will be available through the Harvard Alumni Association, 124 Mount Auburn Street, sixth floor, Cambridge 02138.

—Jacqueline A. O'Neill, University Marshal

U.S. Foreign Service. And Robert Todd Lincoln, A.B. 1864, the son of Abraham Lincoln, practiced law in Chicago and served two terms as club president. The club also had a female president before Harvard did—in fact, its second female (and current) president, Margaret I. McCurry, LF '87, introduced Faust, the eighth Harvard president to visit the club.

Faust has devoted ample time to meeting with alumni in the early months of her presidency; the next planned stops on her tour included Washington, D.C., in December, to be followed by London in January and China in March. In Chicago, before a crowd of more than 500, she touched on the themes of her young administration: transcending the boundaries that divide Harvard's various schools and departments; making it easier for students of modest means to attend; emphasizing practicing, as well as studying, the arts. She called for improving instruction and making Harvard a more international place.

Responding to a question from one alumnus—"Harvard is so rich already. Why do you keep asking us for more money?"—Faust answered: "Thirty-five billion dollars

is not very much money if you want to change the world." She paused, then added, "That is a serious answer, actually," and went on to describe several major goals of her administration that are "not inexpensive": building the new campus in Allston, expanding financial aid for undergraduates from middle-class families.

Another alumnus asked how Faust would have handled the scenario another university president recently faced: Iranian president Mahmoud Ahmadinejad's appearance in September at Columbia University, where its president, Lee Bollinger, gave him a less-than-welcoming introduction. Faust, who had clearly given the matter some thought, said that if a request to invite Ahmadinejad had come through her office (as do all Harvard's invitations to heads of state, as a matter of course), she would have honored the request but would not have introduced Ahmadinejad herself. "I would have tried to set up the situation so there was a group to respond or to question after he spoke," she said. "I think I would not have had myself front and center....I would have wanted to ensure there was very active debate and that the matters of opposition or misrepresentations he made were challenged."

—ELIZABETH GUDRAIS



Drew Faust presents Margaret McCurry with a pen-and-ink sketch of Johnston Gate.

Vanished Acts



"Your wooden arm you hold outstretched
to shake with passers-by."

THREE WORTHY BOOKS full of Harvard references have arrived on the shelf. *The Naked Quaker: True Crimes and Controversies from the Courts of Colonial New England* (Commonwealth Editions) is by Diane Rapaport, a lawyer and columnist for the New England Historic Genealogical Society. The lascivious behavior of Harvard students arises quickly in her book. In 1660 witnesses spotted in a Harvard dormitory, and reported to the law, a girl sitting on a boy's lap. The judiciary was shocked, shocked.

Rapaport reports the appearance in 1677 of an early Bad Influence, one Onesephorus Stanley, a nonstudent, who fetched hard cider into College rooms and was heard swearing therein. Under questioning by Cambridge magistrate Thomas Danforth, Stanley disclosed the names of two "drinking and carousing" students: Urian and Laurence Oakes. These were sons of the College president. Danforth dropped the Harvard investigation, but he kept his eye on Stanley, whom he later threatened

with jail and convicted of many offenses, among them "being a night walker... of...dissolute behaviour" and "drawing ye students from their studies...."



DANFORTH went on to serve as a judge at the Salem witchcraft trials in 1692, where he and his fellow justices condemned 20 people to death. Samuel Sewall, A.B. 1671, famously, was the only one of the nine judges to repent, which he did in 1697.

"He experienced spiritual relief within a week," writes Eve LaPlante, Ed.M. '92, in *Salem Witch Judge: The Life and Repentance of Samuel Sewall* (HarperOne). "On the night of January 26, while the new court met at Charlestown, he lodged in the Charlestown house of Anne Tyng Shepard. Mistress Shepard mentioned to Samuel that John Harvard had built and lived in her house....

"That night in bed...Samuel lay awake for hours. He was struck by 'how long ago God made provision for my comfortable lodging this night, seeing this is Mr. Harvard's house.' This led him to meditate on Heaven, 'the house not made with hands, which God for many thousands of years has stored with the richest furniture: saints

that are from time to time placed there.' It occurred to Samuel that he might now 'have some hopes of being entertained in this magnificent, convenient palace, every way fitted and furnished.'...

"Around this time...Samuel began wearing a hairshirt," according to LaPlante. She is Sewall's sixth-great-granddaughter and credits a great aunt for this sartorial intelligence.



EDITOR Daphne Abeel '59 has skillfully marshaled 19 contributors of essays on Cambridge politics, activism, town-gown relations, folk music, architecture, immigrants, and much else in *A City's Life and Times: Cambridge in the Twentieth Century* (Cambridge Historical Society), an engaging history. One of them is Michael Kenney '57, a retired *Boston Globe* reporter, who chronicles literary Cambridge.

He quotes the poet and music critic Lloyd Schwartz, Ph.D. '76, on poet Robert Lowell '39, who taught creative writing at Harvard from 1963 to 1977, with some interruptions. "Once, after lunch, I walked with him back into Harvard Square. He wanted an ice cream at Bailey's, where I ordered a vanilla malt with an egg in it (a Bailey's specialty). He'd never heard of putting an egg in a milk shake and had to try one too. He was so excited, he wanted to take a long walk, and we strolled all the way up Brattle Street to Sparks Street and back. It was, I think, the longest time I'd ever spent alone with him."

The literary lions have vanished, mostly. So has Bailey's. Primus attests that the Square was a far richer place when it had malted milks with raw eggs whipped up in them.

—PRIMUS V



A SPECTRUM OF DISORDERS

(continued from page 31)

kel, Kohane, and Greenberg, along with others in the consortium, will lead, they hope, to better parsing of the various subtypes of autism. "I would like every kid on the spectrum to have *not* 'autism,' but a more specific disorder," Walsh says. By isolating the genes involved and understanding their functions, researchers can begin to develop particular treatments aimed at particular disorders. So far Rett syndrome and Fragile X (the most common inherited cause of mental retardation, which accounts for 2 to 6 percent of autism cases) have been distinguished from other variants of autism by genetic



Problems with processing faces and emotion and with acquiring language are core symptoms of the disorder.

markers, and advances in treatment for those two types are already under way.

But DNA tests are still far from detecting the majority of cases of autism. In the meantime, scientists need to look for other indicators that can help ascertain the presence of an autism-spectrum disorder at the earliest possible time, in order to enhance the chances for effective intervention.

"The Brain Doesn't Lie"

PROFESSOR OF PEDIATRICS Charles Nelson, who directs the cognitive neuroscience laboratory in the Developmental Medicine Center at Children's Hospital, has had a longstanding interest in how the human brain processes faces. His research has shown that the architecture in the brain that enables children to recognize faces becomes increasingly specialized through early experience. While a six-month-old can distinguish between monkey faces as well as between human faces, a nine-month-old can distinguish only between human faces. A similar perceptual narrowing occurs in the ability to recognize speech sounds: at six months, babies can distinguish sounds in virtually any language, but by one year they begin to discriminate only sounds in their native language. Subsequent studies revealed

that a significant degree of plasticity exists in this specializing process; babies who were exposed to monkey faces between six and nine months of age could still distinguish between monkey faces at nine months, while babies who did not receive this training could not do so.

Nelson believes these findings provide a window onto the cognitive deficits involved in autism, because problems with processing faces and emotion and with acquiring language are core symptoms of the disorder. He wants to know whether there is a corruption in the architecture of autistic brains from the beginning that prevents these children from benefiting from experience in the typical way, or whether the circuits begin by functioning properly

but, for other reasons, do not develop normally, thus preventing these children from benefiting from experience the way they should. He also wonders how early in development signs of an underlying neurological cause can be identified.

To get at these questions, Nelson has been conducting a study with Helen Tager-Flusberg of Boston University to compare the brain activity in siblings of autistic children with that of non-autistic language-impaired children and with controls. Because of autism's strong hereditary component, a child with a (non-identical) autistic sibling has up to a 20 percent chance of developing an autism-spectrum disorder. (The relative risk is substantially higher for male than female siblings, because boys outnumber girls on the spectrum by a ratio of 4 to 1).

These numbers motivated the Phillips family to put their younger child, Kaia—a six-month-old—in the study. Kaia's older brother, Torin, 3, has a diagnosis of PDD NOS. "We understand that early detection is critical," explains their father, Tom Phillips. "We also want to do anything we can to help families in the future." Kaia will undergo a battery of tests aimed at detecting potential abnormalities in brain function that are not yet apparent in her outward behavior. "Because a child's behavioral repertoire is limited in the first years of life, it can be difficult to tell whether an apparent language delay is

developmental or something more significant, like autism," Nelson explains. "But I like to say, 'The brain doesn't lie.'"

The first test examines how Kaia's eyes track alternating images of her mother and a stranger. Does she scan one face longer than the other? What part of the face does she focus on? (Children at risk for autism, Nelson points out, will tend to spend less time on the eyes.) An electrode cap is then placed on her head to measure continuous brain activity as she views the images. Normal babies will take more time to process the picture of the stranger than the picture of the mother. A third test measures her ability to distinguish three highly similar sounds. At three to six months of age, babies should hear three distinct sounds, but by 12 months they should be able to distinguish only two. Nelson and his team hypothesize that a language-delayed or impaired child may not show this perceptual narrowing, or may lack the ability to distinguish the sounds from the start. The final component of the study gauges patterns of interaction with an adult—such as response to facial emotion, eye contact, general social babbling, social interest, shared affect, engagement of attention, and orientation to name. If the researchers pick up any significant irregularities in Kaia's measures, they will alert her parents to begin appropriate early therapies.

In a related piece of the investigation, Nelson's team is looking at the brain activity of older children who have already been diagnosed with autism, in the hope of finding clues that can inform early intervention strategies. "We want to know what the neural circuits are that underlie the primary deficits in face processing," he says. "If we can get kids to process faces normally before that system is derailed, then perhaps we can avoid the further problems in social communication."

Early Action

THE INSIGHTS OF Nelson and other developmental neuroscientists into early brain plasticity have already begun to inform the predominant approaches to autism therapy. Currently, the most widely recommended research-based intervention—known as Applied Behavioral Analysis (ABA)—aims to "wire in" missing or impaired connections in a child's brain through an intensive trial and reward system. Children work one-

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M.B.A.'61, D.B.A.'67

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Catherine A. Chute, Publisher

on-one with a trained therapist to learn the basic components of communication. They begin with general compliance (how to sit in a chair, look at the clinician, and imitate nonverbal behavior in response to verbal commands) and then move on to verbal imitation and receptive language (how to follow one-step commands, and discriminate body parts, objects, and personal names). The approach relies on repetition and reinforcement; each correct behavior or response earns the child a consistent prize, such as a favorite food, access to a toy, or praise.

Although ABA strikes some parents as an unnatural and excessively regimented treatment, many researchers now agree that, for the most severely affected children, it is necessary to apply the most intensive strategy at the youngest possible age. As pediatric psychologist Janice Ware, the associate director of the Developmental Medicine Center at Children's Hospital, explains: "If a child is identified on the spectrum early, they're so disorganized and dysregulated in their communication system that you need to teach them to learn and listen and make eye

teraction problems, which will increase his chances of receiving an autism diagnosis. But speech and motor delays can have various etiologies, and the child may turn out to have a learning disability or a psychiatric disorder. Whether the early intervention remediated away the autism, we'll never know." Many clinicians acknowledge that they have an incentive to apply an autism label to children who may meet some but not all criteria, because under the Individuals with Disabilities Education Act (IDEA), an autism-spectrum diagnosis ensures children both early-intervention services from birth to 3 years and an appropriate educational program once they reach school age. Most psychiatric diagnoses do not carry this guarantee.

The exposure of a young child who may not be autistic to intensive behavioral, speech, and language therapies will certainly not harm the child's development. But it is important to recognize the burden that an early-intervention regimen exacts from parents. When Alison received Matthew's diagnosis, she was told that he needed a minimum of 25 hours of intensive therapy a week—the standard recommendation for PDD NOS. For the mother of an

18-month-old child, this is a daunting prescription that requires a certain leap of faith. As *Educating Children with Autism*, a publication put out by the National Academy



She reoriented her life around an exhausting regimen of therapy and more therapy.

contact, and look at faces. Kids learn how to say words by watching faces." Once the most basic communication skills are in place, she says, more interactive "child-centered" techniques may enable children to acquire the higher order social and emotional skills that are lacking in autism, such as shared affect and reciprocity.


The push for early intervention has undoubtedly contributed to some degree of over-diagnosis of autism, but current thinking holds that it is better to act early than risk missing a crucial window of plasticity in the developing brain. As Ware points out, "There are a lot of kids who are getting the label now who are not going to end up on the spectrum. This doesn't mean they won't have anything. If a very young child's speech and motor skills are off, he is likely to have social in-

of Sciences, states clearly, "There is not a simple, direct relationship between any particular current intervention and 'recovery' from autism." Alison, like many parents, chose to pursue a combination of strategies in order to optimize the odds of success. Driven by the idea that "every moment counts," she reoriented her life around an exhausting regimen of therapy and more therapy. "You become incredibly invested in the treatment," she explains. "I know moms who even put headphones on their children while they're asleep."

The race to "recover" a child from autism can put an enormous strain on a family's emotional and financial well-being. Siblings often suffer as home life begins to revolve around the affected child. Marriages fray. Two-salary households may find their incomes halved as one parent stays home to manage the

child's extensive care. Families with the resources may spend tens of thousands of dollars on private specialists, often moving to a new city or state to have access to a premier program. But the cost of failing to intervene may be even greater. A recent article in the *Archives of Pediatric Adolescent Medicine* estimates the "lifetime per capita incremental societal cost of autism" at \$3.2 million. Lost productivity and adult care constitute the largest portion of the expense.

SOLVING THE PUZZLE OF AUTISM will require close collaboration between those in the laboratory and those on the front lines of patient care. Neurogeneticists will not be able to isolate the genes involved in disorders along the spectrum without well-identified subject populations. By recognizing the often subtle combinations of symptoms within families and by recording the differential responses of patients to various treatments, clinicians can help to inform the search for distinct pathways to autistic syndromes. As genomic and brain-imaging studies begin to provide identifying markers, doctors and therapists can better tailor interventions to individual conditions, providing families with real hope based on scientifically grounded prognoses. Janice Ware refers to this evolving relationship as "an arranged marriage with great potential" and notes optimistically that "today Ph.D. and M.D. candidates are learning about autism from both perspectives right from the start."

A quarter-century ago, a diagnosis of leukemia meant a child had less than a 50 percent chance of survival. Since then researchers have identified many types of leukemia and have developed a battery of specialized treatments, leading to a cure rate of nearly 90 percent. Many in the field of autism research are hoping their work will follow a similar path, yielding an understanding of many distinct disorders with clear remedies. Huge challenges lie ahead—from teasing out combinations of genes to determining the developmental mechanisms and the role of the environment—but the necessary teams of investigators are finally in place to begin to make the connections. 

Freelance writer Ashley Pettus '87 lives in Cambridge.

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“Flim-Flam Finance”

T.R. scrubs up one of those he called “malefactors of great wealth.”



THE STOCK MARKET plummets. Credit is tight. Bankers quake. Then J.P. Morgan organizes a consortium of financial saviors to provide cash to banks and trusts to stave off their collapse.

In the cartoon above, entitled “You

Dirty Boy!” President Theodore Roosevelt, A.B. 1880, LL.D. ’02, applies Honesty Soap to “Flim-Flam Finance.” The drawing—by Joseph Keppler, for his father’s weekly humor magazine, *Puck*—is one of 4,000 political cartoons in the vast Theodore Roosevelt Collection in the Har-

vard College Library. It appeared on September 4, 1907, when capital and confidence were both in short supply on Wall Street. Soon thereafter, Roosevelt went off to lunge after bear in the canebrakes of Louisiana, but he returned to his desk in time to appear interested in the prospectively devastating run on banks that October. The Panic of 1907 was one of the nation’s most severe financial crises ever and led ultimately to the establishment of the Federal Reserve System in 1913.

Whose faces did Keppler put in his suds? By rights, says the collection’s curator, Wallace F. Dailey, they should include that of flimflammer F. Augustus Heinze, but he was then only in his thirties. His failed scheme to corner the stock of United Copper Company touched off the panic.

One of the faces might be John D. Rockefeller’s, Dailey suggests. Judge Kenesaw Mountain Landis had fined Rockefeller’s Standard Oil more than \$29 million in August, in an anti-rebate case. (But note that Rockefeller, as good guy, was hugely helpful in October’s bailout of banks.)

“Conservatives blamed Roosevelt...for jamming regulatory levers into the American economic machine,” Edmund Morris writes in his biography *Theodore Rex*. And they doubted that he knew what he was doing. “Radiant and purified from his hunt,” writes Morris, “he patrolled the Executive Office with his hands behind his back, regaling all comers with his exploits in the canebrakes.”

“Do I look as though those Wall Street fellows were really worrying me?”

“No, Mr. President, you certainly do not.”

“I’ve got them,” he said through his teeth, “on the run.”

“It was exchanges such as this that persuaded some men that Roosevelt was fiscally retarded.”



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