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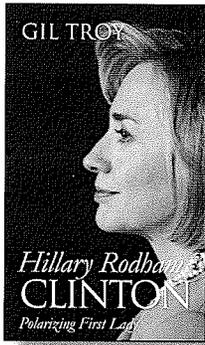


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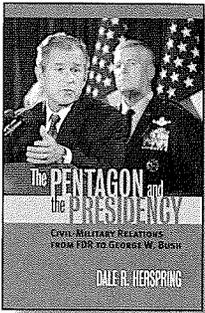
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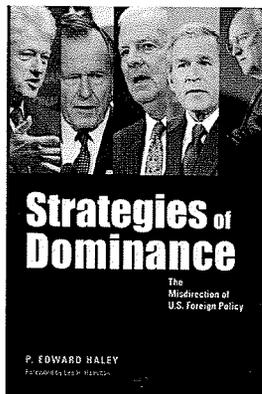
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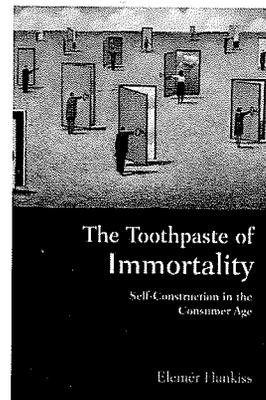
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EDITOR'S COMMENT

Compared to What?

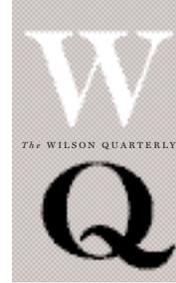
A cynic, it's said, is a disappointed romantic, so I suppose I qualify as a cynic about the American university. From the show trials of political correctness to the mundane rites of academic guildsmanship, it's been one heartbreak after another. It has long seemed to me that the American university is the General Motors of the knowledge economy, a comfortable oligopoly ripe for ruin.

But it's always necessary to ask the simple question, Compared to what? And despite the university's many imperfections, our cover articles on the global race for knowledge leave American higher education looking pretty good in relative terms—vigorous, diverse, adaptable, and productive.

Much of today's anxiety about the university concerns America's ability to produce enough engineers, scientists, and other specialists to supply the knowledge economy. Closer scrutiny makes those worries seem exaggerated, though not completely unfounded. It ought to concern us just as much that we are producing too many *mere* specialists—too many narrowly (or under-) educated graduates who are unprepared to think as expansively as true “knowledge workers” must or to participate fully in democratic life, and too many academics who are unwilling to venture beyond the confines of the academy to the larger world of the public square.

In his essay on p. 52, Michael Lind proposes that we look one step down the ladder, at the American public high school, for remedies to some of the university's shortcomings. High school is known among education specialists as the black hole of the American educational system, the place where standards collapse, test scores plummet, and young people by the thousands lose momentum—or are lost altogether. Whether it's engineers or philosophers we want, that may be the place to look for the greatest improvement. The university deserves criticism, but I suspect that the future won't be won or lost in the ivory tower itself, but on the road to it.

—STEVEN LAGERFELD



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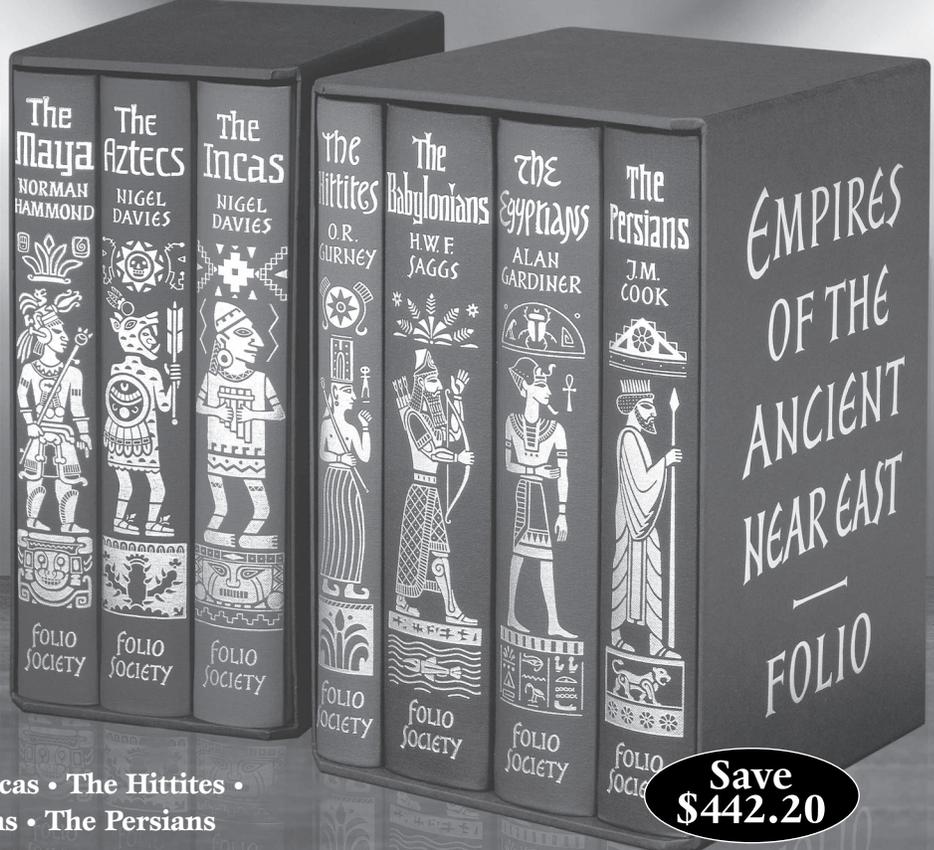
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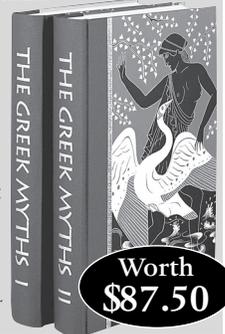
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LETTERS

IMMIGRANTS IN AMERICA

CONGRATULATIONS TO THE *WQ* FOR its fine collection of essays on immigration, "Us and Them: Immigrants in America" [Summer '06]. As a historian of rural America, I found Stephen Bloom's "The New Pioneers" particularly interesting.

It is perhaps not as extraordinary as we might think that new immigrants would be drawn to the rural Midwest. After all, the Midwest and the Great Plains were largely settled by European immigrants who were able to create relatively isolated ethnic communities that sometimes endured for three or four generations. My father was born in Stanton, Iowa, an overwhelmingly Swedish community. The Lutheran church there conducted services in Swedish until the end of World War II, at which time my grandmother—born in Iowa of immigrant parents—refused to attend any longer because services in English were "not religion." Her reaction reminds us—as we are reminded by Peter Skerry in his *WQ* essay, "Mother of Invention," and by Jon Gjerde's book *Minds of the West* (1999)—of the ambivalence of immigrants toward the United States and American culture.

Like rural Iowa, rural North Dakota is on a downward demographic trajectory, but it lacks the poultry and meatpacking plants that would draw large numbers of immigrants. It is in North

Dakota's cities where new immigrants are mainly to be found. As in Iowa, the increase in the number of Hispanics—mainly from Mexico but also from Guatemala, Colombia, El Salvador, and other Latin countries—has been especially great. Between 1990 and 2000, total numbers rose by about 60 percent. Even more impressive was the nearly 65 percent increase in the population of Asian immigrants, many of whom fill an increasing number of jobs as university instructors, physicians, and software engineers at Microsoft's Fargo facility.

North Dakota's immigrant profile is also shaped by an aggressive refugee relocation program undertaken by Lutheran Social Service. Over the past 35 years, LSS has sponsored substantial numbers of refugees from nearly two dozen countries, most of whom have been settled in the Fargo area. The result is that Fargo, a city of about 90,000, now includes about 6,000 refugees. Of these, approximately 2,200 are Bosnians, 1,000 are Vietnamese, 900 are Somalis, 900 are Sudanese, and 500 are Kurds.

The growing presence of refugees in the city has been marked by some frictions. The public school system has struggled to educate large numbers of ESL students, who speak nearly 50 separate dialects, and there have been cultural clashes, particularly over gender expectations and female equality. But

while Fargo has not yet become one of Blair Ruble's "mélange cities," it has become a much more diverse and interesting place in terms of food, dress, language, celebrations—in a word, culture. At every North Dakota State University graduation nowadays, when I hear a Sudanese graduate serenaded with enthusiastic ululation from female relatives in the crowd, I am reminded that this is not the North Dakota I came to 32 years ago.

David B. Danbom

*Author, Born in the Country: A History of Rural America (1995)
Professor of History
North Dakota State University
Fargo, N.D.*

STEPHEN BLOOM SUGGESTS THAT towns and industry could not survive without the foreign influx, which is required by the native exodus. In fact, the appearance of foreign workers in the 1970s predated the departure of native workers. Plains towns did not need those workers at that time; native-born Americans did all the jobs in meatpacking and other industries. But when the federal government quadrupled annual legal immigration and allowed illegal migration to expand even faster, some corporations had enough surplus manpower to bust unions and slash wages, benefits, working conditions, and safety, leading to wage depression throughout the Plains economy and driving away native workers. Without the immigration of foreign workers, meat [Continued on Page 6]

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[Continued from page 4] processing and other industries would still be providing middle-class lifestyles for the sons and daughters of the Plains, and the towns would be without the various social issues and costs Bloom describes.

Assimilation indeed looks formidable, considering the diminished sense of national identity of native-born Americans and the more diverse cultures of immigrants. But I am optimistic. Research suggests that if new immigration is reduced to traditional numbers for at least the next 20 years, we can expect to see an assimilation of this recent great wave of immigrants that is as successful as this country achieved with the great wave of eastern and southern Europeans before the 1920s. The fundamental problem of the present wave of immigrants is in the raw numbers of people involved.

Reducing annual immigration numbers to the traditional quarter-million level (down from nearly two million legal and illegal immigrants of recent years) would not only do wonders for the immigrants now here, but would provide great new opportunities for native-born Americans who have been left out of our current economic system (such as the 40 percent of black men who do not have a full-time job). Both “us and them” would benefit.

Roy Beck

Author, The Case Against Immigration (1996)

President, NumbersUSA

Education & Research Foundation

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INDIA'S UNCERTAIN FUTURE

WHILE MARTIN WALKER'S ASSESSMENT of India's economic trajectory [“India's Path to Greatness,” *WQ*, Sum-

mer '06] was thorough and engaging, it did not sufficiently address three crucial aspects of India's rise.

The first of these is India's environmental problem. A recent edition of *The Financial Times* analogized India's rapid urbanization to Great Britain's period of industrialization in the 19th century. The scale of dislocation that this process engenders, however, is sure to be several orders of magnitude higher in India's case, if for no other reason than its population. According to the United Nations, India is set to overtake China as the world's most populous country by 2045, with 1.5 billion people. Massive inflows of labor to its cities are polluting India's air, contaminating its water, and poisoning its fisheries. Although standard paradigms of development economics posit that economic progress can occur independently of environmental reforms, India's current condition suggests otherwise. At such point as environmental conditions interfere with individuals' ability to function normally, labor productivity and, accordingly, economic output will decline.

Second, socioeconomic disparities are likely to widen as globalization continues. While a narrow segment of India's population accrues benefits from increased trade flows and multinational penetration, hundreds of millions are sinking further into poverty. India's wealthiest states possess five times as much aggregate income as its poorest ones. Of the roughly one billion individuals across the world who sustain themselves on less than \$1 per day, 36 percent live in India. In order to fathom the severity of this problem, consider that between 1995 and 2003, approximately one million Indian farmers committed suicide.

Finally, India faces the classic pigeonholing dilemma, in that it derives much of its economic success from only one sector: information technology. While IT is no doubt a dynamic area, whose importance appears primed to grow in the decades to come, I am unable to think of any developing economy that has achieved long-term, sustainable growth on the back of one industry. India, then, must tap its people's creativity and branch into new areas if it is to succeed. Unfortunately, it cannot initiate this process without implementing some intellectual correctives: In particular, India's educational institutions have heretofore focused far more on theory than they have on application. According to a June 2005 report of the McKinsey Global Institute, only 25 percent of India's engineers can compete in today's global economy.

I hasten to note that I am neither a cynic nor a naysayer. I believe, like most, that India has great promise and wish for it to succeed. However, any statement of its potential must come alongside an acknowledgment of its peril. For while India is properly proud of its economic achievements, it will have to address the aforementioned issues if it seeks to continue its present success.

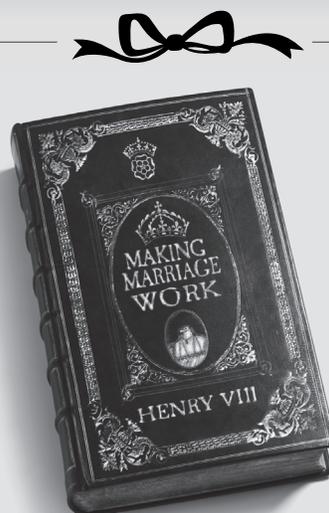
Ali Suhail Wyne

Fredericksburg, Va.

MARTIN WALKER PRESENTS A cogent analysis of India's growing strategic cooperation with the United States. India has begun to break in lasting ways from the legacies of state socialism that characterized Jawaharlal Nehru's vision of modern India in the 1940s. India in the 21st century is a nuclear nation that holds joint mili-

tary exercises with the United States and has embraced economic liberalization. Walker's analysis captures U.S. policy shifts in recognition of these changes and provides some fascinating details of George W. Bush's own interest in making such shifts. India is poised to emerge as a key player with global geo-political significance, a role it has long aspired to, even in the era when it attempted to shape global politics as leader of a nonaligned "third force." However, India's success, as Walker rightly notes, will depend as much on its own domestic policies and politics as it does on international strategic arrangements.

On the domestic front, the most pressing question at hand is how India will address its internal political challenges, which include the persistence of significant socioeconomic inequalities that pose challenges to the promised benefits of liberalization and the continued strength of Hindu nationalist organizations that contest India's long-standing secular traditions. There is no better example of these challenges than the case of the 300 million-strong middle class that scholars and public commentators alike hold up as the embodiment of India's potential greatness. In reality, this middle class represents both India's promise and its potential pitfall. India has indeed been changed by the rise of a new highly visible and politically assertive middle class that supports both the push toward economic reform and India's new strategic and geopolitical role. However, the rise of this new middle class has also sparked new conflicts, for it has grown increasingly resistant to an electoral democratic process that it views as too open to claims from subordinated social [Continued on Page 9]



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FROM THE CENTER

A HAVEN FOR THOUGHT

ONE OF MY FAVORITE COMMENTS MADE BY A departing Wilson Center scholar was that the Center is like “a university without faculty meetings.” Just as students are the driving force within colleges and universities, our scholars and fellows are the Center’s lifeblood. And just as students fill out course evaluations, we ask our departing scholars and fellows to make their own parting comments—or shots—as they leave.

The Wilson Center hosts nearly 150 scholars and fellows each year, all of whom work—in the Wilsonian tradition—at the intersection of scholarship and public policy. Fellows come for a full academic year, public-policy scholars for shorter terms. Based on their evaluations, we have learned that one of the best things the Center can offer is space. As one scholar wrote, “Without question, being away from my home institution allowed me to focus solely on my research and writing. The Center gave me a wonderful space and the resources to do nothing but think and write.” Or, as another put it, “Not to be interrupted by teaching preparation or committee meetings is a blessing.”

The productivity resulting from this space is remarkable. Our most recent sample of 22 scholars and 40 fellows gave more than 50 lectures, wrote or are writing 67 articles, and completed nine book manuscripts at the Wilson Center. And we offer a haven from more than faculty meetings. Two journalists from *The Washington Post* recently spent time at the Center working on books based on their time reporting from Iraq—Anthony Shadid, who wrote part of *Night Drives Near: Iraq’s People in the Shadow of America’s War* here, and Rajiv Chandrasekaran, who completed his recently released *Imperial Life in the Emerald City*.

Both books offer illuminating portraits of different sides of life in Iraq. Shadid draws on reporting that won him a Pulitzer Prize by giving voice to the Iraqi people, sharing their cycles of frustration, hope, and tragedy from life under Saddam Hussein through the American invasion and ensuing insurgency. Chandrasekaran takes the reader into the Green Zone—the “Emerald City”—that served as headquarters for the Coalition Provisional

Authority, providing an indispensable record of America’s misjudgments and missteps in Iraq. In both cases, the Wilson Center offered time, distance, and space for these talented journalists to produce their early drafts of history.

The Wilson Center also offers important resources. Several scholars and fellows commented that they could not have completed their work without the support of our staff; the assistance of an intern; the access to our library resources, including the Library of Congress; or the Center’s growing technological capacity. Indeed, as in so many institutions around the world, our information technology and computer support staff are among our most valuable assets.

Yet perhaps the resource heralded most frequently was the access we offer to people. Within the Center, scholars and fellows interact with one another in informal meetings and in regular Work in Progress sessions, where they hear presentations on colleagues’ projects. The Center hosts nearly 700 meetings each year, offering an enriching environment. One scholar said, “At the beginning, it was difficult for me to choose between my writing and attending these sessions.” Many draw on the resource of America’s capital city, meeting with representatives of institutions such as Congress, the State Department, the International Monetary Fund, or one of the myriad of Washington think tanks and universities. This access is particularly important for researchers accustomed to working on far-flung campuses.

From these comments, we also receive vital recommendations for improvement. For instance, the Center is now working to upgrade its technological capacity, and we are constantly striving for more diversity—in discipline, geography, race, and ethnicity. Yet even the comment on the smallest matter (that faulty printer or air conditioning vent) helps us make the Wilson Center a more perfect place, so that our scholars and fellows can work with all of the benefits we offer, and none of the interruptions that normally mark their bustling lives—be they deadlines or faculty meetings.

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[Continued from page 7] groups. Large segments of the urban middle classes have in fact supported the Hindu nationalist movement. Such conflicts, and the political choices of India's middle class, will shape the direction of the country's democracy.

One of India's greatest strengths as an emerging power lies in its longstanding ability to effectively combine political change and stability within a framework of enduring democratic institutions. It is this fact that distinguishes India from its regional neighbors and lends it a unique strategic role. The challenge for India is not whether it will remain a democracy but whether its democracy will retain its liberal secular democratic character. India's lessons hold insights for scholars and policymakers who increasingly have had to come to terms with the distinction between setting up formal electoral democracies on the one hand and sustaining liberal, secular democracies on the other.

Leela Fernandes

Author, India's New Middle Class: Democratic Politics in an Era of Economic Reform (2006)

*Department of Political Science
Rutgers University
New Brunswick, N.J.*

VIDEO GAME LESSONS

IN "PLAYING WITH OUR MINDS" [*WQ*, Summer '06], Chris Suellentrop makes a persuasive case for the ability of video games to teach players to overcome challenges through analysis, strategy, problem solving, code breaking, and innovation. But, as Suellentrop says, the educational aspect of such games is nothing new. Indeed, it could be argued that by definition a "game" is any routine

that simultaneously entertains and educates through some kind of challenge.

The real question about video games, then, is "What do they teach?" In addition, games that involve players in "virtual worlds" raise their own set of questions: What kind of world is being constructed? Do the virtues and skills inculcated in that world correspond to this one? Suellentrop concludes that because the design of video games rewards players for uncovering, accepting, and following certain "rules," these games may well be creating a generation of organizational "yes men" whose innovative skills are limited to thinking within reductionist and ultimately automatizing systems. Such games train the mind along rigidly dichotomous paths of analysis and evaluation—not surprising in a medium whose logic is grounded in strict binary gatekeeping.

But shooter games also push to radical limits the distinction between "what is important and what isn't" in narratives dependent on identifying and killing targets eminently worthy of destruction: monsters, ghouls, orcs, the undead, etc. The practice of recognizing and liquidating simplistic villains ought to raise concerns about the training implicit in such games and how it is to be applied to real-world conflict resolution and problem solving. Considering the potent power of games to train the mind, the highly polarized and dehumanizing models of conflict created in these virtual worlds may function as more than merely harmless amusement.

Moreover, these virtual worlds offer players a simple "comfort zone" of escape and control, in stark con-

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trast with the ambiguities and uncertainties of real life. Such games may build cognitive skills, but this hardly addresses the player's psychological, social, and emotional well-being. Adolescents are particularly vulnerable to the dysfunctional, escapist, and even addictive seductions of games during a time of life that presents special challenges for their emotional development and communicative ability (see Adam Cox, "Lost in Electronica," in *Psychotherapy Networker*, July–August '06).

In short, it makes as much sense to question and critique the design of video games as it does the structure of all stories we repeatedly tell ourselves through the media, asking all the while: What do our virtual worlds teach us about living in the real world? Does what we learn square

with a future in which we would like to live?

Gregory Desilet

Author, Our Faith in Evil: Melodrama and the Effects of Entertainment Violence (2006)
Longmont, Colo.

EXERTING SELF-CONTROL

IN "WHO'S IN CHARGE HERE?" [*WQ*, Summer '06], Daniel Akst ably describes the emerging awareness of self-control as a source of well-being. This awareness has been sidelined in recent decades by the widespread acceptance of "rational choice," according to which all decision makers know what they want and have the means to obtain it. Thus, by definition, choice equals well-being. Private choices are then added up by the "invisible hand" to maximize col-

lective welfare, and "consumer sovereignty" provides an adequate foundation for the good society.

However, such models falsely assume that we make good decisions consistently over time. If we need to sacrifice now for the sake of something better later, we face a "commitment problem." An innate psychological bias magnifies immediate benefits, and diminishes remote ones. But choices still have to be made. We choose by falling back on "commitment devices," routines, and institutions that tell us what to do: established life patterns like education, marriage, insurance, savings. Affluence and the flow of novelty exacerbate the predicament. Self-control is not a matter merely of individual heroics. New goods, like cigarettes or no-fault divorce, offer

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Debating the meaning of courage are Alcibiades (wearing military garb) with Socrates (seated).

than finding the truth is prized, that is not why most of us exchange arguments.)

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Dr. Zarefsky is the Owen L. Coon Professor of Argumentation and Debate and Professor of Communication Studies at Northwestern University, where he has taught for more than 30 years. The Student Government of Northwestern has elected Professor Zarefsky to the Honor Roll for Teaching 13 times.

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compelling satisfactions, but their ultimate cost is hidden. Immediate gratification does not last. It swamps appetites and induces habituation, leaving us worse off than before. Hence self-control is not merely a problem for individuals. It is a challenge for society and government too. Well-being requires us to balance present and future satisfactions. To attain it, we may need to query our faith in “rational choice” and in sovereign consumers.

Avner Offer

*Author, The Challenge of Affluence: Self-Control and Well-Being in the USA and Britain Since 1950 (2006)
Chichele Professor of Economic History
University of Oxford, England*

DANIEL AKST DESCRIBES THE “self-regulating” individual as one with the ability to maintain self-control even while society’s external “brakes” on behavior weaken and fall away. In reality, things simply do not work this way.

To begin with, most of us spend our lives working in organizations in which we answer to a superior, who in turn has a superior. If we do not do what the higher-ups tell us, we will not be around for long. But it is the family Mr. Akst most underestimates. The dynamics within our families have a great effect on our behavior. As a family therapist, I have seen this proved many times over. Akst’s views seem to fall along the fault lines Marxists colorfully call “bourgeois subjectivity.” We may think that we are “free”—and in our own minds we are—but we live within an array of very powerful structures and institutions. If artists and poets feel a need to rebel, they do not have to look far.

Dr. John D. McBride

Bettendorf, Iowa

AS DANIEL AKST WRITES, SELF-control is critical to our health and economic well-being, as well as to our success in school, work, and relationships. Moreover, he correctly notes that the number of temptations we face has been growing, while access to those temptations has become much easier. Many of the societal constraints against these behaviors have been loosened as well. What this means is that the *self* has become much more critical in self-control.

Unfortunately, there are limits on what the self is capable of doing. There is evidence that self-control is very taxing. In fact, we may have limits on how much self-control we can exert—if we exert self-control over one sphere of our lives, we very well may have less ability to exert self-control over other domains (hence, Akst’s comment on the law of conservation of self-regulation is closer to the science than he might recognize). For instance, researchers have found that the more effort individuals exert to maintain self-control during the day, the more likely they are to lose control over their drinking that evening.

As a means of dealing with our innate shortcomings, Akst discusses pre-commitment, which has the net effect of making self-control the only choice. This is certainly one way to help ensure self-restraint. Similarly, setting firm and clearly defined rules about behavior (and punishing transgressors) also has been found to increase people’s motivation to engage in self-control. Having rules imposed on us has its own problems, however, both in the loss of freedom for people who do not have self-control problems and in what is

known as the abstinence violation effect. Individuals who are trying to control themselves but have a small slip (for example, an alcoholic who has a small drink) may feel that because they have already broken the rules, they might as well continue (for example, go on a bender). Hence, a small slip can become a major relapse.

Paradoxically, the best hope for self-control may be the self. Despite our limitations, there are probably few “irresistible” impulses. Sometimes, self-control is a matter of undermining the strength of the temptation, either by learning new ways of coping or reinterpreting cravings. If we are able to improve our self-control—much as we improve our physical strength and health through exercise and practice, there is no reason why we should not be able to improve our mental strength and willpower through practice as well.

Mark Muraven

*Department of Psychology
State University of New York, Albany*

THE WQ’S NEW LOOK

I READ THE EDITORS’ RESPONSE [*WQ*, Spring ’06] to the gentleman who was disappointed in the *WQ*’s makeover. I was surprised at first when I saw the redesign, but as I read the issue, I was pleased with the changes. The whiter, less glossy pages are easier to read, and the shape is more like a book, making the magazine handier to carry with me when I am reading it during the course of my day. Thank you for the very welcome change.

Susan E. McMasters

San Antonio, Texas

FINDINGS

BRIEF NOTES OF INTEREST ON ALL TOPICS

Turn-of-the-Century Terror

Archaic anarchism

Autumn this year began in a blur of commemoration, as different groups vied to memorialize the fifth anniversary of the 9/11 attacks, and to pin down their precise implications as the first defining moment of the 21st century. But maybe there's a blur because we're all standing too close. A nearly forgotten scourge offers unexpected parallels to today's pervasive terrorist threat, argues Geoffrey Blainey, historian emeritus at the University of Melbourne, in *A Short History of the Twentieth Century* (Ivan R. Dee). His parallel: the anarchists who menaced European monarchies at the dawn of the 20th century.

Monarchy was then at its height as a governing system. Europe and Asia had mostly kings; Russia, tsars; India, an (absentee) empress. But anarchism presented monarchy with an implacable, frightening enemy. In the space of a decade—and well before

a terrorist's bullet touched off World War I—anarchists killed Empress Elisabeth of Austria (1898), King Humbert of Italy (1900), and King Carlos of Portugal and his crown prince (1908). Other victims included Spanish premier Canovas del Castillo (1897), French president Marie-François Carnot (1894), and U.S. president William McKinley (1901).

“As assassins had to be within close range, they had virtually no chance of escaping: Death was their penalty,” Blainey writes. “They were the equivalent of suicide bombers.” But terrorism ebbs and flows, and “when a new wave of terrorism hit



In 1894, an Italian anarchist stabbed French president Marie-François Carnot to death, as depicted in this *Le Petit Journal* engraving.

Europe and the Middle East in the second half of the century, the anarchists, with their revolvers and knives, had already slipped from public memory.”

Speak With Forked Tongue, Memory

A unified theory of Günter Grass

Journalists, politicians, and literati in Germany and elsewhere piled on gleefully when the famed novelist and national moralist Günter Grass admitted this summer that he, so insistent that others be completely honest about their pasts, had concealed his youthful service in the Nazis' elite combat unit, the Waffen SS. His detractors might have spied the snake in the grass sooner if they'd simply kept up their subscriptions to the academic journal *German Life and Letters*, which prophetically explained the whole thing (albeit in rather murky language) in April.

Its scholarly authors report on the “frenzied memory work” that Germans have been doing since reunification, when different groups found themselves saddled with wildly conflicting versions of recent German history. To the East-West divide soon were added left-right and generational spats, as younger Germans tired of their elders' obsessive *Ver-*

gangenheitsbewältigung, or striving to come to terms with the past. Seeking to make sense of the racket, the editors argue that Germans today are embroiled in “memory contests,” an inevitability since any memory is by nature uncertain and incomplete. Referring extensively to the works of the pre-confession Grass himself, one scholar speculates that “subconscious memory imprints of National Socialism . . . [engender] displaced and distorted memories across the generations,” while another argues that “heterogeneous” memories (of German guilt side by side with German suffering, for instance) produce trauma and repression.

Indeed, Grass, confessing at age 78, likened his suddenly inconsistent war memories to “peeling the onion” (the title of his newly published autobiography), and insisted that those memories remain vague to him, as do his motives for finally revealing them. Others have had plenty to say about those motives, and most of it isn’t very charitable. The academics are kinder, and more optimistic: The University of Konstanz’s Aleida Assmann, for instance, argues that memory contests “can only contribute to a greater diversification, energy, and complexity of German memory.” Assmann sees this as healthy, though she may not have anticipated just how much “diversification” of memory could occur within a single person.

Middle-Oxford

Tolkien’s word-hoard

Those looking for more lighthearted memories of the last century may

recall that the British public, asked to vote for the century’s greatest book, bypassed works by the likes of Virginia Woolf and Joseph Conrad to choose J. R. R. Tolkien’s beloved *Lord of the Rings* trilogy. Tolkien is equally famous (at least among fans) for the entire languages he invented for Elves, Dwarves, and other creatures, complete with elaborate etymologies tracing their imaginary relationships to Old English, Icelandic, and related tongues, of which he was a lifelong scholar. Few realize that he also worked professionally as an etymologist during a two-year stint helping to write the *Oxford English Dictionary*—a period, he said later, when he learned more than in any other comparable time in his life.

Fresh from the Great War, with a young family to support, Tolkien joined the *OED* staff in 1919 and was assigned a tricky stretch of the letter *W*. Drawing on his expertise in medieval Germanic languages, Tolkien plunged in, researching the complicated derivations of such words as *wan*, *warm*, *waist*, *waggle*, and *wallop*. Three present-day editors of the *OED*—Peter Gilliver, Jeremy Marshall, and Edmund Weiner—have compiled this early work in *The Ring of Words: Tolkien and the “Oxford English Dictionary”* (Oxford Univ. Press). They’ve added their own analysis of some of Tolkien’s later coinages, adaptations, and borrowings, ranging from *ent* and *attercop* to *confusticate* and *eleventy-one*.

Tolkien’s philological labors came full circle as later editions of the *OED* began to cite many of his own coinages, including *mithril*—“the first

Elvish word to have entered the *Oxford English Dictionary*.” (A jealous W. H. Auden said one of his dearest ambitions was to be cited in the *OED* as the coiner of a word.) The longest *OED* entry for a Tolkien coinage—and, to the authors, the one enduring mystery—is for the word *hobbit* itself, for which Tolkien contributed an elaborate imaginary derivation while admitting that he thought he had made the word up but wasn’t quite sure. The authors note that *hobbit* has since taken on a host of other meanings, most recently as the popular term for an apparent species of diminutive humanoids whose fossils were discovered on the Indonesian island of Flores.

Virtual Elephants

Not exactly on parade

Zoo animals don’t engage in politics, as far as we know, but the people who look after them certainly do. In *The Politics of Zoos: Exotic Animals and Their Protectors* (Northern Illinois Univ. Press), political scientists Jess Donahue and Erik Trump describe four decades of behind-the-scenes snarling and biting between two very different species of animal “protector.” On one side of the fence are zoo professionals—conservation scientists, veterinarians, and the like—who, ever since widespread habitat destruction began threatening some species with extinction in the 1960s, have seen zoos as the Noah’s Ark that can preserve species through care and captive breeding. On the other are animal rights activists, who seek to “save” individual animals from zoos entirely.

Elephants have become a “mar-

queer species" in this fight. Animal-rights activists trumpet the creatures' need for the bigger spaces and warmer climates of privately run elephant sanctuaries. Zoo people get equally thunderous about the great affection citizens feel for their local elephants. Some animal-rights groups want an all-out ban on elephants in zoos, while others have made the fate of particular local elephants an issue in municipal elections.

Alarmed by this encroachment on their traditional territory, and fearing that they could gradually lose the right to display their "charismatic megafauna," zoos have fought back. The preserves, zoo partisans argue, would become sanctuaries only for elitism, with managers and rich donors still getting to see the pachyderms up close, while selling remote

video access to the hoi polloi.

This campaign has been quite successful, demonstrating that, for the American political animal at least, populism is still an easier sell than conservation. The proof's in the petting: Attendance levels at the nation's zoos show that, while Americans are concerned for animals' welfare, they want to see their elephants live—not on a screen, no matter the size.

Keystroke Diplomacy

Beats being there

People may want face time with their elephants, but when they try interacting with human beings different from themselves, virtual is better, argue two Israel-based researchers in *The Journal of Computer-Mediated Communica-*

tion (April 2006). Revisiting the "contact hypothesis"—the hoary idea that personal contact between individuals of different groups is the best way to reduce conflict—Katelyn Y. A. McKenna and Yair Amichai-Hamburger argue that online meetings score higher than real ones on every measure that's thought to contribute to fruitful interaction: apparent equality, absence of social status signifiers such as clothes or jewelry, intimacy, and voluntary participation. "The Internet," they conclude, "may be said to provide opportunities for a successful contact that are superior to those provided in a traditional face-to-face meeting." That could be, though you wonder if they've wandered into the blogosphere—or tried online dating.

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The Revenge of the Shia

Every increase in the violence between Sunni and Shia Muslims in Iraq raises the threat of a wider sectarian upheaval that could vault Iran to dominance in the Middle East.

BY MARTIN WALKER

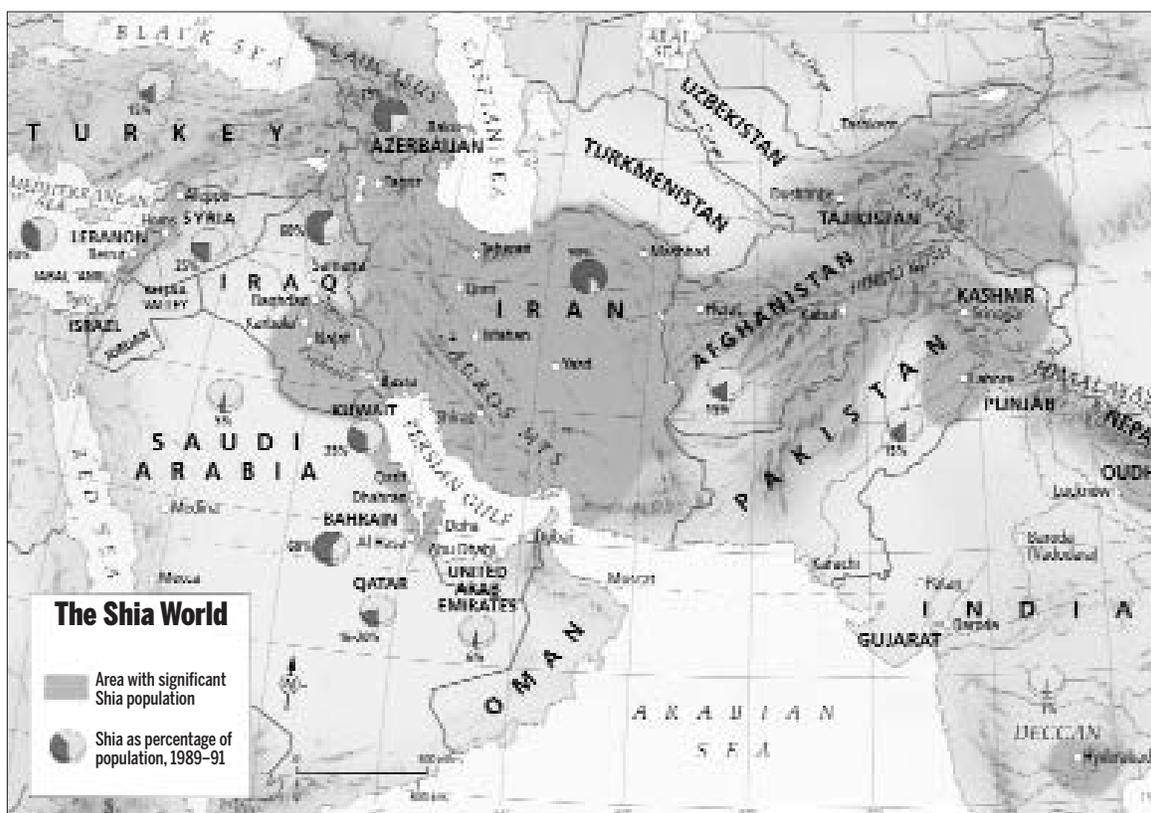
IN DECEMBER 2004, AS THE UNITED NATIONS Security Council began to grapple with the challenge of Iran's nuclear ambitions and as Iraq started its slow topple into civil war, one of the closest and most trusted American allies in the Middle East began to warn publicly of the emergence of a "Shia crescent" in the region. Jordan's King Abdullah, a Sunni who claims direct descent from the Prophet Muhammad, sounded the alarm that a vast swath of the region, stretching from the Mediterranean Sea to the Indian Ocean and from the oil-rich Caspian Sea to the even richer Persian Gulf, was coming under the sway of the Shia branch of Islam. More ominously, he implied that this looming Shia empire would take its direction from Tehran. President Hosni Mubarak of Egypt echoed this warning last year when he said, during an interview on al-Arabiya television, "Most of the Shias are loyal to Iran, and not to the countries they are living in."

Abdullah and Mubarak, two of the most prominent Sunni leaders, have, along with senior Saudi officials,

evoked the specter of a new Middle East divided along sectarian lines. It would set the long-downtrodden Shia against their traditional Sunni masters, rulers, and landlords. If the first battlefield was Iraq, the two leaders suggested, the next would be the oil-endowed regions of the Persian Gulf, southern Iraq, and Azerbaijan, where Shia happen to live. In this scenario, the ayatollahs of Shiite Iran could then secure control of the Iraqi, Saudi, and Caspian oil and gas fields by placing them under the protection of their own nuclear arsenal, thus establishing the first Islamic state to achieve great-power status since the collapse of the Ottoman Empire in 1918.

A glance at the map suggests that this scenario is at least plausible. Although they are a minority of some 150 million in a region of almost 400 million and the larger Islamic community of 1.3 billion, the Shia dominate the region to the east of the Suez Canal. They are a strong majority in Iran, Iraq, Azerbaijan, Yemen, and Bahrain. The Shia now form the largest single Islamic community in Lebanon and cluster along the Persian Gulf coast of Saudi Arabia. There are substantial Shia minorities in Kuwait (35 percent), Qatar (15–20 percent), the United Arab Emirates (six

MARTIN WALKER, editor emeritus of United Press International and a senior scholar at the Wilson Center, is the author of several nonfiction and fiction books, including *The Caves of Périgord* (2002).



Source: <http://www.morainevalley.edu/ctf/MiddleEast/photoGallery.htm>

percent), Pakistan (15 percent), and Afghanistan (15 percent). Since the Alawites, who provide the current ruling dynasty of Syria, are an offshoot of the Shia sect, Jordan's King Abdullah is only slightly stretching the truth to talk of a Shia crescent running from Tehran through Baghdad to Beirut. From his vantage point in Amman, Abdullah's little kingdom appears encircled, and as he looks eastward, he sees Shia majorities all the way to Pakistan. Watching from Riyadh, the Saudi monarchy may feel secure in the numerical dominance of Sunnis in the kingdom, but its restive Shia subjects are concentrated in the parts of the country where the oil fields lie.

For the first time in centuries, the Shia of the Arab world can taste the prospect of power, while the Sunni are experiencing the bitterness of being overthrown. The Shia of Iraq, long suppressed by the Sunni elite, who cooperated with the Ottoman and British

empires, are now in a position to use their numerical majority to dominate the country's politics. The Shia triumph in Iraq is constrained only by the Sunni resistance, which is fast approaching the dimensions of a full-scale civil war. At the same time, the fierce response of the predominantly Shia Hezbollah of Lebanon to the Israeli attacks of July 2006 has combined with the Shia's numbers (slightly over 40 percent of Lebanon's population of four million) and their presence in the government to give them a dominant voice in that Mediterranean state and frontline status in the Arab confrontation with Israel.

Nowhere has the Shia resurgence aroused more opposition than among Sunnis in Iraq, much of it deliberately incited by Al Qaeda's late leader in that country, the Jordanian-born Abu Musab al-Zarqawi. Perhaps best known in the West for his participation in the videotaped beheadings of Western hostages,

Zarqawi set a strategic goal of making Iraq ungovernable by unleashing a wave of sectarian killings designed to foment civil war between Sunni and Shia. One early captured message that he tried to smuggle out to Al Qaeda's leaders, Osama bin Laden and Ayman al-Zawahiri, suggested that such a course was his only hope of success, that he had to provoke the Sunnis by dragging the Shia "into the arena of sectarian war." In one of his first attacks, in August 2003, he sent his father-in-law on a suicide mission to the sacred Shia site of the Imam Ali mosque. Nearly a hundred worshipers died, including Zarqawi's target, Ayatollah Muhammad Bakr al-Hakim, widely seen as a moderate and unifying presence.

In a four-hour anti-Shia sermon, released on the Internet a week before his death in a U.S. bombing raid in June but apparently recorded two months earlier, Zarqawi ran through a list of Shia "betrayals" and cited a number of venomously anti-Shia tracts written by scholars in the fundamentalist Wahhabi branch of Sunni Islam. He declared that there would be no "total victory" over the Jews and Christians without a "total annihilation" of the Shia, whom he called the secret agents of Islam's enemies. "If you can't find any Christians or Jews to kill, vent your wrath against the next available Shia," Zarqawi said. He claimed that his fellow terrorists, the Hezbollah in Lebanon, were only pretending to oppose Israel, while in reality their mission was to protect Israel's northern border. Zarqawi concluded with a formal declaration of war on the Iraqi Shia leader Moqtada al-Sadr and his "bastards." (Large parts of this bizarre and possibly unhinged outburst focused on defending the chastity of the Prophet's wife Ayesha against Shia slurs, on discussing whether the Ayatollah Khomeini was a pedophile, and on assailing "wicked" Shia clerics who purportedly defended unusual sexual positions.)

The Shia-Sunni schism, which emerged out of a dynastic struggle following the death of the Prophet in AD 632, has all the bitterness that centuries of theological and earthly conflict can create, but Zarqawi's attacks on the Shia were so extreme that the established Al Qaeda leaders tried to rein him in. Zawahiri chided him in a letter last year, swiftly published on the Internet, that asked, "Why were there attacks on ordinary Shia? . . . Can the mujahideen kill all the Shia

in Iraq? Has any Islamic state in history ever tried that?" Zawahiri also warned that the hideous videotapes of beheadings should stop. "We can kill the captives by bullet," he urged. (Zarqawi's instruction to "kill all the Shia, everywhere" has been regarded as so extraordinary that some Shia refuse to believe that this taped sermon is genuine. General Mohammad Baqer Zolqadr, now Deputy Interior Minister for Security Affairs and one of the most powerful men in Iran, claimed that he did not believe Zarqawi really existed, and that such extremists were Zionist agents sent to divide Muslims.)

It is now a fairly semantic question whether to define the bloody sectarian slaughter in Iraq, bringing 100 civilian deaths a day in July, as a civil war or something marginally less awful. But since the deliberate attack on the main Shia shrine in Samarra this past February, the sectarian killings have intensified, with Shia militia now said to be as ruthless and murderous as Zarqawi's followers. Along with the kidnappings and general lawlessness, the sabotage and economic disruption, the killing has overshadowed two apparently successful Iraqi elections, soured the American electorate, and undermined the Bush administration's attempt to turn Iraq into a showcase for its wider strategy of encouraging democracy in the Middle East. That policy was already suffering from the warnings given by America's traditional allies in Jordan, Egypt, and Saudi Arabia (the same leaders who were warning of the dangers of the Shia crescent) that the policy of democracy and elections was likely to benefit America's Islamist enemies rather than its friends.

The grisly scenario that lay behind the concerns of the Egyptian, Jordanian, and Saudi leaders is that a Sunni-Shia civil war in Iraq could erupt into a wider Sunni-Shia war across the Arab world, a larger and later version of the Iran-Iraq War that lasted for most of the 1980s and bled, exhausted, and impoverished both countries. The most callous practitioner of realpolitik might see this as preferable to a war between Islam and the West in some lethal rendition of Samuel Huntington's famous "clash of civilizations." Such a conflict certainly cannot be ruled out, but the consequences for the region and the world's oil supply, and

even the potential for global suicide if Iran obtains nuclear weapons (or if Pakistan joins the fray), are almost too hideous to contemplate.

There is, however, good reason to question the forebodings of Sunni leaders. After all, Shia solidarity did not prevent the Shia conscripts of southern Iraq from fighting stoutly against their Shia fellows on the other side in the Iran-Iraq War. And alongside the sectarian slaughter between Sunni and Shia in today's Iraq is being waged another vicious battle between the rival Shia militias of Moqtada al-Sadr's Mahdi Army and the Badr Brigade. In Saudi Arabia, despite the Wahhabi clerics and their claims of Shia heresy, the monarchy has chosen to conciliate its Shia minority, easing some of the restrictions it had placed upon them. The pan-Islamic solidarity toward Lebanon in recent months also suggests that the Shia and Sunni masses are more easily rallied against their common Israeli enemy than against one another. Nonetheless, a power struggle between the entrenched Sunni establishment and the rising and newly confident force of the long-underprivileged Shia is under way, and extremists on both sides seem determined to pursue it bloodily.

When President Bush met his envoy, L. Paul Bremer, at the U.S. air base in Qatar in June 2003, less than two months after the fall of Baghdad, the difficulties of bringing the two sides together seemed foremost in his mind. According to Bremer's memoir, *My Year in Iraq* (2006), Bush asked if the American attempt to bring representative democracy to Iraq would succeed. "Will they be able to run a free country?" the president asked. "Some of the Sunni leaders in the region doubt it. They say, 'All Shia are liars.' What's your impression?"

"Well, I don't agree," Bremer replied. "I've already met a number of honest moderate Shia, and I'm confident we can deal with them."

Three years later, in June of this year, the same problem dominated conversation, as Bush invited to the White House one of the best-known Arab academics and

intellectuals, Fouad Ajami, a professor at the School of Advanced International Studies of Johns Hopkins University. Ajami tried to counsel the president that the Shia resurgence was a historical process that would prove difficult and probably could not be stopped. In a subsequent meeting at the Council on Foreign Relations, Ajami said, "The idea that the Shia will make their claim on political power in the affairs of the Arab world and that it will be peaceful is not really tenable. It will be a very, very contested political game. And we have to be willing to accept this. And we must not be scared off by what the Jordanians and the Egyptians and oth-

THE GRISLY SCENARIO is that a Sunni-Shia civil war in Iraq could erupt into a wider Sunni-Shia war across the Arab world.

ers are telling us. . . . We should not be frightened of radical Shiism; we should understand these things on their own terms. We should not jump when someone says to us 'radical Shiism,' for one interesting reason—right?—9/11. The 19 who came our way were not Shia. They were good Sunni boys, and we should remind the Arab regimes when they try to frighten us out of our skins that in fact we also have another menace, which is radical Sunnism."

Ajami made a further point about the kind of social and political change the Shia resurgence could bring to the Arab and Islamic worlds, citing a Kuwaiti Shia friend who had suggested, "If you take Egypt out of the Arab world—and it's a kind of outlier country, historically, culturally, in every way—there is no Sunni majority in the Arab world. . . . The region becomes a group—a multiplicity of communities and sects, and the place of the Shia in that landscape truly changes. So the region is being redrawn."

King Abdullah of Jordan, Egypt's Mubarak, and the Saudi monarchy all have their own very good reasons to protect their current positions in the Arab world and to be alarmed at the changes the new Shia role could bring. The question is whether their anxi-

ety is shared by their own people or simply reflects concern that the empowerment of the Shia implies the empowerment of Iran to the detriment of the Sunni Arab establishment. There is no clear answer. The history of Sunni-Shia and Arab-Persian tensions points one way; but the rallying of Sunni public opinion behind the Shia resistance of southern Lebanon this past summer and the hailing of the Hezbollah leader Sheikh Hassan Nasrallah as the new Saladin, the new pan-Arab hero, point to a different future, in which Arab and Islamic solidarity against Israel will trump the traditional Sunni-Shia enmities. The only safe conclusion is that the political situation is too dynamic and the ethnic and sectarian politics of the region are moving too fast for any easy prediction.

Another regional specialist who is consulted by the Bush administration, Vali Nasr of the Council on Foreign Relations, has sketched out a scenario for an inter-Islamic clash of civilizations. Everything hinges on the ability of the United States and Iran to normalize relations and work together to manage Shia-Sunni tensions. "If Washington and Tehran are unable to find common ground—and the constitutional negotiations [in Iraq] fail—the consequences would be dire," Nasr warns. "At best, Iraq would go into convulsions; at worst, it would descend into full-fledged civil war. And if Iraq were to collapse, its fate would most likely be decided by a regional war. Iran, Turkey, and Iraq's Arab neighbors would likely enter the fray to protect their interests and scramble for the scraps of Iraq. The major front would be essentially the same as that during the Iran-Iraq War, only 200 miles farther to the west: It would follow the line, running through Baghdad, that separates the predominantly Shiite regions of Iraq from the predominantly Sunni ones."

But look at the issue from a perspective that considers the catalytic role that has been played by the two American interventions in Iraq, in the wars of President Bush the elder in 1991 and of his son 12 years later. From the point of view of the Kurds, the 1991 war became—after Saddam Hussein's postwar repression and the mass flight of refugees into Turkey—a kind of liberation, under the protection of the Anglo-American no-fly zone. The Kurds of northern Iraq enjoyed a regional autonomy that has been consolidated by the war of 2003. And for the Shia, despite the

dreadful losses of Saddam Hussein's repression after 1991 and the deaths by sectarian strife in the last three years, the American interventions have brought about an unprecedented era of empowerment and liberation. This is unlikely to produce the kind of gratitude that would see statues of the two Bushes erected in Kurdish Suleimaniya or in the Shia city of Basra, but the effect of this double liberation on the politics of Iraq and of the region has been revolutionary. The balance of power between Sunni and Shia, and (because of the empowerment of Iran through the departure of its old enemy Saddam Hussein and of the Sunni-dominated Iraq that he represented) between Arab and Persian, has been fundamentally shifted.

This vast political change coincides with the dramatic socioeconomic and intellectual changes that are sweeping the Islamic world, triggered by some of the globe's highest birthrates, by the surging fluctuations in oil prices (and the resulting instability of state budgets, pensions, and employment), and by the impact of globalization, which has brought unprecedented numbers of non-Muslims to live and work in the region. To this must be added the groundswell of demands by Arab women and civil society, by the newly educated professional class, and by Arab democrats for human rights and a greater say in public life; the intense theological debates between advocates of the puritan and the more relaxed forms of Islam; and the incalculable impact of the outspoken and less censored new satellite television media.

In a sense, the Islamic world is undergoing almost simultaneously its Renaissance, its Reformation, and its Enlightenment, and the Shia are living their version of the civil rights movement, all while reeling from the impact of economic and media revolutions. Considered in this light, the emergence of Al Qaeda might be seen as a particularly virulent symptom of this tumultuous Arab transformation and as a response not just to the perceived sins of the West, but also, in the case of Zarqawi, as an extreme Sunni reaction to the Shia resurgence. Of all the tectonic shifts now jarring the Middle East, the rise of the long-subdued Shia promises to be the most potent, and potentially the most destructive. ■

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Mao Now

China's transformation in the 30 years since the death of Mao Zedong has been breathtaking. But it will not be complete until the nation comes to terms with Mao's complex legacy.

BY ROSS TERRILL

IN THE EARLY 1990S, A STORY CIRCULATED among Chinese taxi drivers about an eight-car traffic accident in Guangzhou that resulted in injuries to seven of the drivers involved; the eighth, unscathed, had a Mao portrait attached to his windshield as a talisman. The story fueled Mao fever (*Mao re*) in China, with shopkeepers offering busts of Mao that glowed in the dark and alarm clocks with Red Guards waving Mao's little red book at each tick of the clock. Mao temples appeared in some villages, with a serene portrait of the Chairman on the altar. Transmuted uses of Mao continue today. Nightclub singers in Beijing croon songs that cite Mao's words. Youths dine in "Cultural Revolution-style" cafés off rough-hewn tables with Mao quotations on the wall, eating basic peasant fare as they answer their cell phones and chat about love or the stock market.

This nonpolitical treatment of Mao Zedong (1893–1976) is an escape that fits a Chinese tradition. When floods hit the Yangzi valley and farmers clutch Mao memorabilia to ward off the rushing waters, it is reminiscent of Chinese Buddhists over the centuries clutching images or statues of Guan Yin, the goddess of mercy, to keep them safe and make them prosperous.

ROSS TERRILL is the author of *Mao: A Biography* (1999), currently a best seller in a Chinese-language edition in China, *Madame Mao* (1999), and *China in Our Time* (1992), among other books. His most recent book is *The New Chinese Empire*, winner of the 2004 Los Angeles Times Book Prize. He is an associate in research at Harvard's Fairbank Center for East Asian Research.

Following the eclectic nature of Chinese popular beliefs, Mao is added to the panoply of faith.

But where is Mao the totalitarian? Each of the major nations that experienced an authoritarian regime in the 20th century emerged in its own way from the trauma. Japan, Germany, Italy, even Russia departed politically from systems that brought massive war and repression. China, still ruled by a communist party, has been ambiguous about Mao. Although Mao's portrait and tomb dominate Tiananmen Square in the heart of Beijing, Mao himself—unlike Stalin in Russia or Hitler in Germany—has floated benignly into a nether zone as if somehow he was not a political figure at all, let alone the architect of China's communist state.

The cab drivers, farmers, pop singers, and shopkeepers are really only following the lead of the Chinese Communist Party, which does not quite know how to handle Mao's legacy. New history textbooks approved for initial use in Shanghai have largely brushed Mao out of China's 20th-century story. China has abandoned Mao's policies but not faced the structural and philosophical issues involved in Maoism—and probably won't until the Party's monopoly on political power comes to an end. Yet unless China gets the Mao story correct, it may not have a happy political future.

The moral compass of the Mao era has gone, unregretted. But moneymaking, national glory, and a veil over the past in the name of "good feelings" are not enough to replace it. Can a society that lived by the ideas of Confu-

cianism for two millennia, and later by Mao's political athleticism, be content with amnesia about the Mao era and the absence of a believed public philosophy?

In a recent biography, *Mao: The Unknown Story* (2006), Jung Chang and Jon Halliday pile up evidence that Mao was a monster to eclipse Stalin and probably Hitler and Lenin as well. "Absolute selfishness and irresponsibility lay at the heart of Mao's outlook" from his teens to his dotage, say the authors. In a second influential volume, *The Private Life of Chairman Mao* (1995), Mao's physician Li Zhisui portrays the Chairman as exceedingly selfish, jealous, and promiscuous. Soon after his book came out, Dr. Li came to speak at Harvard, and I showed him around the campus. "Three words did not exist for Mao," the gentle doctor remarked as we strolled. "Regret, love, mercy." These two books—both written from outside China—explain the Mao era in China as essentially the consequence of having an evil man at the helm.

Certainly Mao's rule was destructive. Tens of millions of Chinese died in the forced collectivization of the Great Leap Forward of 1958–59, victims of Mao's willful utopianism and cruelty. Millions more died, and tens of millions had their lives ruined, during the Cultural Revolution of the 1960s. Practicing brinkmanship toward India, Taiwan, and the Soviet Union, Mao declared that a loss of hundreds of millions of Chinese in a nuclear war would be a setback China could readily digest.

Yet "bad man" does not adequately sum up Mao and his legacy. To believe so would be to embrace the moral absolutism of communism itself, with its quick verdicts ("enemy of the people," "hero of the proletariat"), and to repeat the manipulations of official Chinese imperial history, in which



Mao's image is seen everywhere in China—silk-screened on T-shirts, printed on clock faces, and, in this case, molded in solid gold—but discussion of his 27-year reign and its legacy is rare.

even a flood or earthquake "proved" the evil character of the emperor. Were the "good men" around bad man Mao blind to his failings for so many decades? Were the hundreds of millions of Chinese who bowed before Mao's portrait and wept at the sight of him out of their minds?

Mao made history; at the same time, history made Mao. In addition to looking at Mao's failings as a human being, we must look at the structures and pressures that turned whim into tyranny. At the ideas Mao wielded. At the evaporation—in Mao's case, as in that of several other dictators—of youthful idealism and exactitude. Above all, at the seduction of a "freedom"

bestowed from above by a party-state that believed it knew what was best for the citizenry.

In a letter he wrote in 1915, Mao said, “Jesus was dismembered for speaking out. . . . He who speaks out does not necessarily transgress, and even if he does transgress, this is but a small matter to a wise man.” Immediately we face a puzzle: Young Mao was an ardent individualist. In his years at the teachers’ training college he attended in Changsha, the capital of Hunan Province, Mao’s credo became the self-realization of the individual. “Wherever there is repression of the individual,” he wrote in the margin of a translation of Friedrich Paulsen’s *System of Ethics* (1889), “wherever there are acts contrary to the nature of the individual, there can be no greater crime.” His first published newspaper work, written in 1919, was a plea for the liberation of women, a passionate nine-part commentary on the suicide of a young woman in Changsha moments before her arranged marriage.

Mao at 24 saw the Russian Revolution of 1917 as an outbreak of freedom for the individual that lit the way for China. A young female friend objected, “It’s all very well to say establish communism, but lots of heads are going to fall.” Mao, who had recently read Marx and Engel’s *Communist Manifesto*, retorted, “Heads will fall, heads will be chopped off, of course. But just think how good communism is! The state won’t bother us anymore, you women will be free, marriage problems won’t plague you anymore.” Although these words hint at Mao’s later callousness about human life, it is striking that he viewed Lenin’s revolution in terms of the “marriage problems” of individual women.

The anarchism of Peter Kropotkin, the author of *Mutual Aid* (1902), had a strong hold on Mao until he was nearly 30. A great virtue of the Russian anarchist, Mao felt, was that “he begins by understanding the common people.” Anarchism in Mao’s perception was linked with Prometheanism; Friedrich Nietzsche was also among his early enthusiasms. The Promethean individual would prepare for his heroic role by taking cold baths, running up mountains, and studying books in the noisiest possible places. This prefigures the fascism to come in Mao’s Cultural Revolution, just as fascism in Europe owed a debt to Nietzsche. At the time, however, Mao’s individualism was nurtured by the influence of a Chinese professor at Chang-

sha who had imbibed the idealist liberalism of T. H. Green, the late-19th-century British philosopher.

Mao was a rebel before becoming a communist. The psychological root of his rebelliousness was hostility to his father, and, by extension, to other authority figures. The political root was dismay at China’s weakness and disarray in the face of foreign encroachment, shared by most informed Chinese of the period. Mao’s chief use for the steeled individual was as a fighter for justice and China’s salvation. “The principal aim of physical education,” he wrote in 1917 in *New Youth* magazine, “is military heroism.” The authoritarian strain in Mao’s individualism was already present.

Eventually, Mao’s respect for individual freedom collapsed. There were four causes. One was the powerful current of nationalism in early-20th-century China; the cry to rescue the nation eclipsed the cry for the self-realization of the individual. A second was the large role of war in China from the 1920s to the ’40s. Pervasive violence made political debate a luxury and favored repression. A third was Mao’s embrace of Marxist ideas of class, central economic planning, and communist party organization. Fourth was the hangover in Mao’s mind and Chinese society generally of a paternalistic imperial mentality.

In the end, Mao Zedong, facilitated by Stalin, put the population of the world’s largest nation under a regimen that combined Leninism, the paternalism of early Chinese sage-rulers, and, by the 1960s, a hysteria and military romanticism that amounted to fascism Chinese-style.

The imperative of national salvation was the first factor working against Mao’s attraction to freedom. Mao was mildly attracted to a movement comparable in spirit to Europe’s Enlightenment that sprang into existence in China in 1919. Named May Fourth (after the date of an initial student demonstration), it aimed at modernizing China by embracing quasi-Western ideas of individualism, democracy, and science. Liberated individuals would rescue China. But May Fourth soon split in two, a left wing jumping to Marxist collectivism and a right wing sticking with individualism. Leftists, including the 27-year-old Mao, founded the Chinese Communist Party (CCP) in 1921.

Bolshevism helped Mao be progressive and anti-Western at the same time. Opposition to the West was necessary to many young Chinese leftists, despite the appeal of Western ideas, because of British and other foreign bullying of China since the Opium War of 1839–42. From

Lenin, Mao learned that social justice and national salvation could come as one package. Leninism—and to a lesser degree Marxism—joined anarchism, nationalism, and individualism in the ragbag of Mao's political ideas. It was Lenin who showed Mao his road to power. Anti-imperialism was going to be for Mao, as it was for Lenin, the framework for revolution. But this anti-imperialist—soon anti-Japanese—nationalism that Mao injected into the Chinese Revolution negated individual freedom.

In the 1930s, Mao argued to the semicriminal secret society Gelaohui (Elder Brother Club) that its principles and the CCP's were "quite close—especially as regards our enemies and the road to salvation." Of course, the threat of enemies was the central point. In his appeal to non-Han "minority" peoples during the Long March of 1935–36, when Mao emerged as the CCP's top leader as the Communists retreated before Chiang Kai-shek's Nationalist forces, Mao challenged Mongolians to "preserve the glory of the era of Genghis Khan" by cooperating with the Communists. Pressing the Muslims to support him, he told them that this would ensure the "national revival of the Turks." Of course, Chinese nationalism had turned Mao into a trickster.

After the wars with Japan and Chiang Kai-shek were over, there would be no common cause with the Gelaohui, no freedom for the Mongolians or the Muslims of Xinjiang.

The violence that continually rippled through China was another force militating against individual freedom. After the death in 1925 of Sun Yat-sen, a leader in the overthrow of the Manchu dynasty in 1911 and a founder of the Nationalist movement, the gun was prominent in Chinese public life. Sun's wavering leadership gave way to warlordism, a violent rupture of the tenuous coalition of Nationalists and Communists in 1927, and growing incursions by Japan beginning in 1931. Guns were to freedom as a cat is to mice. From the time Mao used force to confiscate the holdings of Hunan landowners in 1925, when he was just one of many CCP leaders, his political life cannot be understood aside from violence, both the wars he waged and those waged against him. As he sought to organize

farmers in a remote mountain region, he remarked, "The struggle in the border area is exclusively military. The Party and the masses have to be placed on a war footing." Mao spoke of "criticizing the Nationalists by means of a machine gun."

A third enemy of freedom was the class, organizational, and economic theory Mao drew from Marx and Lenin. Here Mao's story is similar to that of Stalin, Castro, and others. Class theory has intrinsic distortions; people often do not act as members of an economic class. Class labeling became especially inimical to freedom when Mao was forced to rely on farmers rather than workers as the key class in China's revolution. Anyone who pointed out this departure from Marx's theory of proletarian revolution was stamped out as a renegade.

Eventually, class became little more than a convenient way to demarcate friends and enemies of the moment.

FROM THE TIME MAO used force to confiscate the holdings of Hunan landholders in 1925, his political life cannot be understood aside from violence.

Hence, longtime colleague and expected successor Liu Shaoqi was "discovered" by Mao in the 1960s to be a "bourgeois" who had "sneaked into the Party." Never mind that Mao and Liu had worked together as leftist organizers on and off since 1922.

Within a year of the founding of the CCP in 1921, Mao also fatefully embraced Leninist authoritarianism, and with it Lenin's argument that an elite revolutionary vanguard must guide the rank and file. He accepted the secrecy, duplicity, and absolute party loyalty of communist discipline. Individual autonomy, honoring the truth, friendship, the long bond with Liu Shaoqi—they all meant little by comparison. With Leninism also came a cult of personality stemming from the vanguard theory; a logical further step was to posit a supreme leader who, in turn, would play a vanguard role for the party elite. Mao's cult began in the dusty hills of remote Yanan, north of Xian, where he led a

settled life following the Long March, and seriously studied Lenin's writings for the first time. The later defense minister Lin Biao spoke of Mao in 1938 as a "genius"; in 1941, former classmate Emi Xiao called him "our savior." Mao could have no further doubt that he was a "hero" in the May Fourth leftist mold, able (as he later put it) to "teach the sun and moon to change places."

By the 1960s, Chinese arriving at urban work units would bow three times before a blown up image of Mao's face, asking for guidance with the day's labors. Before going home, they would bow again before the portrait, reporting to the Chairman what they had accomplished since morning. The wisdom of Mao's thoughts made the blind see and the deaf hear, said the official media. On airplanes, the flight began with a hostess holding aloft a copy of *Quotations From Chairman Mao*, then reading a selected maxim to the passengers. (I recall, on a flight from Beijing to Xian, a shrill voice delivering the startling quote, "Fear not hardship, fear not death," just before the engines started up.) Leninism had again, in Mao's case as in Hitler's and Mussolini's, shown a certain hospitality to fascism.

Mao's commitment to the communist command economy was likewise antithetical to freedom. One thinker who saw the flaws of central planning clearly long ago was Friedrich von Hayek, who spoke in the 1940s of the "synoptic illusion." There simply is no one point, Hayek argued, where all the information bearing on an economy can be concentrated, observed, and effectively acted upon. Rather, it is dispersed, changes constantly, and only comes into play in the bids and offers of market participants. Freedom shriveled as Mao extended the command economy in the Great Leap Forward of the late 1950s. The demands made on the grassroots were irrational for the reasons Hayek named. The grassroots, in turn, falsified reports going up to Beijing, as local officials were afraid to tell Mao the truth about the bleak results of his social engineering. The next step was to punish the class enemies who, Mao concluded, must have sabotaged the beautiful socialist vision of the Great Leap Forward.

As an old man, Mao seemed to enjoy calling himself "emperor." He found influences from China's imperial history both appealing and useful for bolstering pater-

nalistic rule. This was a fourth reason for Mao's weakening attachment to individual liberty.

Mao's eventual role as a supreme leader above even the Party gave expression to his father's impact. Mao in old age became everything his father had been—and found young Mao incapable of being. Mao Shunsheng did not like to see his son reading a book; Chairman Mao came to scoff at book learning. Mao's father made his son work in the fields against the boy's will; Chairman Mao sent tens of millions to the countryside to do just that. Mao's father had been in the army; Mao made military virtues the yardstick for the nation's values. People became props in Mao's collective pageant.

In the last two decades of his life, Mao became a changed leader, half modern Führer and half ancient Chinese sage-king. As the autocratic impulses of his father and other antifreedom forces shored each other up, the façade of his socialism decayed and his relationship to the CCP changed. Mao fought two phantoms he could never vanquish: the failure of socialism to take on the splendor he expected of it and the refusal of the CCP to be simply a Mao Party. These disappointments made him more arbitrary. "Revisionism" came to be the term Mao applied to the alleged betrayal that produced his disappointments. But Mao never clearly defined revisionism; hence, he never found a way to eliminate it. He knocked down many revisionists, but never revisionism.

One could say in Mao's defense that after 1949 he had priorities higher than freedom. These included organizing a vast country, stabilizing the currency, producing steel and machine tools, and balancing Soviet and American power. And as a practical matter, the dictatorial Soviet Union was willing to give him aid, whereas America was not.

Yet Mao's impulse toward freedom was crippled at its heart. What is freedom for the individual? One viable form is freedom to act as you please as long as you do not inhibit a like freedom for others. A second notion is that an individual is free to the degree she is able to realize herself. The mature Mao believed in neither of these two concepts of freedom, though he was closer to the second than to the first. He knew the kind of citizens he wanted in China. It was not for each person to realize himself, but for all to become suitable building blocks for Mao's Chinese update of Sparta. He egregiously confused



Red Guards dispense revolutionary justice to an “enemy of the people” in a poster from the Cultural Revolution of 1966–67.

the remolding impulse of Confucius with the functions of a modern state. “Can’t you change a bit?” he once asked a roomful of intellectuals with “bourgeois” tendencies. But was it Mao the Confucian teacher talking or Mao the dictator of a police state?

“Opinions should not be allowed to become conclusions,” Mao declared. In the abortive Hundred Flowers drive of 1956, he realized that some cut and thrust was necessary as a safety valve against the rigidity of his rule. But only Mao knew the difference between a flower and a weed. The blossoms were to swell and open according to a formula the gardener held in his pocket. Mao wanted the impossible: open debate to keep the sys-

tem lively, yet with the outcome of the debate fixed in advance. “I told the rightists to criticize us in order to help the Party,” Mao said pathetically to his doctor. “I never asked them to oppose the Party or try to seize power from the Party.”

Mao’s practical achievement was to unite China and demonstrate to Asia that China after 1949 was a force to be reckoned with. Other Chinese leaders in Beijing have built on that achievement. But Mao’s social engineering efforts were largely canceled by Deng Xiaoping after Mao’s death in 1976. In subsequent years, the totalitarian party-state became an authoritarian party-state. Under totalitarianism, it is said, many things are forbidden and the remaining

things you must do; under authoritarianism, many things are forbidden and the remaining things you may do. Today, the retention of power and economic development, rather than the pursuit of ideological phantoms, is the drive around which the political process arranges itself. With Mao's "new" Chinese man gone, the "old" Chinese man of family values and entrepreneurial spirit seems alive and well.

The passing of totalitarianism has brought into view some tentative realms of freedom, including partial property rights and the beginnings of autonomy for lawyers, journalists, and other professionals. Above all, there now exists for most people the freedom to ignore politics. Yet the institutionalization of the new space opening up for Chinese citizens has barely begun.

As I write, Beijing has jailed three intellectuals on trumped-up charges behind which lie the sin of speaking indiscreet words. Ching Cheong, chief China correspondent of a Singapore newspaper, got five years for "spying," but really for getting a fee to speak at a seminar run by a think tank that Beijing dislikes. Zhao Yan, a researcher for *The New York Times* in Beijing, got three years for "fraud," but really for feeding the *Times* information on some mild political tensions within the Chinese government. Chen Guangchen, a blind self-taught lawyer, faces four years for "gathering a crowd to disrupt traffic," but really for annoying officials in Shandong Province by representing victims of sterilizations and forced abortions that were carried out contrary to Beijing's own regulations. The rule of law seems far off, and equally so a free press and much-needed federalism. The intended intimidation in these three cases is an all-too-clear residue of the Mao era, when citizens never knew where they stood in relation to authority.

One might have expected Deng's successor, Jiang Zemin, and the current president, Hu Jintao, to put in place structures that, following the Deng era, took account of the new relationship between politics and economic and cultural life. But this has not yet happened.

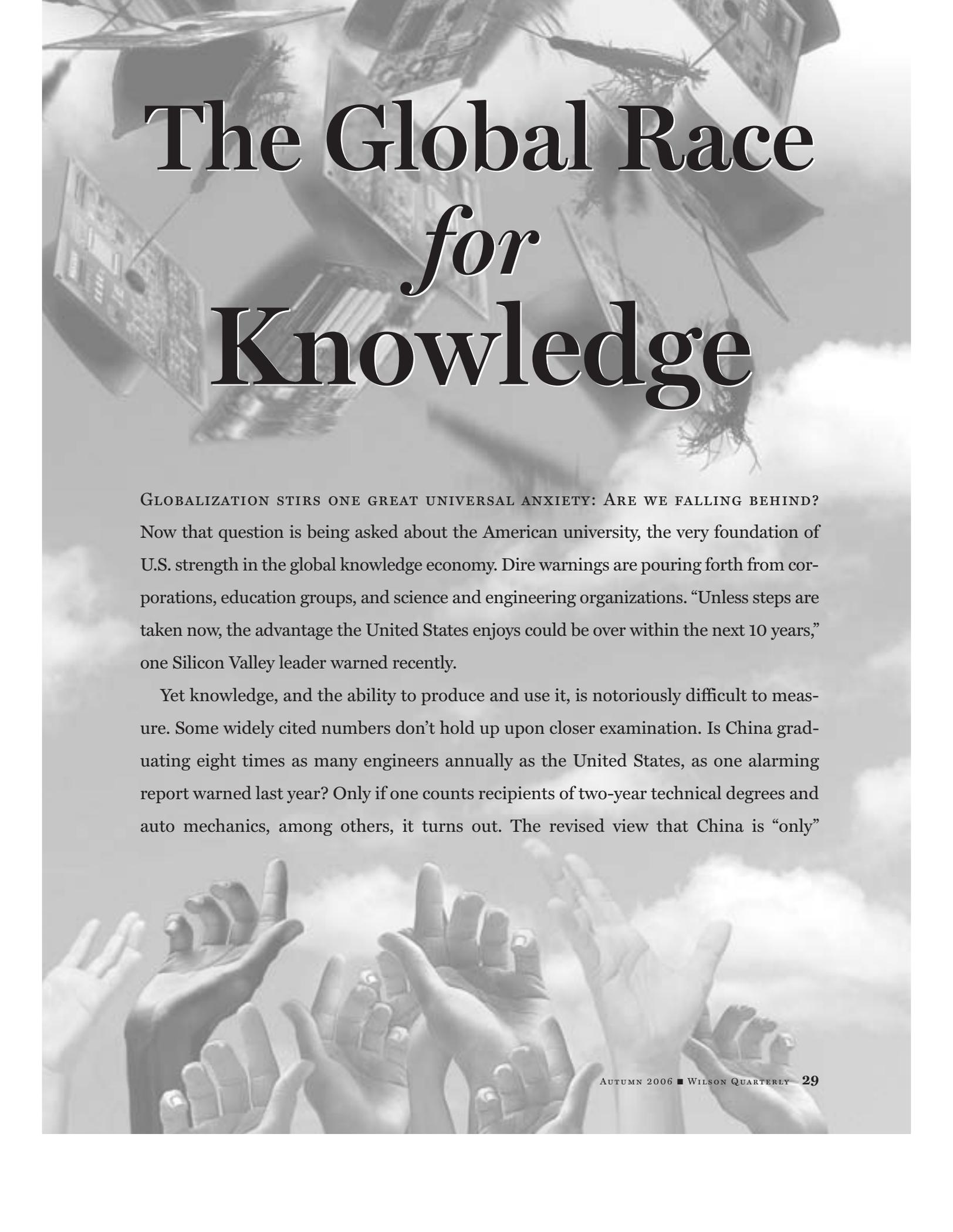
We return to the "solution" of having Mao float into folklore as a modern-day Yellow Emperor, whose photo on the windscreen will ward off traffic accidents, and who can serve as a fashion model for green silk pajamas, as I recently

noticed in a Shanghai department store. Such "Maoism" is the twitching of a society whose post-Mao leaders have brought economic advancement but political stagnation. Mao's totalitarian leaps knocked illusions out of generations of Chinese, but also soured them on public-spiritedness. By the destruction entailed in his revolution, and particularly his Cultural Revolution, Mao took away China's past.

China has moved beyond Mao as a builder of socialism. But China should never move beyond the grim lesson of how Mao could begin in idealism yet become an oppressor. It is easier and safer, of course, to criticize Mao as an evil person, or simply to draw a veil over him, than to broach the problem of the political system he introduced to China.

Philosophically, a value to be retained from Mao is that a society does require shared moral values. He was correct to see a good society as more than gadgets and cars. Talking with the French writer André Malraux in 1965, Mao ridiculed Soviet premier Alexei Kosygin's statement at the 23rd congress of the Soviet Communist Party that "communism means the raising of living standards." Snorted Mao to the Frenchman, "And swimming is a way of putting on a pair of trunks!" But Mao's proposed moral compass was a high-minded fraud. The Chinese farmers were "poor and blank," he said. On the blank page of Chinese humanity, Mao the sage-king would sketch wonderful designs!

Today, young pro-market Chinese who devour Hayek's *Road to Serfdom* and books on American business are leaving Mao in the dust and embracing an antistate Chinese tradition (best known in the West through Daoism). They would like—but will not get—a China without politics. A new public philosophy, when it comes, as it must, will draw on China's humanistic traditions as well as the best of the experience of the People's Republic. Procedurally, a new moral compass will come from below as people express themselves politically, not, again, as a diktat from a father-figure above. "When societies first come to birth, it is the leader who produces the institutions," said Montesquieu. "Later it is the institutions which produce the leaders." Later still, in a democratic era, the voting public sustains the institutions that, in turn, frame those leaders who are given the short term authority to lead. ■



The Global Race *for* Knowledge

GLOBALIZATION STIRS ONE GREAT UNIVERSAL ANXIETY: ARE WE FALLING BEHIND? Now that question is being asked about the American university, the very foundation of U.S. strength in the global knowledge economy. Dire warnings are pouring forth from corporations, education groups, and science and engineering organizations. “Unless steps are taken now, the advantage the United States enjoys could be over within the next 10 years,” one Silicon Valley leader warned recently.

Yet knowledge, and the ability to produce and use it, is notoriously difficult to measure. Some widely cited numbers don’t hold up upon closer examination. Is China graduating eight times as many engineers annually as the United States, as one alarming report warned last year? Only if one counts recipients of two-year technical degrees and auto mechanics, among others, it turns out. The revised view that China is “only”

graduating two and a half times as many engineers as the United States is no cause for complacency. But what is the significance of that number?

The very concept of a knowledge economy is surprisingly new. Until the past two decades, economists thought that labor and capital alone forged the wealth of nations, with knowledge (in the form of technology) serving as a kind of wild card. The new understanding of technology's role is a magnificent discovery, as chronicled in David Warsh's *Knowledge and the Wealth of Nations* (2006), but unfortunate in the way that it has also narrowed our thinking about the sources of wealth. Long before economist Paul Romer did his pioneering research on the knowledge economy, social thinkers such as Daniel Bell and Peter Drucker developed the more spacious concept of the knowledge *society*. They recognized that technical and scientific know-how is only the beginning of prosperity, much less human fulfillment. Knowledge societies need people equipped to think for themselves, institutions prepared to adapt to change, and social structures that are open and attractive to others around the world. North Korea has the scientific proficiency to build a nuclear weapon, yet it is anything but a knowledge society.

With these qualifications in mind, we asked five contributors to explore the state of the university "knowledge industry" in the United States, China, Germany, and India. They show that while other nations may one day catch up to the United States according to some quantitative measures, this is not likely to occur anytime soon. More important, they remind us that quality matters at least as much as quantity in the realms of knowledge, and that universities are highly complex organisms. And they beg us to ask the larger question of how exactly we are impoverished if our neighbor gains in knowledge.

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The New Ivory Tower

America's higher education complex is a behemoth of mass production. But what, exactly, is coming off the assembly line? A veteran professor and administrator looks inside the new ivory tower.

BY CHRISTOPHER CLAUSEN

WHEN I FINISHED MY PH.D. AND BEGAN WORKING at a large southern state university in the early 1970s, the grunts who taught freshman English had in their possession a handsome athletic-style trophy of which they were extremely proud. Instead of a football or tennis player or track star, atop its base stood a foot-high letter *F*. At the end of every term, this cherished object would be awarded with great festivity to the teacher

who had flunked the largest number of freshmen. The winner was almost always one of four women in their sixties who had started out as high school teachers and graduated, so to speak, to the university when the post-World War II expansion of higher education cre-

CHRISTOPHER CLAUSEN has been a teacher and administrator at five universities in the United States and Canada. His latest book is *Faded Mosaic: The Emergence of Post-Cultural America* (2000).

ated a temporary shortage of qualified faculty.

These tough old schoolmarm were on the verge of retiring as I came in the door, and their standards and attitudes now seem as antique as the mandatory ROTC for male students that many state universities had only recently abolished. New assistant professors like me, who were paid more to teach less, generally frowned on the amateurism and provinciality we attached to our predecessors. The university was changing fast, and we were part of the change. American higher education was on its way to becoming a mature industry, with all the benefits of greater professionalism, but also, in retrospect, with much of the waste and confusion that come with unplanned growth in a sector largely shielded from competition. It rarely occurred to anybody to specify realistically what purposes this vast and costly increase of scale was intended to accomplish, let alone to question whether it might turn out to be a mixed blessing.

Until World War II, colleges and universities were a modest presence in American life, enrolling a tiny minority of high school graduates. The GI Bill of 1944 started to change all that. Subsidized by a grateful nation, suddenly a much larger proportion of young men and women acquired the college habit, and in the 1960s their baby boomer children began swarming onto campuses. The result was an unprecedented burgeoning of higher education, particularly at state institutions. New campuses sprouted everywhere, while old ones frequently tripled or quadrupled their enrollments. Practically every teacher's college in the country proclaimed itself a university. Once mostly an amenity of the elite, a college education quickly became a necessity for anyone with ambition, and soon after an entitlement.

Few would have expected universities to prosper as much as they did in the third of a century that followed the expansive 1960s. By the fall of 2005, there were some 2,000 four-year colleges and universities in the United States, enrolling in excess of 17 million students (more than three-quarters of them in public institutions) of hugely varying qualifications. These institutions confer close to a million bachelor's degrees a year. The 20 richest schools have endowments that collectively

approach \$200 billion; the University of California receives \$3 billion a year from the state government, and that is just a fraction of the system's total budget. The number of students, like the size of budgets, continues to mushroom, as the belief that a bachelor's degree—at the least—is essential to success has hardened into holy writ. The cost of American higher education has for decades been rising faster than the price of gold or gasoline. Between 1995 and 2005, tuition and fees at public four-year institutions rose by 51 percent *after inflation*. Meanwhile the number of colleges and universities continues to grow.

Higher education in America has become a sprawling enterprise, an octopus with many apparently uncoordinated tentacles. Seemingly endless capital campaigns and partnership agreements with corporations blur the line between higher education and other major economic entities (there is now a Yahoo! Founders Professor of Engineering at Stanford, and the University of California, Irvine, boasts a Taco Bell Chair of Information Technology Management). Yet the bottom line of all this activity has become even harder to identify than it was in 1946 or 1960. One striking illustration of the confusion of purposes is that, having established "research parks" in the 1980s to attract high-tech industries as tenants, many universities are now building retirement villages to entice the affluent elderly.

Higher education on this scale is something new in the world. Unlike American primary and secondary education, it is also the envy of the world. Yet we may be starting to notice that some of its achievements shimmer like a mirage. This past August, the National Commission on the Future of Higher Education reported that "the quality of student learning—as measured by assessments of college graduates—is declining." It cited a stunning finding of the National Assessment of Adult Literacy: Only 31 percent of college-educated Americans qualify as "prose literate," meaning that they can fully comprehend something as simple as a newspaper story. That number has shrunk from 40 percent a decade ago, apparently because the flood of badly educated new graduates is dragging down the average.

One reason we often overlook the shortcomings of higher education is that although in many ways modern universities resemble diversified corporations, they are also strikingly peculiar. American higher education

today looks somewhat like the Catholic Church of the late Middle Ages—another anomalous enterprise that was once a ubiquitous presence, immensely rich in money and talent, staffed by multiple hierarchies whose principles of organization were opaque to outsiders, following its own arcane laws and mores, seemingly invulnerable to criticism because, with all its contradictions, it still represented what the society as a whole regarded as its highest aspirations.

Nobody disputes that higher education is a good thing, that fine teaching and research enrich society over and above their immediate economic benefits—the main goal most students, parents, and taxpayers have in mind—or that the professionals who spend their lives in these pursuits are as admirable as any group of people. If we take all that as read, what else might we notice when we peer through the fog of idealization that always seems to obscure the particularities of the university?

While most people still think of undergraduate education as the core function of colleges and universities, the total undergraduate capacity of American higher education today probably exceeds by a wide margin the economic advantages it confers, either on students as individuals or on society as a whole. Most of the jobs now held by college graduates in sales, transportation, services, and even the computer industry could be performed successfully by people with little or no higher education. For high school graduates, as is often pointed out, going to college has become a defensive necessity—you have to do it because everyone else is doing it—regardless of how unattractive another four years in school looks to the average 18-year-old.

As for graduate education and research, the amount of duplication among 50 state systems, in addition to the Ivies and Stanfords and Dukes, serves no rational purpose. At last count, more than 160 universities offered a Ph.D. in English, a field where people with doctorates have far outnumbered jobs since the early 1970s. Even

the number of Division I football teams, each a multimillion-dollar business in itself, is too great for anyone but a sportscaster to keep track of the standings.

Considering the multiple vulnerabilities of higher education—to inflation, donors, state legislatures, and parents who complain about skyrocketing tuition—maintaining such an expensive status quo has been quite an achievement, but an achievement that has required some hidden sacrifices.

“The university shamelessly promised everything to everyone,” Jane Smiley wrote in her 1995 novel *Moo*, “and charged so much that prospective students tended to believe the promises. . . . Students would find good jobs, the state would see a return on its educational investment, businesses could harvest enthusiastic and well-trained workers by the hundreds, theory and technology would break through limits as old as the human race (and some lucky person would get to patent the breakthroughs). . . . Everyone around the university had given free rein to his or her desires, and the institution had, with a fine, trembling responsiveness, answered, ‘Why not?’ It had become, more than anything, a vast network of interlocking wishes, some of them modest, some of them impossible, many of them conflicting, many of

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them complementary.”

The instruction that Smiley’s *Moo U*, based loosely on Iowa State University, offers is a drop in the bucket of adolescent ignorance. Its research is harmlessly bizarre at best and destructive at worst. The faculty spend as little time on campus as possible. Cruellest of all, Smiley uses a hog to symbolize the university—a hog whose sole purpose as the subject of an eccentric professor’s research project is to grow as fat as it is genetically capable of becoming. When the grotesque beast escapes from its cage at the climax of the novel, it immediately drops dead of a heart attack. Smiley’s vivid satire displays some

unsurprising manifestations of human nature in large bureaucratic systems. Yet each of these realities takes forms in the university that render it unfamiliar, sometimes even unrecognizable, to outsiders.

Normally, when an industry becomes overstocked with providers of a service, the least capable are eventually taken over by the more successful, or simply go bankrupt and cease to exist. Think of Gimbel's, TWA, American Motors. The victorious competitors typically become more efficient and distinctive. In higher education, however, there are several reasons why the normal effects of competition fail to operate. First, the extreme difficulty of objectively measuring the relative success or failure of a university makes it possible for the adminis-

TO ADMINISTRATORS, “diversity” simply means recruiting more black and Hispanic students and employees. It has no intellectual significance.

trators of even the most disreputable institution to claim that it has not failed. Both the criteria that define success and the best means for gauging it are endlessly debatable. Because the funding of higher education comes from such a diversity of sources, there is no immediate connection between failure in the market (such as a persistent inability to attract sufficient numbers of students) and utter collapse.

Second, because the majority of colleges and universities are public rather than private, any threatened campus usually has one or more legislators it can count on to save it from oblivion. Despite periodic alarms about the threat to such institutions, very few have gone out of existence or suffered hostile takeovers since the end of the Great Depression. Even small private colleges, the most fragile members of the breed, have low fatality rates: About three shut down every year, many of them religiously based institutions, and new ones are always being born.

Instead of becoming more varied in the face of

competition, institutions of higher education paradoxically become more alike, thereby increasing redundancy. In every subsector—Ivy League institutions, gigantic public research universities such as the University of Wisconsin, elite liberal arts colleges such as Oberlin, or the middle-sized regional campuses where most Americans pursue their studies—distinctiveness of mission, curriculum, and expectations of students and faculty have diminished since the 1950s. Thanks partly to accrediting organizations that apply national standards uniformly, the cultural, denominational, and regional differences that not long ago distinguished, say, all-male, Quaker Haverford College in Pennsylvania from coeducational, Baptist Furman

University in South Carolina have narrowed to little more than local color. (One straw in the prevailing wind has been the virtual disappearance of single-sex higher education since the 1960s.) The University of California, Berkeley, and the University of Virginia were once far more oriented toward

the differing needs of their states than they are today. The major exceptions to the trend are a few radically contrarian religious schools such as Bob Jones University and Liberty University that are pariahs in the academic world. Given the emphasis placed on diversity in the mission statement of virtually every academic institution in the country, this homogenization seems ironic. But to administrators today, “diversity” simply means recruiting more black and Hispanic students and employees. It has no intellectual significance.

Homogeneity has been reinforced by the rise of a national managerial class in higher education. Unlike in the past, most college and university presidents today are not alumni or longtime employees of the institutions over which they preside. According to a 2002 study, their average tour of duty is less than seven years. Beneath them sits an ever-expanding cadre of career administrators whose lives follow a similar pattern as they move from one institution to another of the same type, rising successively from

department head to dean to provost and (occasionally) to president. Rather than embrace the historical peculiarities of a particular school, academic managers tend to pass their careers keeping up with the fashions and taboos of the moment through professional conferences and the administrative trade paper, *The Chronicle of Higher Education*.

The notorious misadventures of former treasury secretary Lawrence Summers as president of Harvard put several of these anomalies on the front page, first when he spoke indiscreetly (as it seemed to his critics) about research on the mathematical abilities of men and women, and again a year later, when the Harvard faculty of arts and sciences succeeded in getting him fired for offenses against academic orthodoxy. To many observers, the whole episode looked like a recurrent fantasy or nightmare of the late 1960s, depending on your point of view, in which the tenured equivalent of a people's court meted out revolutionary justice.

Yet it's important to notice just how atypical the events at Harvard were of the way higher education normally operates today. First, Summers expressed himself with a freedom and openness that few contemporary academic administrators would allow themselves. The time when presidents of major universities were public figures who spoke with some candor on genuinely controversial issues is long past. Second, the Harvard faculty have, or at least had (they may have used some of it up), an authority within the university that exists in few other institutions, no matter how eminent their members. Almost invariably, trustees hire and fire the people who run large universities without much consultation, while fully socialized administrators express in public only the most widely shared opinions.

Faculties are a little less conformist, but, as the Summers episode illustrates, not much, despite the brilliance and idealism of many of their members. Like administrators, the most successful professors migrate from institution to institution. Their allegiance is far more to a discipline and a group of widely dispersed colleagues—fellow specialists around the world who also study population genetics, medieval Islam, or tropical agriculture—than to a particular place.

Regular faculty members, a small minority of university employees, increasingly occupy a world of

their own. They compete like gladiators, first for tenure, then for the considerable amenities higher education has to offer. Light-to-nonexistent teaching loads, substantial research and travel budgets, frequent time off, and a cascade of honorific titles help make up for salaries that, even at the higher levels, rarely approach what a comparably successful lawyer or doctor would make. The average full professor in a Ph.D.-granting public university earned \$101,620 last year, but the figure is almost meaningless because of dramatic variations among individuals as well as between high-paying (engineering, accounting, law) and low-paying (arts, humanities, foreign languages) departments. Once upon a time, many institutions used published salary scales. It is only one sign of the faculty's diminished authority on campus that academic salaries now are individually set by what administrators airily refer to as "the market," and frequently kept secret.

Today, a profession exceeded by few others in its intellectual commitment to egalitarianism inhabits a world of ever more elaborate hierarchies. Not long ago, most universities had three professorial ranks—assistant, associate, and full professor—with a rare endowed chair thrown in. Now even public universities may have three or four categories of endowed, distinguished, and other super-ranked faculty, each with its own clearly defined status and perquisites.

Undergraduate education has been one of the chief casualties of this new order. Overcapacity and changing demographics mean that all but the most prestigious institutions have to admit marginally qualified students simply to keep their classrooms full. Virtually any high school graduate today who wants to go to college can find a berth somewhere. To reduce the chances that these underprepared students and their tuition dollars will flunk out, most universities now tie faculty raises and promotions to student evaluations of teaching, thereby encouraging easier courses and less stringent grading. The days when a flagship state university would routinely fail a quarter or more of its freshman class in order to maintain academic standards ended before the last baby boomers graduated in the mid-1980s.

Even so, about a third of the students who enroll in universities leave without getting a degree.

The thirst for dollars has also brought the system of “publish or perish,” which used to operate only in top research universities, to virtually every institution that aspires to national standing. While good teaching may attract good students, well-publicized research can bring in the harder currency of grant money and status. And if professors are to focus on research, somebody else must take up the teaching slack. The bulk of introductory teaching now falls to graduate students or poorly paid adjuncts—not the former high school teachers of old, but frequently holders of Ph.D.’s who have failed to find permanent positions amid the market glut. Contact with beginning undergraduates has become both less attractive and, for senior faculty, less frequent.

Nobody wants to go back to the era of finishing schools staffed by amateurs, but the new world we have created is dysfunctional in ways that we have only begun to recognize. The National Commission on the Future of Higher Education tentatively warned of “disturbing signs that many students who do earn degrees have not actually mastered the reading, writing, and thinking skills we expect of college graduates.” Are we really turning out armies of semiliterate college graduates? The answer is that nobody knows. Standardized national tests, along with federal monitoring of institutional quality and changes in financial aid to students, were among the commission’s recommendations. Like so many previous commissions on higher education over the past four decades, however, the group had trouble reaching agreement on the key questions and, apparently, persuading itself that its proposals had much chance of surviving the hostility of the higher education lobby.

The fact that evaluating universities is so frustratingly difficult suggests that we have only the vaguest idea of what we want from them. Is it primarily undergraduate education? (In that case, we could get rid of many expensive Ph.D. programs and research facilities.) If so, exactly what kind of education, and for what percentage of the population? By what criteria

will the fortunate few or many be selected? (Any decision on these questions would definitively settle the issue of whether we currently have overcapacity, undercapacity, or just the right amount.) Or do we, as taxpayers, donors, or parents, really want to maintain the lavish graduate programs and laboratories that attract so many foreign applicants and lead to so many patents and Nobel Prizes? If so, maybe we should stop complaining quite so loudly about the price tag. In any case, merely agreeing that education and research are valuable doesn’t get us very far. Some informed choices are long overdue.

The late Reuven Frank, who was president of NBC News and subsequently a critic of television, once asked his readers whether they could correctly identify either the main product of a commercial television network or its customers. Most people, he noted, would say that the product was an array of programs, while the customers were the audience that viewed them. But most people would be wrong. The real product of the television industry, Frank concluded—what it sets out to create, what it compulsively measures, what it labors single-mindedly to increase—is an audience. The industry’s customers are advertisers who buy access to that audience.

A similar misapprehension surrounds higher education. The real product of major-league universities—what they measure obsessively with yardsticks that range from rankings in *U.S. News & World Report* to the total size of their research budgets, what they seek and reward most in faculty members, what they tirelessly emphasize in their marketing—is reputation. Their customers are parents, government at all levels, businesses, donors, and foundations, all of whom want different pieces of what has become a hugely complicated pie. In a world where the bottom line is so elusive, the distinction between appearance and reality has no meaning. At bottom, the mark of a great university, more than anything else, is its success in gaining and profiting from a reputation for being a great university.

The power of the new ivory tower endures, like that of a church, simply because most Americans believe whichever of its promises pertain to them. If they ever started to question their faith, a Reformation might be at hand, but not before. ■

China's College Revolution

Students are flocking to China's campuses, but educating them and finding them jobs are bigger challenges than the government reckoned. As China's leaders rush to change an old, ungainly system, they are learning that shaking up is hard to do.

BY SHEILA MELVIN

WHEN A GROUP OF NEPALESE TEACHERS VISITED Beijing in 1964 to learn from the Chinese education model, Chairman Mao Zedong offered them this blunt warning: "The school years are too long, courses too many, and the method of teaching is by injection instead of through the imagination. The method of examination is to treat candidates as enemies and ambush them. Therefore, I advise you not to entertain any blind faith in the Chinese educational system. Do not regard it as a good system. Any drastic change is difficult, as many people would oppose it."

More than 40 years later, many outsiders are viewing China's education system—at least at the tertiary level—with the same apparent credulity as did that long-ago Nepalese delegation. The number of university students in China has doubled since 2000, to 23 million—more matriculants than in any other nation in the world. This dramatic growth, coupled with the

SHEILA MELVIN, a writer and journalist, is coauthor, with her husband, Jindong Cai, of *Rhapsody in Red: How Western Classical Music Became Chinese* (2004). Her book on Mao Zedong's continuing influence in China will be published next spring.

nation's rapid economic development, has made China an educational frontier, what one American university president called "the Klondike of higher education," and universities the world over are scrambling to form partnerships with their Chinese counterparts. Last year's report by the U.S. National Academies that China graduates eight times as many engineers a year as the United States caused widespread hand-wringing—though the figure was later revised downward to two and a half times. American pundits seized on the figure as proof that the United States was losing its lead in yet another field. From afar, this transformation looks like more evidence that China is an economic juggernaut. But while the vast expansion and raft of reforms the Chinese government is undertaking will undoubtedly prove beneficial in the long run, drastic change is, as Mao said, difficult.

"The story is both frustrating and exciting," explains Fu Jun, executive dean of the School of Government at Peking University. "At the macro level the picture is very rosy, but at the micro level there are

many problems. This is true of all Chinese society.”

In a widely publicized survey released by *China Youth Daily* (the newspaper of the Communist Youth League) in August, 35 percent of the young respondents said they regretted their university experience and did not consider it worth the time and money invested; more than half said that they had learned nothing of use. In mid-June, students with grievances against Shengda University staged the largest demonstration on a Chinese campus since 1989, one of several recent protests at the nation’s universities. Seemingly every week, the government announces yet another policy adjustment intended to quiet public opinion and stave off further unrest.

Changes to the educational system are particularly difficult to digest in China because education has for so long been the primary path to social and economic advancement. Under the dynastic system, government officials were recruited and promoted through a rigorous series of examinations that tested their knowledge of the Confucian classics. In theory, even the poor and disenfranchised could sit for this imperial exam and rise to the top ranks of officialdom. The odds of such success were long—there was no formal system of public education, so students studied with private tutors or in private academies to which few had access. But the perception of opportunity did much to ensure political stability; the abolition of the exam in 1905 had massive repercussions, and contributed to the collapse of the dynastic system a few years later.

China’s first universities were founded at the turn of the 20th century, and patterned on the Western model. Most were built with the involvement of missionaries or other Westerners. Tsinghua University, for example, was established in Beijing in 1911 to prepare Chinese students for advanced studies in the United States. When the Communist Party came to power in 1949, it nationalized private universities and took control of the entire education system, putting it under the dominion, for the most part, of the Ministry of Education. Mao’s policy of “leaning to one side”—that side being the Soviet Union’s—led education officials to remodel





The throng at a Beijing job fair includes many college graduates who are finding that their meager education doesn't qualify them for good jobs.

the system along Soviet lines. Comprehensive universities were broken apart and reorganized to focus on single disciplines, and liberal education was forsaken in favor of ideological indoctrination and narrow specialization. Tsinghua, for example, was recategorized as a polytechnic university for engineers; Chinese president Hu Jintao, a 1965 graduate of its Water Conservancy Engineering Department, majored in hub hydropower stations. Bureaucracies such as the ministries of railways, health, and agriculture established separate university systems for training their future employees. While a university education was free and theoretically open to all, so few spaces were available that the system created, in effect, an elite of politically correct cadres to serve the socialist state.

The entire higher education system was rent asunder when Mao launched the Cultural Revolution in 1966. He ignited the movement in part by encouraging students to rebel, and universities soon became battlegrounds in which Red Guard factions fought each other in Mao's name. Professors were publicly humiliated, tortured, even killed, and all formal higher education came to a standstill. Mao finally brought an end to the unrest he had created by sending millions of students to the countryside, ostensibly to learn from the peasants.

The system began to function again in a limited way in 1973, when schools were reopened to the dutiful offspring of workers, peasants, and soldiers. But it was only after Mao's death in 1976 and the subsequent overthrow of the "Gang of Four" that real rebuilding began, marked by the revival of the National College Entrance Examination at the end of 1977. Of the nearly six million who sat for the exam, only 278,000 could be accepted.

After Deng Xiaoping came to power in 1979, he stressed that the education system required reform to meet the needs of "socialist modernization." The first private university was founded in 1982, and in 1985 the government enacted a comprehensive education reform law, which was followed by another in 1993. Thus decentralization began, as Beijing ceded more authority to universities, and students were allowed—then required—to find their own jobs. Yet another reform program came in 1998, grandly titled "Plan for Revitalizing Education

in the 21st Century." Then-president Jiang Zemin called for the creation of 100 world-class universities for the 21st century.

The impact of the reforms has, in some areas, been tremendous. But each reform seems to have created a new set of problems—and provoked the opposition Mao predicted. The most discussed issue at the moment is the drastic expansion of university enrollment, which is transforming China's social landscape.

"In 1992, about three percent of college-age students were in college. Now it is 20 percent," explains Anne Stevenson-Yang, the president of 6xue.com, an Internet company that provides Chinese students with information about studying overseas. In the United States, roughly 40 percent of college-age students are enrolled.

In major cities such as Shanghai and Beijing, the proportion of senior high school graduates who go on to college is now more than half. Soon, almost anyone in these cities who wants a university degree will be able to get one. The capacity to absorb so many new students developed in a remarkably short time. Some universities built entire new suburban campuses in six months. Big-name schools have created satellite campuses—Tsinghua has established science parks in five provinces—and a number have gone into business, setting up private, for-profit universities. Cities and other localities, hoping to foster innovative research, have gotten into the game by building "university cities" to house new campuses and branches. These facilities have vastly improved the living conditions of many students, who until a decade ago generally lived eight to a room in slumlike conditions, ate cafeteria food fit for a slop pail, and lost electric power at 11 P.M. Enhanced conditions have encouraged a much richer campus life, in which students participate in clubs, sports, and extracurricular activities at venues provided by their universities.

But if all this sounds a little too good to be true, it is. The biggest apparently unanticipated result of the expansion is the skyrocketing unemployment rate among new college graduates. Over the past few years, universities have churned out many more graduates—4.13 million this year, as com-

pared with 1.15 million in 2001—than the job market can absorb. It's not just that there aren't enough jobs for university graduates, but that many graduates are too poorly educated or too inexperienced to qualify for high-skills jobs. That a 22-year-old college graduate with no work experience might have trouble finding a decent job would surprise few in America. But in China, where graduates were assigned positions until the 1990s, and afterward had their pick of plum jobs as elite members of a fast-growing economy, such difficulty is considered a serious breach of the social contract. Indeed, the situation has caused an uproar. The news media are filled with accounts of college graduates working as security guards, maids, and nannies because they can find no other work. A recent wire report by the state-run news agency, Xinhua, revealed that more than 500 new graduates had applied for six traditionally taboo positions working with the dead at a Beijing funeral home—and a quarter of them had master's degrees.

The rapid growth of the higher education system is also breeding profiteering. The riots in June, for instance, came about because students who had not scored high enough on the national exam to get into Zhengzhou University in Henan Province were accepted into its private subsidiary, Shengda University. In China, a private university is considerably less prestigious than a public one, but students at Shengda had paid tuition fees five times those of Zhengzhou University because they were promised diplomas that bore only the parent university's name, a practice quietly made illegal in 2003. When students received their diplomas and saw that they had been issued by Shengda—and were thus virtually worthless in the tight job market—they demanded either new diplomas or refunds. The university did not respond, so angry students trashed the campus and then staged protests that took police several days to quell.

The structural, managerial, and financial reforms under way can be seen as part and parcel of an accelerated effort to decentralize. This includes the biggest

restructuring of the higher education system since the early 1950s, in what is essentially an abandonment of the Soviet-style system and a return to the Western model of multidisciplinary universities. Between 1996 and 2000, the number of major colleges and universities was reduced from 387 to 212, a consolidation that authorities hope will increase efficiency and boost competitiveness. All public universities operated by other ministries were merged into ones overseen by the Ministry of Education, and that ministry itself delegated considerable authority to the provinces, retaining direct supervision of just 70 first-tier universities.

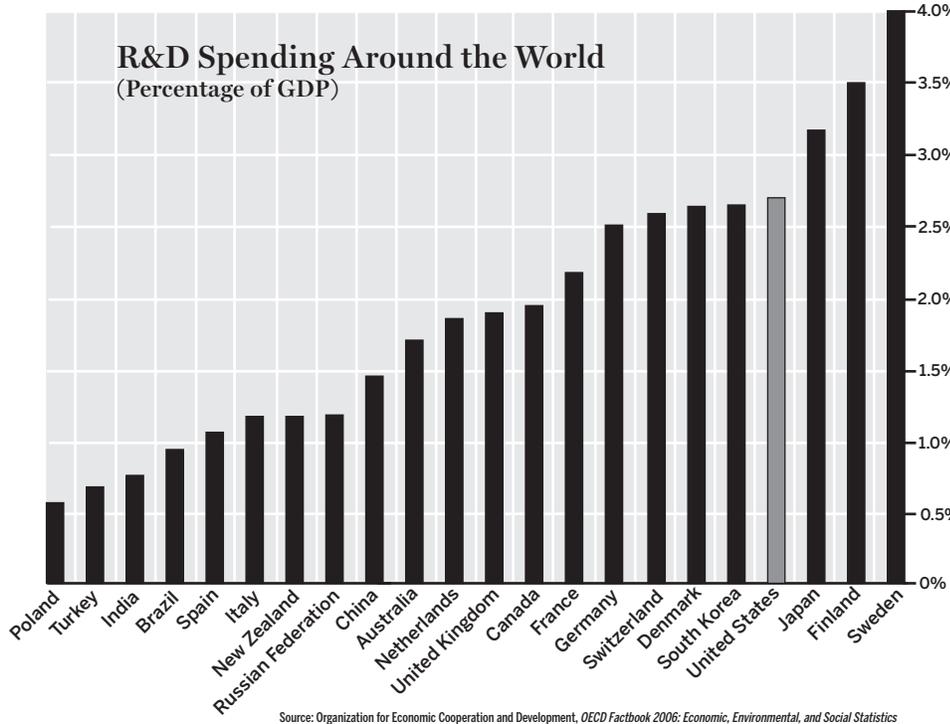
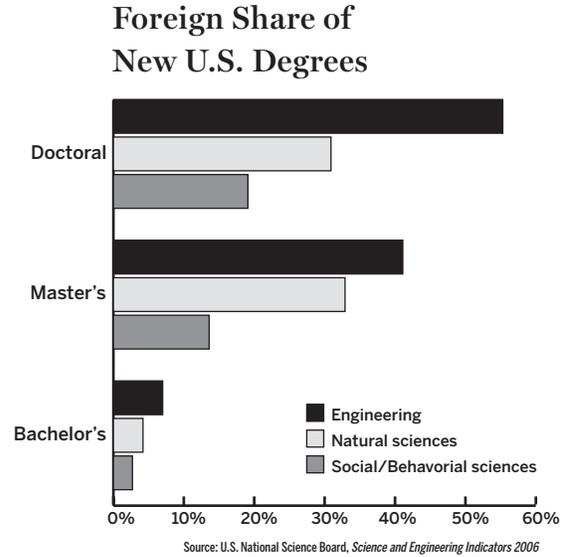
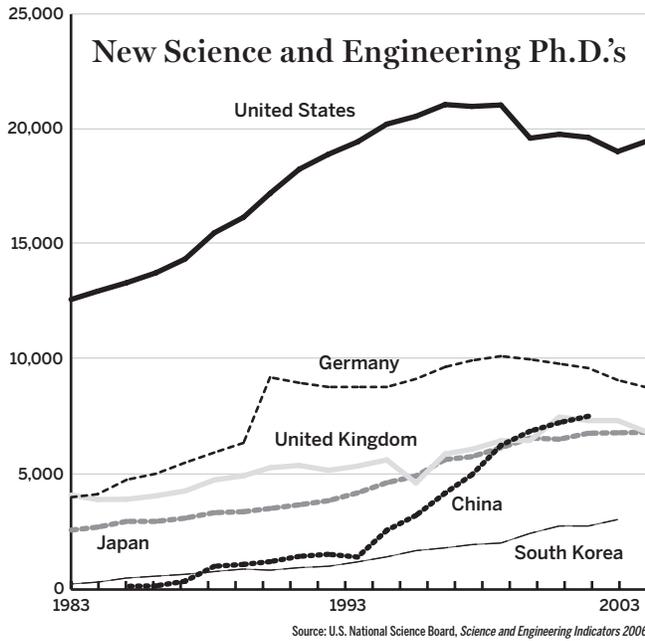
Naturally, as the provinces have gained more control

THE CHINESE NEWS media are filled with accounts of college graduates working as security guards, maids, and nannies.

over higher education, they also have been required to assume more financial responsibility—much of which has been passed on to the universities and to the students themselves. Between 1994 and 2006, college tuition increased from a token amount to an average of \$600 to \$1,000 a year. This is a significant investment for average families and a huge burden for poor ones, especially in rural areas, where cash income is low. The student loan system is still nascent, so tuition bills are footed by parents and extended families, with repayment expected once the student begins working. The release of National College Entrance Examination scores each July is now followed by a spate of suicides among farmers who are ashamed that they cannot afford to pay tuition fees for children who are admitted to college.

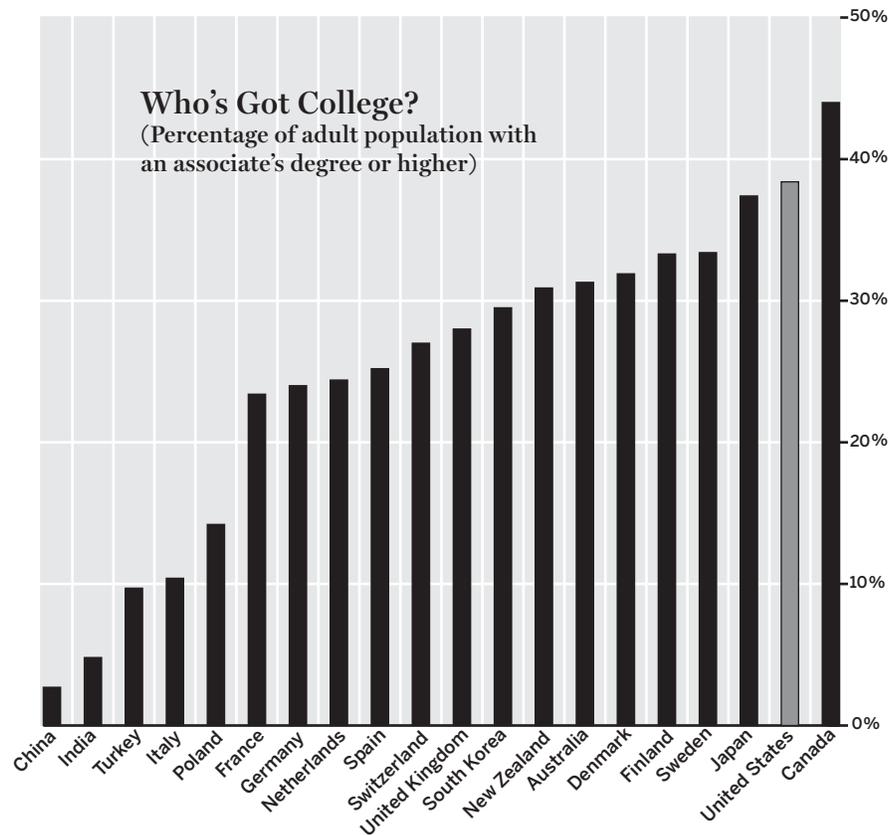
But even with increased tuition income, many universities have a hard time meeting expenses. This past summer it was revealed that one university forced its students to sell tour packages for a travel agency it had established in order to earn course credits. The university president defended the policy by arguing that any student who couldn't sell five tour packages wasn't ready for a market economy. While such cases are the excep-

Racing for Knowledge: International Comparisons



The United States remains the developed world's leader in science and engineering Ph.D.'s (above left). Although foreigners are awarded a high proportion of these doctorates (above), about 75 percent of new Ph.D. holders from overseas plan to stay in the United States. While there are many critics of American R&D—arguing that too much of it is defense related, for example—outlays are substantial relative to those in other nations (left). R&D outlays in the United States totaled some \$300 billion in 2004. Academic institutions performed \$42 billion in R&D; government and corporations accounted for most of the remainder.

An extensive system of affordable state universities is a key explanation for the relatively high level of postsecondary education in the United States. The chart (right) includes those who have a two-year associate's degree or its equivalent. In the United States, about a quarter of the adult population holds a bachelor's degree. In one recent ranking of the world's universities (below), U.S. institutions accounted for 20 of the top 50.



Sources: Organization for Economic Cooperation and Development, *OECD Factbook 2006: Economic, Environmental, and Social Statistics*; Chinese and Indian data from Center for International Development, Harvard University, Robert J. Barro and Jong-Wha Lee, CID Working Paper No. 42 (2000)

The World's Top 50 Universities

- 1 Harvard University (U.S.)
- 2 Massachusetts Institute of Technology (U.S.)
- 3 Cambridge University (U.K.)
- 4 Oxford University (U.K.)
- 5 Stanford University (U.S.)
- 6 University of California, Berkeley (U.S.)
- 7 Yale University (U.S.)
- 8 California Institute of Technology (U.S.)
- 9 Princeton University (U.S.)
- 10 École Polytechnique (France)
- 11 Duke University (U.S.)
- 12 London School of Economics (U.K.)
- 13 Imperial College London (U.K.)
- 14 Cornell University (U.S.)
- 15 Beijing University (China)
- 16 Tokyo University (Japan)
- 17 University of California, San Francisco (U.S.)
- 18 University of Chicago (U.S.)
- 19 Melbourne University (Aus.)
- 20 Columbia University (U.S.)
- 21 ETH Zurich (Switz.)
- 22 National University of Singapore (Sing.)
- 23 Australian National University (Aus.)
- 24 École Normale Supérieure, Paris (France)
- 25 McGill University (Can.)
- 26 University of Texas, Austin (U.S.)
- 27 Johns Hopkins University (U.S.)
- 28 University College London (U.K.)
- 29 University of Toronto (Can.)
- 30 Edinburgh University (U.K.)
- 31 Kyoto University (Japan)
- 32 University of Pennsylvania (U.S.)
- 33 Monash University (Aus.)
- 34 École Polytechnique Fédérale de Lausanne (Switz.)
- 35 Manchester University and UMIST (U.K.)
- 36 University of Michigan (U.S.)
- 37 University of California, Los Angeles (U.S.)
- 38 University of British Columbia (Can.)
- 39 Sydney University (Aus.)
- 40 University of New South Wales (Aus.)
- 41 Hong Kong University (Hong Kong)
- 42 University of California, San Diego (U.S.)
- 43 Hong Kong University of Science and Technology (Hong Kong)
- 44 Carnegie Mellon University (U.S.)
- 45 Heidelberg University (Ger.)
- 46 Northwestern University (U.S.)
- 47 Queensland University (Aus.)
- 48 Nanyang University (Sing.)
- 49 Bristol University (U.K.)
- 50 Indian Institute of Technology (India)

Source: *The Times Higher Education Supplement* (Oct. 28, 2005)

tion, the growing gap between the top universities and all the others lays bare serious inequities in what is still, in theory, a socialist state.

Complaints about how students are accepted to college and how and what they are taught have grown considerably in recent years, and are receiving more government focus given the growing unemployment rate of college graduates. Critics of the National College Entrance Examination argue that the three-day knowledge-based test—toward which all elementary and high school education is directed—is a poor means of selecting students who will become the creative and innovative thinkers China needs for the 21st century.

China's universities are trying to adapt their curricula and teaching methods to meet the demands of a fast-changing society. They are encouraging a more integrated, cross-departmental approach to study that includes humanities and science courses, rather than the narrow specialization of years past. Study of a foreign language, usually English, is a requirement, and there is increasing emphasis on learning practical skills, in areas such as information technology. Many universities require students to complete working internships before they are granted a diploma. University teachers are being urged to move away from rote education that stifles student curiosity.

Of course, it is hard for faculty to adjust to new teaching styles, and many students complain that professors are more interested in using the university as a base from which to moonlight or launch private businesses. Professors grouse that students who have been trained to sit quietly in classrooms and prepare for tests do not adapt well to more interactive teaching. Employers have their complaints as well, noting that many students drop out of corporate internships after only a few weeks, have unrealistic salary expectations, are insufficiently fluent in English, and lack initiative.

"We aren't doing as well as the system in the U.S. in terms of making contributions to knowledge," Dean Fu acknowledged. "Unless we learn how to teach students how to think critically—this has much to do with innovation."

Innovation is one of the key goals of China's current five-year plan, and the country's universities have come under tremendous pressure to improve and apply their research. This has contributed to an

apparent epidemic of academic fraud, as professors falsify or plagiarize their research to gain promotion or simply to meet societal expectations and political goals. This past spring, China suffered embarrassment when it was revealed that a state-funded microchip research project at Shanghai's Jiaotong University had used stolen technology. Critics point out that such fraud is easy to perpetrate and hard to detect because China doesn't have a rigorous peer review system: Academic boards are often composed of nonexpert officials, and universities are frequently run by administrators whose primary qualification is Communist Party loyalty.

Meanwhile, the popularity of university education shows no signs of abating: Nearly nine million people sat for the college entrance exam this year, and more than 10 million are expected to do so in 2007. Graduate school enrollment is also increasing in response to the tight job market. As a popular saying goes, "If you go to university, you regret it for four years, but if you don't, you regret it for life."

Discontented university students certainly number among a Chinese leader's worst nightmares; the communist government has been forced to deal with significant student unrest in every decade of its rule except the first. In April, the State Council ordered that all further enrollment expansion be suspended immediately. The Ministry of Education has opened a 24-hour hotline to help students with financial problems.

It is important to view these growing pains in the context of the nation's overall transformation. Reform came late to higher education, and there will be many more bumps in the road. Political exigencies will undoubtedly prevent some necessary changes. Even so, China is likely to emerge with a stronger higher education system and a more broadly educated public.

"Universities are state-owned enterprises," says Dean Fu. "But they are behind the curve in . . . reform. If you are an industrial [state-owned enterprise], you produce a product—it can be tested and sold. But it is difficult to assess our products because we train human beings. For us to see our problems takes a very long time." ■

The Humboldt Illusion

The German university, once considered the model for the world, has been stirred from years of slumber. But as long as it remains solely a creature of the state, it will not escape its middling status.

BY MITCHELL G. ASH

WHILE THE WAR IN IRAQ IS LAYING BARE THE LIMITATIONS of American power and political will in military and foreign affairs, in higher education and research, America's long-established supremacy remains unquestioned. Now, Europe is moving forcefully to compete with the U.S. university system.

Education ministers across the continent have promised to produce a "European higher education area" by 2010 in which a cohort of workers educated in compatible degree programs can carry their skills and knowledge across the continent's national boundaries as easily as Americans move from state to state. The European Union's budget for scientific research, though small, is growing. European governments appear finally to understand that higher education and research policy can no longer be left to local or even national governments alone, because knowledge—especially scientific know-how—is key to economic growth in the global economy.

At the same time, Europe cherishes its traditions, and next to the Catholic Church, the university is Europe's old-

MITCHELL G. ASH is professor of modern history at the University of Vienna. He is the author of numerous articles and books, including *Gestalt Psychology in German Culture, 1890-1967* (1998), and is editor of *German Universities, Past and Future: Crisis or Renewal?* (1997). His primary research fields include the relationships among science, politics, society, and culture in German-speaking Europe since 1850.

est cultural institution. Names such as Bologna, Paris, Oxford, Cambridge, Kraków, Vienna, and Heidelberg have stood for excellence in higher education for hundreds of years. When the modern university emerged in the late 18th and 19th centuries, Göttingen, Berlin, Leipzig, Munich, and other cities joined this exclusive group, increasing Germany's prominence, and attracting the attention of American educators.

As the story goes, the modern research university, with its laboratory instruction in the sciences and research seminar in the humanities, was imported from Germany to America in the late 19th century. American universities subsequently rose in prominence as their German counterparts declined because of dictatorship, war, and the country's division during the Cold War. Today, Germany is reunified and Europe is expanding peacefully. Is the homeland of the research university finally poised to return to the front rank at the head of Europe's transformation?

Positive change clearly is occurring, but it cannot be described as a reimportation of German grandeur from America. Nor is it likely to produce a new academic superpower capable of competing on equal terms with the American research establishment.

First, some history: The conventional view that the university was imported from Germany to America is prob-

lematic. German universities were already in deep crisis around 1900, just as they were being acclaimed abroad as the world standard. Contemporaries complained about overcrowded lecture halls, seminars, and laboratories. They warned against the danger of an “intellectual proletariat” of unemployable academics, and an “invasion” of foreigners (and Jews), and they worried about an “exodus of research from the university” to industrial laboratories and elsewhere. It was only then that the writings of Wilhelm von Humboldt (1767–1835), now celebrated as the founding spirit of the University of Berlin, were published, and that the ideals he expressed during 1809–10, most notably about freedom of teaching and learning and the unity of teaching and research, became the guiding myths of the German university. Even in 1900, the claim that the German research university was informed by Humboldt’s ideals was not entirely true. Americans and Germans embraced his ideas roughly simultaneously. His vision was a utopia in his own time, and it retains its power today primarily as a utopian counterpoint to the realities of mass higher education.

The claim that “the German university” was imported to the United States is also not quite accurate. American universities are too diverse to be described as products of a model imported from any single country. Higher education in America has never been oriented exclusively to science and scholarship, as it supposedly is in Germany. Instead, research-oriented graduate schools were added onto bachelor’s degree programs. Moreover, the original cliché focuses on elite private universities, while America’s public institutions have always tried to balance broadly accessible undergraduate education and a variety of practical professional training programs with basic and applied research. The roots of American higher education’s enormous vitality—institutional openness and diversity, the union of professional training and academic research in the same institution, and the combination of outstanding research at the upper levels with broad accessibility at the undergraduate level—are as much home-grown as imported from elsewhere.

In Germany today, 100 of the 351 higher education institutions are properly considered universities. The rest are specialized in more limited areas such as technical disciplines, the arts, social work, education, and theology. This compares with about 125 research universities and some 2,000 other four-year institutions of higher learning in the United States. The liberal arts and two-year community colleges so common in the United

States have no counterparts in Germany.

Nearly all German universities are public institutions supported primarily by state (*Länder*) governments. A few private institutions such as the International University in Bremen have attracted attention lately, but their size and their impact on the system as a whole are small. Total enrollment in higher education institutions currently stands at roughly 1.8 million. Just over 20 percent of Germans now have more than 12 years of schooling, a considerably smaller proportion than the comparable figure of nearly 50 percent in the United States.

Reform is on the agenda in Germany. Universities are altering their administrations, trying to coordinate their curricula, and moving gradually to open up new sources of revenue. But many Germans are ambivalent about these changes, charging that they amount to an “Americanization.” Part of their fear arises from perceptions, or misperceptions, of what is going on in the United States, and part stems from loyalty to what they take to be the Humboldt tradition.

Germans decry a loss of “autonomy,” but the real meaning of that word is what is in dispute. Until recently, autonomy in Germany meant that professors enjoyed academic freedom and could determine university policy through so-called self-administration. In fact, self-administration was limited because state governments pay almost all the freight and appoint the professors. Universities in Germany continue to be regarded as welfare-state institutions, because Germans, like other Europeans, view higher education as a public and not a private good.

Policymakers now recognize that German universities need more autonomy to advance as research entities, but by this they mean increased management flexibility. That is now permitted, and the forms it takes are drawn to some extent from American models. Higher education administration is being professionalized, supported in part by a private institute funded by the Bertelsmann Foundation. The corresponding shift in power within universities from professors toward administrators has potential to create widespread unease—for example, when the *Rektor* (president) and the *Kanzler* (provost), and not the faculty as a whole, decide on the distribution of funds or the appointment of professors.

But the single most important factor that determines the reach of change—or, more precisely, its limits—in higher



The University of Berlin, often called the progenitor of the modern university, grew out of the vision of diplomat-philosopher Wilhelm von Humboldt.

education in Europe is state funding. Real autonomy can only come when universities are able to raise money from multiple sources, and that is not happening. Only in Britain does private revenue account for significant proportions of university budgets. One major and increasing source of funding outside state budgets in Germany is research money from the federal government, the EU, and other public or private sources, but three-fourths or more of university budgets still comes from the states. Tuition is finally being introduced in Germany, but the amount charged is generally the equivalent of \$600 per semester. At that rate, it will be a long time before student fees provide as much of university budgets as they do in the United States, and the higher education community worries that opening up new revenue streams will lead to corresponding reductions in state money.

Germans are torn between the goals of uniformity and competition. German professors are civil servants and in theory must be treated alike (for example, paid according to seniority). As state institutions, universities have to be financed and administered according to similar rules, and places must be provided to all qualified students who seek them. The result, according to available measures, is that

many German universities rank at a pretty good middle level internationally, but none is anywhere near the top, though their strengths in certain fields, such as history and engineering, are undeniable. Uniformity has its advantages: Degrees have the same value, and real differences in quality need not be discussed openly.

One reason for the success of American universities, by contrast, is their willingness to compete with one another for resources. And for many reasons—not only to buy prestige or get tax deductions—Americans have been extraordinarily willing to give money to their institutions. The availability of both government and private resources in America fuels continuous competition among institutions and leads to huge salary differences across disciplines, and among professors in similar fields. Could this happen in Germany? Maybe. German universities have introduced “achievement based salaries” for professors, but base salaries remain subject to civil service rules, and “achievement” supplements are often not included in the determination of pension benefits. Significant new state funding is not available for any of this; existing money is only being redistributed.

Any serious challenge to American predominance is not conceivable on the cheap. So where’s the money? Seen

in this light, the current “excellence initiative,” a joint project of the German federal and state governments, provides another example of ambivalence about change. The project is being trumpeted as a new beginning because it requires universities, for the first time, to compete against one another for support on the basis of specific plans for graduate programs or research-oriented “excellence clusters,” evaluated by peer review. But the total amount involved is the equivalent of \$2.4 billion, to be spent by 2011, which is less than the budget of one top American research university for one year! Serious German commentators recognize that as long as dependence on state financing continues, talk of a German Harvard, Stanford, Berkeley, or Michigan is whistling in the dark.

Higher education also has a second purpose—teaching, or the production of qualified participants in the knowledge society. The Bologna Declaration of 1999, which established the goal of the European Higher Education Area, is not a project of the EU alone, but of the European Cultural Convention, with more than 50 signatories. Yet Germans are of two minds about change in this area, too. Opponents of Bologna warn of a “farewell to Humboldt,” by which they mean a standardization of curricula that would undermine freedom of teaching and learning, and a separation of undergraduate teaching from research. Yet, in the first five years after the Bologna Declaration, 1,900 new bachelor degree programs were approved in Germany, and their content varies widely across institutions. Thus, the process appears to be producing not standardization, but variety.

Germans also worry about the unity of teaching and research, but that has been in doubt in Germany since 1900. Though many still wish they could make “Humboldt” available to all, the division of existing German four- to five-year *Diplom* or *Magister* programs into two degree cycles, a bachelor for foundational studies and a master for the first steps toward research, satisfies a long-standing demand from within the German system. It also accords with the wishes of many students who have little desire to do academic research.

The degree names “bachelor” and “master” provoke cries of “Americanization.” But the hope that the new three-year European bachelor degrees will be compatible with the four-year American B.A. or even four- or five-year

B.S. degrees is illusory. As American accreditation bodies and university officials have noted, the structural and content differences are too great for that. In fact, the new bachelor degrees are mainly shortened versions of the specialized one- or two-subject programs offered in the past, lacking any general education component. Germans think that students receive a broad liberal education in high school and do not need more of it in college, but that is no longer true. Specialized elective university-preparatory courses much like American advanced placement courses now dominate the last two years of high school. The new degrees have “Anglo-Saxon” names but will be European in form and content, and may not be easily transferable outside the continent. Despite this limitation, the “Bologna process” could, in time, produce a huge European talent pool of highly mobile, internationally experienced graduates ready to take the step up to research-based training.

The final element of ambivalence about change can be summed up in two words: “elite” versus “access.” These buzzwords polarize the politics of higher education in Germany in ways that would be familiar to Americans. Germans take pride in their Nobel Prize winners, but the primary focus of German higher education remains on training masses of students, and funding per student has long been insufficient to achieve that goal. Since 1945, several of the best publicly supported higher education systems in the United States have managed to balance relatively open access at the undergraduate level with high-quality research at flagship institutions. In Germany, many politicians and academics still regard these two goals as antithetical and refuse to invest what it takes to achieve both.

Departments and programs in some German universities are achieving international standing at the graduate and postdoctoral levels, at the cost of widening separation from their home institutions. The dynamism of such programs could increase the centrifugal forces pulling high-level research away from mass higher education in Germany.

The best outcome of today’s reforms would be serious increases in merit-based research and infrastructure funding, along with changes in university governance that would allow increasingly autonomous universities to compete for research funds and top students more effectively. It will be a challenge to make the benefits of such policies effective for whole institutions. But even if reform succeeds, the results will hardly be enough to make top American institutions fear German competition anytime soon. ■

Tiny at the Top

India has surprised the world by suddenly jumping into the front ranks of emerging economies, but its colleges and universities remain mired in the past, and may be moving backward.

BY PHILIP G. ALTBACH

MUMBAI'S VENERABLE ELPHINSTONE COLLEGE SITS stolidly in a city transformed by India's economic boom. Though Mumbai's legendary poverty remains painfully apparent, it is home to the thriving Indian stock market, the Bollywood film industry, and a burgeoning tech sector. Even the city's name (formerly Bombay) is different. Yet when I returned to Elphinstone recently after a 40-year absence I found the college barely changed, its extraordinary 19th-century Indo-Islamic-Gothic main buildings lightly renovated, its classrooms and library much as I had left them long ago. The condition of Elphinstone, one of India's most prestigious colleges, is a telling sign of the state of higher education in the world's largest democracy. Underinvestment has led to stagnation.

Stagnation is no longer a word that people reflexively apply to India. Starting in the early 1990s, the nation rocketed to prominence as the world's second-fastest-growing large economy. Moreover, it is growing not mainly by the standard means of low-wage manufacturing, like China, but through the provision of knowledge-intensive services and software, with globally recognized homegrown corporations such as Infosys and Tata Consultancy Services in the lead. In the coming year, however, these two high-tech giants will hire thousands of college graduates from abroad.

The problem is not so much the quantity of Indian uni-

versity graduates as their quality. India has the world's third-largest system of higher education, with 10.5 million students studying at 17,625 institutions. Last year, these institutions turned out nearly 700,000 graduates in science and engineering disciplines alone. However, in a recent opinion survey, human resources managers at multinational companies in India said they would consider hiring only 10 to 25 percent of Indian graduates.

Virtually all of the world's academic systems are shaped like a pyramid, with a small, elite sector at the top, a large, relatively unselective middle, and a bottom usually composed of vocationally oriented postsecondary institutions. Patterns of funding, government support, and management necessarily vary for each sector, with costs per student in the elite sector much higher. India long ago chose a pyramid with a very broad bottom and a miniscule top, and it shows few signs of changing. Its policy has been to spend little on higher education and spread its money widely, devoting only 0.37 percent of its gross domestic product (GDP) to postsecondary education. Only countries such as Japan and South Korea, where the vast majority of students attend largely unsubsidized private universities, approach India's low government spending levels. China spends 0.50 percent of GDP on colleges and universities, while the United States spends 1.41 percent and the United Kingdom 1.07 percent. Even more remarkably, the share of Indian GDP devoted to higher education has hardly budged in years.

PHILIP G. ALTBACH is Monan Professor of Higher Education and director of the Center for International Higher Education at Boston College. His many books include *The Struggle to Compete: Building World-Class Universities in Asia and Latin America* (forthcoming), of which he is coeditor.

As a result of this approach, the entire Indian system strains even to achieve mediocrity. More fatefully, its top tier is stuck in a state of arrested development. The absence of a significant group of world-class universities is perhaps the most serious impediment to India's ambition to build a sophisticated knowledge-based economy.

At the pinnacle of the nation's higher education establishment stand the seven Indian Institutes of Technology (IITs), which have won fame around the world for their prowess in engineering, along with five institutes of management, the All India Institute of Medical Sciences, and a handful of schools such as the Tata Institute of Fundamental Research, focused on the physical sciences, and the Tata Institute of Social Sciences. But all of these institutes are fairly specialized, lacking a university's full panoply of research and teaching programs. And they are small. The seven IITs have a total of 30,000 students, about as many as a single state university campus in the United States.

Despite their justified renown, the IITs do not appear near the top of international rankings of universities. (In *The Times Higher Education Supplement* list shown on page 43, they rank 50th.) Yet their graduates can compete with the best anywhere in the world. Alas, that is precisely what many choose to do, going abroad to take jobs or pursue advanced degrees and not returning. The United States alone is home to an estimated 40,000 IIT alumni, many of them highly successful. (Large numbers of engineering graduates in every country, including the United States, take more lucrative jobs in business management rather than stay in engineering.)

Apart from the specialized institutes, there are some outstanding master's- and doctoral-level academic departments in India's universities, and a few schools have fairly high standards—such as the Jawaharlal Nehru University in New Delhi, one of the few institutions sponsored directly by the central government. (Most public universities are funded by the state governments.) A small but significant cadre of undergraduate colleges throughout the country has developed high standards and attracts excellent students. But with few exceptions these places lack state-of-the-art equipment, falling far below international standards.

The swollen middle tier of Indian higher education is full of universities and colleges that provide a mediocre educa-

tion at best. "Poor facilities, abysmal teaching, no accountability . . . a caricatural education," is the summary offered by Indian-American academics Devesh Kapur and Sunil Khilnani. Faculty members, though not badly paid, have little power and limited job security, and rarely have a role in determining their own curricula. Pedagogy is based on rote learning and "teaching to the exam." Only about one-third of the nation's 472,000 academics hold Ph.D.'s. It is taken for granted that many professors will not show up for class; some supplement their incomes by insisting that students take their private "coaching classes."

As in many other developing countries, moreover, higher education is extremely politicized. Local politicians use colleges for patronage, awarding student slots as well as staff positions—from janitor to professor—to supporters. Considerations of caste, region, and other factors are common in academic appointments and other hires. The institutions are riddled with petty politics and low-level corruption.

A significant part of the higher education system's woes stem from a byzantine structure that stifles diversification and innovation. Under the Indian constitution, education is mainly the responsibility of India's 31 states, which provide most of the (scant) funding—though the central government exercises significant regulatory power and funds parts of the system directly, including the institutes of technology. Most of India's colleges are legally private institutions, established by religious groups, ethnic or linguistic communities, charitable trusts, and the like. Only 30 percent of them receive government financial support; most of the rest are "unaided" and must rely on tuition and other funding sources. Almost all of the colleges are affiliated with a university and subject to regulations governing such matters as faculty salaries and entrance requirements, which has the effect of stifling any healthy competition. In recent years, however, a few of the best colleges have achieved independent legal status, and seven completely independent private universities have been launched.

India is not blind to the dire condition of its higher education. For more than 50 years, official commissions have been offering wise reform proposals. The first IIT was born in 1951 in a moment of enlightenment. But very little has changed. The challenges have seemed overwhelming, money has been scarce, and political will appears absent.

A discouraging reminder of the obstacles to improvement came this past spring. Even as the blue-ribbon National Knowledge Commission was at work on new



These New Delhi medical students were among the many critics who denounced the Indian government's April 2006 decision to increase quotas for certain disadvantaged groups to 50 percent at elite institutions as a deadly blow against the few bastions of meritocracy in India's education system.

reform proposals, Prime Minister Manmohan Singh unilaterally announced a dramatic change in the country's "reservation" policies: At the IITs and other top institutions, which were already required to set aside 22 percent of the seats in each entering class for the former untouchable caste and other disadvantaged groups, the quota would be increased to 50 percent. In the explosive reaction that followed, two members of the commission resigned, decrying what one called the "insidious poison" of politicization. It was all the more discouraging that Singh himself is a former academic and world-class economist who must have known very well that this step, however laudable the professed goal of reducing social inequality, would destroy international competitiveness at India's top institutions and deal a powerful blow to the fragile meritocratic ethos in Indian higher education. Singh apparently felt compelled to bow to the left-wing members of his coalition government. Critics were quick to point out the cynicism of meddling with

a handful of highly visible institutions while doing nothing to remedy decades of inadequate funding of education at every level that have left nearly half the Indian population illiterate.

India is a country of enormous potential, with a huge pool of talented young people who are eager for education and the opportunity to participate in the knowledge economy. Yet to fulfill its potential, India must develop an elite, internationally competitive higher education sector even as it greatly improves the general quality of education, from the universities all the way down through the primary schools. There are few signs that India's leadership is prepared to take the necessary steps, and recent events indicate that lately it has even been moving backward. A visitor to Elphinstone College a decade from now likely will find it, along with the rest of India's colleges and universities, in much the same sad state of gentle dilapidation and neglect it is in today. ■

Why the Liberal Arts Still Matter

Never has a broad liberal education been more necessary than it is today, and never have colleges and universities done such a poor job of delivering it. Radical measures are needed.

BY MICHAEL LIND

EVERYONE IS IN FAVOR OF LIBERAL EDUCATION. Praise of its benefits is found in countless university commencement addresses and reports by commissions on higher education. But it seems that nobody can agree on what liberal education is.

For some, liberal education means a general education, as opposed to specialized training for a particular career. For others, it refers to a subject matter—"the humanities" or "the liberal arts." Still others think of liberal education in terms of "the classics" or "the great books."

All of these conceptions of liberal education are right—but each is only partly right. The tradition of liberal education in Europe and the Americas is a synthesis of several elements. Three of these have already been mentioned: nonspecialized general education; an emphasis on a particular set of scholarly disciplines, the humanities; and acquaintance with a canon of classics. The traditional Western synthesis included two other important elements: training in rhetoric and logic, and the study of the languages in which the classics and commentary on them were written (Greek and Latin,

and, in the case of Scripture, Hebrew as well).

What brought all of these different elements together in the liberal education model was their purpose: training citizens for public life, whether as rulers or voters. Liberal education is, first and foremost, training for citizenship. The idea of a liberal education as a "gentleman's education" reflects the fact that, until recent generations, citizenship was restricted in practice if not law to a rich minority of the population in republics and constitutional monarchies. In a democratic republic with universal suffrage, the ideal—difficult as it may be to realize—is a liberal education for all citizens.

Liberal education, in different versions, formed the basis of Western higher education from the Renaissance recovery of Greco-Roman culture to the late 19th century. In the last century, however, liberal education as the basis for higher education in the United States and other nations has been almost completely demolished by opposing forces, the most important of which is utilitarianism, with its demand that universities be centers of practical professional training. So completely has the tradition been defeated that most of the defenders of liberal education do not fully understand what they are defending.

The first thing that must be said about liberal education is that the word "liberal" is misleading. In this con-

MICHAEL LIND, the Whitehead Senior Fellow at the New America Foundation, is the author of *The American Way of Strategy* (2006) and *What Lincoln Believed* (2005).



Allegory of the Liberal Arts (1475–95), by Biagio di Antonio

text, “liberal” has nothing to do with political liberalism, or “liberation of the mind” (a false etymology that is sometimes given by people who should know better).

“Liberal arts” is a translation of the Latin term *artes liberales*. *Artes* means crafts or skills, and *liberales* comes from *liber*, or free man, an individual who is both politically free, as a citizen with rights, and economically independent, as a member of a wealthy leisure class. In other words, “liberal arts” originally meant something like “skills of the citizen elite” or “skills of the ruling class.” Cicero contrasted the *artes quae libero sunt dignae* (arts worthy of a free man) with the *artes serviles*, the servile arts or lower-class trades. As the Renaissance humanist Pier Paolo Vergerio wrote in “The Character and Studies Befitting a Free-Born Youth” (1402–03), “We will call those studies liberal, then, which are worthy of a free man.”

Once “liberal arts” is understood in its original sense as “elite skills,” then the usefulness of elements of a traditional liberal arts education for a ruling elite becomes apparent:

Classical languages. In the last 200 years, as the study of Greek and Latin declined, its proponents often argued that learning these two languages was valuable in itself, or that it provided “mental discipline.” But such far-fetched arguments were unnecessary for nearly two millennia. In their day, the relatively unsophisticated Romans needed to read and understand Greek in order to read most of what was worth reading on subjects from philosophy, medicine, and military tactics to astronomy and agriculture. Greek was also the lingua franca of the eastern Mediterranean, shared by the Romans with their subjects. Subsequent generations of Europeans and Americans learned Latin and, sometimes, Greek for equally practical reasons.

Rhetoric and logic. The members of the ruling class—whether they were citizens in democratic Athens or republican Rome, or courtiers in a monarchy—were expected to debate issues of public policy. The Greeks and Romans naturally emphasized rhetoric and logic. Rhetoric helped you persuade the voters or the king, while logic permitted you to rip your opponent’s arguments to shreds.

Beginning with Plato, philosophers and theologians often railed against rhetoric as the seductive

art of prettifying falsehood. In modern, democratic societies, rhetoric is often equated with bombast—“mere rhetoric.” But the great theorists of rhetoric, from the Athenian Isocrates to the Romans Cicero and Quintilian, insisted that their ideal was the moral and patriotic citizen, and manuals of rhetoric subordinated flowery language to clarity of thought.

General education. On hearing his son Alexander play the flute, King Philip of Macedon is reported to have asked, “My son, have you not learned to play the flute too well?” A governing elite, whether in a republic, a monarchy, or a dictatorship, must know a lot about many subjects but not too much about any particular subject. An aristocrat or general should show some accomplishment in arts such as poetry, scholarship, music, and sports, but only as an amateur, not a professional. Even in modern democracies, the same logic applies. U.S. senators and presidents must know enough to be well informed about many subjects, from global warming to military strategy to Federal Reserve policy. But a senator or president who neglected other issues while devoting too much time to studying one favorite subject would be guilty of dereliction of duty.

A focus on the humanities. While the liberally educated elite could master the basics of any subject, subjects in the the humanities or liberal arts were of particular importance in the education of rulers, in republics and autocracies alike. Studies in these areas, according to Romans such as Cicero and Seneca, helped an individual cultivate *humanitas*, by which is meant not humanitarianism (although education might promote understanding of others), but rather the higher, uniquely “human” faculties of the mind and character, as opposed to the lower faculties needed by peasants and craftsmen, those human beasts of burden (once again, the class bias of the liberal arts tradition is evident).

In the Middle Ages, the “seven liberal arts” came to be thought of as the trivium (grammar, dialectic or logic, and rhetoric) and quadrivium (arithmetic, music, geometry, and astronomy)—in essence, literacy and numeracy. Renaissance humanists, rebelling against the logic chopping they associated with medieval Christian Scholasticism, downgraded the mathematical subjects in favor of their own list of the

“humanities,” including grammar, rhetoric, politics, history, and ethics. Mathematics, however, survived as part of the liberal arts curriculum in the West until the 19th century.

The classics. Like most premodern societies, the premodern West viewed the past as the source of wisdom and virtue, not as an outmoded former stage in a history of never-ending progress. Whatever their other studies, elite Greeks were expected to be familiar with Homer and other ancient poets, who were viewed as sources of knowledge, not just aesthetic pleasure. The Romans, and later, the Europeans and Americans, added Virgil, Horace, and other Latin authors to the canon.

Some Christians in the later Roman Empire and the post-Roman West viewed the pagan classics with suspicion. But in Catholic and Protestant countries alike, a version of the Greco-Roman gentleman’s education, supplemented with liberal doses of Christian ethics and theology, provided the basis of higher education from the Renaissance until the 19th century.

I’ve said nothing so far about philosophy, for good reason. The founding fathers of liberal education are the Roman statesman and thinker Cicero and the unjustly neglected Athenian orator Isocrates, a contemporary of Plato and Aristotle. Isocrates ridiculed the Socratic philosophers for wasting their time on metaphysical puzzles instead of educating virtuous statesmen and citizens. This skepticism toward metaphysical philosophy and theology was shared by the great figures of the Western humanist tradition, from Cicero and Seneca to Petrarch, Erasmus, Montaigne, and Hume. It was only in the 20th century that Americans, influenced by 19th-century German thought, began to treat Socrates, Plato, and Aristotle, rather than orators such as Isocrates and Cicero and poets such as Homer and Virgil, as the founding fathers of Western civilization. The assertion, frequently encountered today, that the tradition

of liberal education is based on the Socratic method is completely incorrect.

The premodern Western liberal arts curriculum served a variety of governing classes quite well for two millennia. In colonial America and the early United States, most colleges were Protestant denominational institutions whose curricula would have been familiar to Romans and Renaissance Italians alike. For example, in the 1750s Harvard required every applicant to be able “extempore to read, construe, and parse Tully [Cicero], Virgil, or such like common classical authors, and to write Latin in prose,

ONCE LIBERAL ARTS is understood in its original sense as “elite skills,” its usefulness for a ruling elite becomes apparent.

and to be skilled in making Latin verse, or at least in the rules of the Prosodia, and to read, construe, and parse ordinary Greek, as in the New Testament, Isocrates, or such like, and decline the paradigms of Greek nouns and verbs.” Thomas Jefferson thought that before being admitted to college, students should learn “Greek, Latin, geography, and the higher branches of numerical arithmetic.”

The crisis of liberal education began in the late 19th century and continued until the middle of the 20th. One by one, the traditional elements of a liberal arts education came under assault from reformers. Utilitarians argued for replacing the study of Greek and Latin with the study of modern languages. Rhetoric was disparaged, on the grounds that it was unscientific or undemocratic. General education was challenged by vocational training for jobs in the new industrial economy. The subject matter of the traditional humanities was carved up between the “social sciences,” including mathematical economics and political science, and the “arts” or “fine arts,” which romantics redefined as the realm of the nonrational and “creative.” Of the traditional humanities, only history and philosophy retained their premodern forms.



They may not get Plato, but they'll still get jobs.

The Anglo-American liberal arts college, founded in emulation of Renaissance Italian academies, was increasingly remodeled along the lines of the new German research university, whose main purpose was rigorous, original scholarship. Johns Hopkins University, founded in 1876, was the first German-style research university in the United States. By World War I, most prestigious universities in the United States had rebuilt themselves along German lines. Increasingly, that Germanic degree, the Ph.D., became a requirement for college teaching. In German fashion, professors concentrated on research and writing for their specialist colleagues, rather than on undergraduate teaching. In the new research university, the original purpose of higher education—producing well-rounded, versatile civic leaders who shared a common cultural tradition—came to seem anachronistic.

The amazing thing is that liberal education survived at all. It was rescued thanks only to two measures initiated between the late 19th century and World

War II. First, a number of universities made an undergraduate liberal arts education a prerequisite for specialized professional training in law, medicine, and other fields. Second, the study of Latin and Greek was abandoned in favor of study of “the great books” in English translation.

The importance of the first reform was pointed out by the cultural critic Louis Menand in a 2004 lecture, “After the Liberal Arts.” In the early 1900s, Charles Eliot Norton, the president of Harvard, compelled the university’s professional schools to accept only applicants with undergraduate degrees. “Eliot’s reform, once it had been widely adopted, saved the liberal arts,” according to Menand, by making a generalist liberal arts undergraduate education the precondition for a specialized professional education.

The other reform that arguably rescued the liberal arts from extinction was the replacement of study of the classical languages with study of the classics in translation. This reform is associated with President Charles Maynard Hutchins of the University of Chicago, who introduced the “Great Books” program in the 1930s. Columbia University adopted a similar approach at the same time. In addition, Columbia turned a propagandistic World War I course

instructing U.S. servicemen on Western civilization, whose preservation was the supposed goal of the war, into the first of many “Western Civ” core curriculum programs. Classics departments dwindled in resources and prestige as other disciplines assumed many of their functions.

As a result of these reforms, by the mid-20th century a new kind of undergraduate liberal arts education had taken shape in the United States, one that would have puzzled Thomas Jefferson and Cicero. Rhetoric had been downgraded to “composition,” also known derisively as “bonehead English,” and logic was encountered, if at all, in math classes. The chief emphasis was no longer on rhetoric and logic, but on the study of classic and contemporary literature, in English translation rather than in the original languages. The humanities still included history and philosophy. But political science had torn away the study of politics, while political economy, now called economics, also claimed the status of a social science. This tilted the definition of the humanities away from the subjects of practical concern to statesmen and citizens and toward the fine or “creative” arts.

In the 1950s and '60s, this new kind of liberal arts education managed to hold the menace of vocationalism at bay for a while. In the booming post-World War II economy, liberal arts enrollment increased. But by the 1970s and '80s, a troubled economy and an uncertain job market pressured students to focus on career training. At the same time, increased competition for admission to selective professional schools inspired a growing number of undergraduates to follow “pre-professional” tracks.

In recent decades, debates over humanities curriculums and Western Civ courses among multiculturalists, postmodernists, and traditionalists have attracted considerable public attention. But the rival sides are fighting for a few planks from a ship that has already sunk. By the beginning of the 21st century, only three percent of American undergraduates were choosing a liberal arts major. The most popular undergraduate majors in the United States were business (20 percent), education (eight percent), and health care (seven percent).

Today, as so often since the late 19th century, the chief danger to liberal education comes not from radical ideologies but from the utilitarian center, which views the university as the training ground for the U.S. work force. In its attempt to become the governing philosophy of the modern American university, utilitarianism has advanced in two great waves. The first began with the importation of the model of the German research university around 1900. The second, originating after World War II, started with the growth of government and corporate funding of university research, combined with the proliferation of professional schools.

A third wave of utilitarianism may be on its way. The economic and technological progress of China and India already is prompting calls for more emphasis in

TRADITIONALISTS AND multiculturalists in the humanities are fighting for a few planks from a ship that has already sunk.

American education on math, science, and technology, as in the post-Sputnik era of competition with the Soviet Union.

Another factor is demand by students and their parents. Most of the jobs being created in the United States are low-wage, low-prestige service-sector jobs—waiter, food preparer, retail worker, nursing aide—that do not require college degrees. In these circumstances, it is only to be expected that most students going to college will focus on the high-wage professions rather than the liberal arts, and that they will prefer specialized, pre-professional undergraduate courses of study that maximize their chances of admission to elite professional schools.

In an era when business elites and government officials are demanding more scientists and engineers to help the United States compete with Asia, while most students go to college in the hope of obtaining a well-paid job, any project to make the liberal arts the

basis of undergraduate education will almost certainly fail. Insisting on a broad curriculum by means of distribution requirements for all pre-professional students is probably the most that defenders of liberal education can do.

This raises the question: Why have liberal education in the modern world at all? The argument for liberal education, from Isocrates and Cicero onward, has been that the leaders of society, even if they practice one or another profession, need to be well-rounded, well-informed generalists if they are to make sound decisions in public and private life. Even in a society transformed by science and technology, the need for a liberally educated elite remains.

Defending liberal education against the excesses of professionalism in elite schools, then, is a priority. But even if that campaign succeeds, a second question will remain: In a democratic republic, isn't it necessary for all citizens to have at least the basics of a liberal education? Even if their participation in public life is limited to voting occasionally, citizens cannot adequately perform that minimal duty unless they have the training in reasoning, rhetoric, and fact that in aristocratic and patrician republics was needed only by the few.

Is the democratic dream of a gentleman's classical education for every citizen impossible? Not necessarily. The century-long takeover of the university campus by science, business, and the professions cannot be reversed. But the defenders of universal liberal education might consider retreating to the more defensible ground of secondary education.

As we have seen, the demands of liberal education and professional education were balanced for a few generations by universities that made an undergraduate degree a requirement for professional education. But this compromise was already breaking down by the late 20th century, as an increasing number of students who planned to go on to professional school chose specialized vocational or pre-professional bachelor's degrees.

The two-degree system can also be criticized for contributing to inequality in the United States. Whatever its legitimate purposes, the requirement of an expensive four-year undergraduate degree prior to three or more years of law school or medical school has had the effect

of driving up the fees of professionals by restricting the competition. And paying for every American to obtain at least two degrees and to enjoy seven or more years of higher education would be prohibitively expensive.

What if Charles Eliot Norton was right that liberal general education should precede specialized professional education—but wrong about the age range? When the modern research university and the modern professional schools were being introduced in the late 19th century, some American educators argued that the high school rather than the four-year liberal arts college should be the site of liberal education. Indeed, that was the course chosen by the nation that gave us the research university. While most German secondary students today receive an education that is tilted toward the vocational, the elite high school, or *gymnasium*, has long served as the equivalent of the American liberal arts college. College-level liberal arts education is also offered at the secondary level in many other European countries, and even in a handful of America's more rigorous high schools.

At a time when many universities are forced to provide remedial instruction to high school graduates, the idea of a quality basic liberal arts education in high school may seem utopian. But consider the social benefits. Because public high schools are free, every citizen could obtain the advantages of a basic liberal arts education, without the need for wealthy parents, student loans, or scholarships.

In the late 19th century, before Norton's reform, it was possible to go directly to professional schools from secondary schools. At many schools, for example, law degrees were undergraduate degrees. Suppose that this trend had continued. If it were possible to go directly from high school to law school or medical school, there would undoubtedly be more lawyers and doctors from working-class and middle-class backgrounds.

Making high school, rather than the four-year college, the basis of liberal arts education would mark a return to the older Western tradition, in which elite education ended and adult life began much earlier. And because high school attendance is compulsory and universal, the dream of the democratization of liberal education might be achieved, at least in a rudimentary form, in high school rather than in college.

Reforms like these can be debated. Of one thing we can be certain: Liberal education in some form will survive, as long as societies need not only leaders but also ordinary citizens who know how to read, write, and reason. ■

Nuclear Power

Both Sides

AFTER THE ACCIDENT AT THREE MILE ISLAND IN 1979, THE UNITED STATES WROTE off the expansion of civilian nuclear power as a dead issue. Now, with oil prices and anxiety about global warming on the rise, this energy source is getting a long second look. Here, advocates on each side of this complex issue make the case for and against nuclear power. The authors continue the debate with rejoinders at the *WQ* website, www.wilsonquarterly.com.

Nuclear Power Is the Future

BY MAX SCHULZ

IN THE EARLY MORNING HOURS OF MARCH 28, 1979, a pump that provided cooling water to Unit No. 2 at the Three Mile Island Nuclear Generating Station suddenly broke down. The 880-megawatt reactor, located on an island in the Susquehanna River 10 miles from the Pennsylvania capital of Harrisburg, was operating at close to full capacity.

When the cooling pump failed, the turbine and the reactor automatically shut off, as they had been programmed to do. But an entire nuclear power plant doesn't halt operations as easily as one flips a switch. The other parts of the plant that are going full-bore have to ramp down, too, in a carefully managed process. The safe shutdown of a nuclear plant relies partly on automation—an elaborate, sophisticated series of computers, pumps, valves, and mechanical checks and balances—and partly on human oversight.

MAX SCHULZ is a senior fellow at the Manhattan Institute for Policy Research.

As the turbine and reactor at Unit No. 2 turned off, the pressure in the nuclear portion of the plant began to build excessively. In such situations, a valve should pop open, releasing coolant and thereby relieving the pressure. In this case, the valve did. But it failed to close when the pressure decreased. It was stuck.

Worse, according to the federal government's subsequent investigation, "signals available to the operator failed to show that the valve was still open." As a result, "cooling water poured out of the stuck-open valve." As coolant continued to escape, unbeknownst to the engineers in the control room, the reactor began to overheat. It was melting down, and, terrifyingly, Three Mile Island's overseers didn't know it.

After that accident 27 years ago, a consensus quickly emerged that nuclear energy was too inherently dangerous for the United States to pursue a future powered by splitting the atom. More than 60 nuclear reactor units at various stages in the permitting and construction pipeline were

canceled in the aftermath of Three Mile Island. So complete was this rout that not a single new nuclear power plant has been ordered since. The disaster at Chernobyl in the Soviet Union seven years later seemed merely to confirm that nuclear power was dead.

The obituaries written for U.S. nuclear power in the wake of Three Mile Island were, however, premature. True, the industry suffered greatly, but it did not die entirely. In fact, under the radar, nuclear energy production has actually *expanded*. In 2005, the 103 U.S. commercial nuclear reactors operating in 31 states generated 782 billion kilowatt-hours (kWh), three times more power than in 1979.

Not every nuclear plant in the pipeline was cancelled after Three Mile Island. In fact, there are 50 percent more commercial nuclear reactors in operation today. More important, massive gains in operating efficiency have helped boost nuclear plants' output. At the time of the accident, nuclear facilities ran at about 60 percent of their capacity; they were offline for several months a year for refueling and maintenance. Today this work is done in weeks, not months, and plants can run at nearly 90 percent of capacity. From 1990 to 2002, these gains helped add the equivalent of 26 new, standard-sized 1,000-megawatt nuclear power plants to the U.S. power supply system.

While the United States has been suffering its crisis of confidence about nuclear energy, much of the rest of world has shrugged off such anxieties. Today, more than 300 nuclear reactors produce electricity in nearly 30 other countries. The vast majority have come online since Three Mile Island. More than 130 new plants are under construction worldwide.

Now, the United States seems poised to catch up. Today, we routinely hear about a "renaissance" or "revival" of nuclear energy. The recognition that nuclear power is vital to global energy security in the 21st century has been growing for some time. Public opinion on the relative dangers and benefits of atomic energy is shifting, particularly in the United States. Opinion polls routinely show that a majority of Americans support nuclear energy. That support translated into favorable provisions in the Energy Policy Act of 2005, which specialists claim will facilitate the construction of new nuclear plants in the United States. Within the next 10 years, we are told, we should see the first new nuclear power plant in decades get licensed and built.

But such a renaissance is not a sure thing. Legitimate questions remain about safety, about the licensing process for new reactors, and, most important, about how to handle and where to store spent nuclear fuel. Failure to answer these questions adequately could imperil the nuclear revival so many have proclaimed is nigh.

The beauty of nuclear fission is its ability to derive so much from so little. The energy density of nuclear fuel far exceeds that of any other energy source. As my Manhattan Institute colleague Peter Huber has noted, "A bundle of enriched-uranium fuel rods that could fit into a two-bedroom apartment in Hell's Kitchen would power [New York City] for a year: furnaces, espresso machines, subways, streetlights, stock tickers, Times Square, everything—even our cars and taxis, if we could conveniently plug them into the grid."

Pound for pound, coal stores twice as much energy as wood. Oil packs the same amount of energy that coal does into half the weight and space. But a gram of uranium 235 contains as much energy as four tons of coal. This is why splitting the atom was key to inventing the new type of bomb that could win World War II. And it is why President Dwight D. Eisenhower, an early proponent of commercial nuclear power, could argue that atomic energy might transform medicine, agriculture, and, in particular, electricity generation. It succeeded on all counts.

At times, enthusiasm for nuclear power's potential bordered on the hyperbolic. In 1954, the chairman of the Atomic Energy Commission famously predicted in a speech to science writers, "Our children will enjoy in their homes electrical energy too cheap to meter." Though to this day there remains speculation about whether he was referring to nuclear fission or perhaps to something farther off in the future, such as fusion power, the "too-cheap-to-meter" promise has been attached to commercial nuclear power generation ever since. It is cited frequently by antinuclear activists as evidence that the technology's proponents have their heads in the clouds.

Just as there is no such thing as a free lunch, there is no such thing as "too cheap to meter"—though in some respects nuclear energy isn't all that far off the mark. The generation of electricity from nuclear power entails significant costs. By and large, however, these are capital investments having to do with construction and trans-

mission. Because a plant requires so little uranium to generate so much power, once a nuclear plant is built—and the expected life span of a conventional reactor is 40 to 60 years, perhaps longer—the price of fuel is close to irrelevant in figuring the cost of electricity. The nuclear industry boasts of providing some of the cheapest electricity on the grid, at an average production cost (after a plant is built) of less than 1.8 cents per kWh. These costs are close to 40 percent lower than they were just two decades ago.

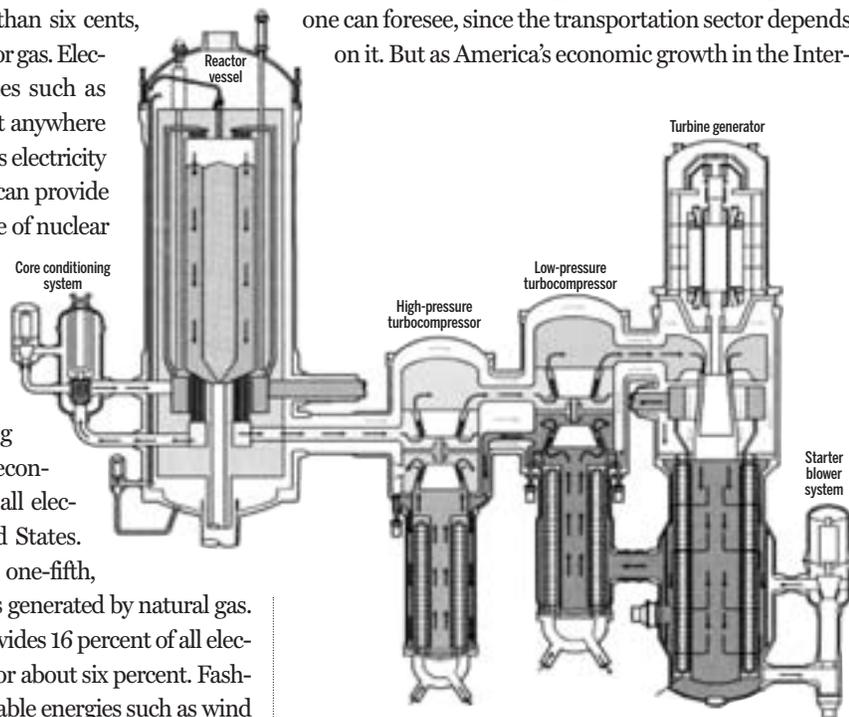
On its merely pecuniary merits, then, nuclear power looks pretty good compared to the alternatives. Electricity generated from natural gas can cost anywhere from three cents per kWh to more than six cents, depending on the market price for gas. Electricity from renewable energies such as wind, solar, or biomass can cost anywhere from two to six times as much as electricity from nuclear power. Only coal can provide electricity at prices to rival those of nuclear energy, but coal has evident environmental drawbacks tied to pollution and climate change.

Given the economics, it is little wonder that nuclear power has gained a strong foothold in America's energy economy. Coal accounts for half of all electricity generated in the United States. Nuclear power's share is about one-fifth, roughly as much electricity as is generated by natural gas. (Worldwide, nuclear power provides 16 percent of all electricity.) Hydropower accounts for about six percent. Fashionable but uneconomic renewable energies such as wind and solar power generate less than half of one percent of America's electricity.

Total world energy demand is expected to double by 2050. Over the next two decades, global appetites for electricity are expected to increase 75 percent over current levels. Electricity demand is predicted to skyrocket in the United States as well, continuing a recent trend that has gone largely unnoticed by many pundits and energy industry observers. Though the news media constantly broadcast our angst about reliance on petroleum, particularly oil from the Middle East, the most significant energy development in recent times has been the increasing electrification of America's amazing economic engine. More than 85 percent

of the growth in U.S. energy demand in the last quarter-century has been met not by oil but by electricity, most notably in the information technology and telecommunications industries. Today, nearly three of every five dollars of U.S. gross domestic product come from industries and services that run on electricity. In 1950, just one in five dollars of GDP was dependent on electrical power.

This shift from oil to electricity points to the gradual fulfillment of President George W. Bush's goal, expressed in the 2006 State of the Union address, that our nation "move beyond a petroleum-based economy." Oil will remain critical to the energy economy for as long as anyone can foresee, since the transportation sector depends on it. But as America's economic growth in the Inter-



Pebble-bed reactors, still under development, are fueled by graphite-encased uranium pebbles (in the reactor vessel at left) rather than rods, reducing waste products as well as the risks of meltdown and proliferation.

net age continues, sparked by electrons dancing along wires and fiber-optic cables, it will require ever more massive amounts of electricity. Nuclear power seems a promising solution to this need.

The questions about nuclear power, however, are not merely economic. If they were, there would be little controversy about whether to split atoms. Since Hiroshima and Nagasaki, during the Cold War, and particularly in the wake of Three Mile Island and Cher-

nobyl, legitimate inquiries into the safety, security, and environmental effects of nuclear energy have dominated the debate.

With regard to the incidents at Three Mile Island and Chernobyl, these objections don't quite seem fair. Opponents of nuclear energy seized on these episodes to argue that nuclear power is inherently unsafe, and they found a receptive audience in the United States and Europe. But a closer examination of the two events tells a different story.

God willing, Three Mile Island will be remembered as the worst nuclear accident in American history. But nobody

THE ARGUMENT THAT nuclear power should be a critical component in dealing with climate concerns is quite new.

died. Nobody was even injured. Despite the scary-sounding partial core meltdown that occurred, the nearby community was never really endangered. The massive concrete containment structures that are standard on almost all nuclear reactors did their job and ensured that no radiation leaked.

Chernobyl was different. The 1986 accident spiraled out of control partly because of human error by the Soviet-trained engineers, but more because of the nuclear plant's tragically flawed design. Many reactors built in the Soviet era, as Chernobyl was, did not feature the containment buildings found at virtually every other facility around the world. A toxic plume of radioactive fallout drifted across the Soviet Union, the rest of Europe and Asia, and even as far as North America. Hundreds of thousands of people in Ukraine and Belarus were forced to relocate permanently. Several dozen people perished in the first few months after the accident. A recent United Nations report suggested that as many as 4,000 people will die from radiation-induced cancers tied to the disaster. Had Chernobyl been built with the containment structures standard in nuclear reactors the world over, that tragedy could have been avoided.

Still, the critics of nuclear power are right: Nuclear power *is* dangerous. Dealing with radioactive materials entails very real peril. Concerns about the proliferation of materials, technology, and nuclear know-how are by no means

unfounded. And for all of the nuclear industry's protestations about its safety record amassed almost 3,000 years of collective reactor operating experience, that record will mean nothing if even one catastrophe occurs. As one industry trade group executive recently acknowledged, "With nuclear energy, an accident anywhere is an accident everywhere."

In truth, every energy source has drawbacks, many related to safety. A large pile of coal, left alone, eventually will smolder and combust. Petroleum is highly flammable. Windmills kill birds and, arguably, disrupt the Navy's sonar. Hydroelectric dams kill fish, divert rivers, and threaten ecosystems with soil erosion. The question isn't whether the dangers associated with nuclear energy outweigh those from coal or petroleum or the Grand Coulee Dam. Of course they do. The question is whether the enormous benefits derived from nuclear power—which

pound for pound outweigh those of any other fuel or energy technology—are worth accepting its risks.

Critics also cite concerns about the spread of dangerous nuclear waste that can be used to manufacture nuclear weapons. But the latest technology research is geared toward developing systems that resist proliferation. China and Russia are expected to join the United States, France, Canada, Japan, Britain, and other nations later this year in the Generation IV effort, an international consortium explicitly devoted to fostering technologies that limit proliferation risks.

Meanwhile, South Africa and China are pioneering the development of smaller, "pebble-bed" reactors that operate differently from reactors typically found in the United States. Pebble-bed reactors use uranium-specked graphite balls, rather than rods, for fuel. Conventional fuel rod assemblies must be removed before they are completely used up, but pebble-bed fuel balls burn until they are depleted, lessening the chance for trafficking in dangerous nuclear waste.

In addition, the Bush administration has proposed a new method for reprocessing spent nuclear fuel. Reprocessing traditionally has entailed recycling the remaining uranium from spent fuel rods after removal from a reactor and using it as additional fuel. But the procedure used to separate the uranium for reuse also produces small amounts of

weapons-grade plutonium. For that reason, President Jimmy Carter banned the reuse of spent fuel in the United States as a proliferation risk. Today, spent nuclear fuel is stored on-site at nuclear plants, awaiting final disposal upon the completion of the Yucca Mountain nuclear waste repository in the Nevada desert.

The Bush proposal, however, seeks to develop a promising new technology for recycling spent fuel in a manner that renders the material suitable for use as nuclear fuel but not for use in nuclear weapons, thereby eliminating the risk. If successful, this technology could not only help make nuclear energy safer, but could also extend its benefits to the far reaches of the globe.

The equation skews more decidedly in favor of nuclear power with the introduction of the environment as a factor. Electricity generated by nuclear power plants gives off no emissions: no sulfur, no mercury, and, most important, none of the greenhouse gases, such as carbon dioxide (CO₂), thought to contribute to climate change.

Roughly 700 million metric tons of CO₂ emissions are avoided each year in the United States by generating electricity from nuclear power rather than some other source. According to the U.S. Department of Energy, that is nearly equivalent to the CO₂ released from all U.S. passenger cars.

The argument that nuclear power should be a critical component in a strategy to deal with concerns about climate change is quite new. Certainly, it was not anything that occurred to Eisenhower when he crafted his *Atoms for Peace* message for a postwar era. Nor was it much on the radar screen in the 1970s when concerns about global cooling were in vogue. And even those who have raised the specter of global warming most alarmingly by and large haven't embraced the potential of nuclear energy. Former vice president Al Gore, who has stated that global warming ultimately is a greater threat than terrorism, pointedly refuses to endorse expanded use of nuclear power.

Yet some longtime opponents are overcoming their fear of atomic energy. Patrick Moore, one of the founders of Greenpeace, recently declared his support for nuclear energy as "the only large-scale, cost-effective energy source that can reduce [greenhouse-gas] emissions while continuing to satisfy a growing demand for power." British prime minister Tony Blair, an enduring critic of nuclear power, this

spring signaled his government's support for expanding nuclear energy production.

Today, it is the global climate change argument that clinches the case in favor of nuclear power. If, as Gore asserts, combating climate change is our highest priority, and if the future of civilization itself is at stake, then nuclear power must play a significant and expanded role not just in America's energy mix but in the world's.

For all of nuclear energy's apparent advantages (even when weighed against its risks), its renaissance faces several challenges. The chief question is what to do with the waste. Political squabbling has pushed back the opening of Yucca Mountain, the disposal facility the Department of Energy began contemplating in 1978, to 2017 at the earliest, and even that date is in doubt. The country's reactors have accumulated 55,000 metric tons of nuclear waste in temporary storage, and many are running out of space. Failure to open Yucca Mountain or otherwise solve the waste question could force some reactors to shut down and discourage investors from supporting new nuclear plants.

Meanwhile, the nuclear licensing process must be improved. Last year's energy bill streamlined procedures somewhat, but the Nuclear Regulatory Commission must get serious about processing license applications in a timely manner. Delays caused by red tape and bureaucratic foot-dragging could send private investment elsewhere.

The 21st century will be marked by a near-insatiable thirst for energy around the world, particularly in the large and growing economies of the United States, China, and India, and among the large-scale consumers of industrial Europe. At the same time, the developing world will greatly benefit if granted access to cheap, reliable sources of energy. According to the United Nations, 2.4 billion people lack access to modern energy service for cooking and heating. Roughly 1.6 billion—about a quarter of the world's population, including most of sub-Saharan Africa—have no access to electricity at all.

Nuclear power alone is positioned to help meet the world's burgeoning energy demand and supply electricity to the power-starved areas of the world in a manner that safeguards the environment. It alone can raise standards of living on every continent while emitting no pollutants or greenhouse gases. It is the best candidate among many to help raise more than a billion people out of darkness and grinding poverty, and to do so in a way that does no harm, but only good. ■

Nuclear Is Not the Way

BY BRICE SMITH AND ARJUN MAKHIJANI

DECADES AFTER THE PROMISE OF NUCLEAR energy “too cheap to meter” was swamped in a sea of red ink and trampled by the Three Mile Island accident in 1979, the nuclear power industry is seeking to reinvent itself by claiming that it will help save the world from the perils of global warming. It has found an ally in the Bush administration, which has spurned the Kyoto Protocol as too costly even as it beats the drum for nuclear power at home and abroad. Last year, the administration persuaded Congress to pass an energy bill authorizing billions of dollars in potential subsidies for new nuclear power plants.

Could nuclear power really help save the world from what is arguably the worst environmental scourge ever to confront humanity? History suggests the need for two things: caution about the nuclear industry’s messianic proclamations, and careful analysis.

The technical facts are reasonably clear. In the United States, the largest source of carbon dioxide (CO₂), the most important greenhouse gas, is the electric power sector, followed closely by transportation. Together, these sectors accounted for nearly 72 percent of U.S. greenhouse-gas emissions in 2004. Coal, the dirtiest of the fossil fuels, supplies 50 percent of U.S. electricity. By contrast, nuclear power emits far lower levels of CO₂, even when uranium mining, enrichment, and fuel fabrication are taken into consideration.

At first blush, these facts would seem to support the promoters of nuclear energy. But a shortage of low- or zero-CO₂ sources of energy is not the problem we face in confronting

BRICE SMITH is an assistant professor of physics at the State University of New York, Cortland, and the author of *Insurmountable Risks: The Dangers of Using Nuclear Power to Combat Global Climate Change* (2006). ARJUN MAKHIJANI is president of the Institute for Energy and Environmental Research in Takoma Park, Maryland, and the principal author of *Nuclear Power Deception: U.S. Nuclear Mythology From Electricity “Too Cheap to Meter” to “Inherently Safe” Reactors* (1999).

global warming. The scarce commodity is money. What will give the biggest bang for the global warming buck? A related question: What other problems may be created in the process of reducing CO₂ emissions? Any energy source must meet the tests of safety, reliability, and cost. In addition, there are unique problems associated with nuclear energy: the potential for nuclear weapons proliferation arising from the fact that developing and using nuclear power creates the twin byproducts plutonium (in the spent nuclear fuel) and nuclear know-how. Moreover, an expansion of nuclear power would require a vast increase in the world’s uranium enrichment capacity—the very technology that the United States and other countries now desperately want to prevent Iran from acquiring. While commercial-power reactor fuel cannot be used in a nuclear bomb, commercial enrichment plants can be reconfigured to produce weapons-grade uranium.

Taken together, cost, proliferation, and accident risks made the promise of nuclear power as a “magical” energy source, as Alvin Weinberg, the first director of Oak Ridge National Laboratory, once put it, evaporate the first time around. How serious will these risks become if nuclear power has a second life?

The most important consideration is how many nuclear plants would be needed to significantly reduce future CO₂ emissions. A 2003 study by researchers at the Massachusetts Institute of Technology, *The Future of Nuclear Power*, considered a reference case in which 1,000 one-gigawatt (GW) nuclear plants would be in operation around the world by 2050. (A gigawatt is enough electricity to power a U.S. city of half a million.) Even with such an increase, however, the proportion of electricity supplied by nuclear power worldwide would rise only slightly, from about 16 percent in 2000 to about 20



Two of the four cooling towers at the Three Mile Island nuclear plant stand idle, reminders of America's worst nuclear accident, which occurred in April 1979.

percent in 2050. As a result, the number of fossil fuel power plants, and thus the amount of CO₂ emissions, would continue to increase.

A more serious effort to limit carbon emissions through the use of nuclear power would require a larger number of reactors. In *Insurmountable Risks: The Dangers of Using Nuclear Power to Combat Climate Change* (2006), one of us used the same projected growth in electricity demand employed in the MIT report to estimate the number of reactors required simply to maintain the electricity sector's CO₂ emissions at their 2000 levels. Some 2,500 one-GW nuclear plants would be needed by mid-century. To meet that goal, one plant would have to come online somewhere in the world every six days between 2010 and 2050.

The largest risk of such an expansion of nuclear power is likely to be the increased potential for proliferation of nuclear weapons. It has been known since the dawn of the nuclear age that nuclear power

and proliferation are inextricably linked. In order to fuel 2,500 reactors, the world's uranium enrichment capacity would need to increase by approximately six times. Just one percent of that capacity could supply enough highly enriched uranium to create 500 nuclear weapons every year. The Iranian enrichment facility at Natanz that has created an international uproar and rumblings of war would, if completed, represent less than 0.1 percent of the enrichment capacity needed to fuel 2,500 reactors. If the plutonium in the spent fuel discharged from that number of reactors *each year* was separated, it would be enough to make more than 60,000 nuclear bombs, about twice the number in the world's nuclear arsenals today.

Proposals to reduce proliferation risks require intrusive inspections and a consensus that countries will not use commercial technology for weapons purposes even in a crisis. The 1970 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) gives more

than 180 non-nuclear weapon states that are signatories the “inalienable right” to nuclear power technology. It also requires the five recognized nuclear-armed states that are signatories to get rid of their weapons, according to a World Court advisory interpretation of the NPT. Yet the United States and the other four powers show no signs of moving toward fulfillment of that commitment. Without a clear movement toward disarmament, the desire for at least the potential to build nuclear weapons will remain widespread, and the acquisition of commercial nuclear technology will remain the most attractive means of keeping that potential alive. No overt move toward nuclear weapons is required. But it is interesting that Brazil opened a commercial uranium enrichment plant in 2005 and Argentina has announced that it is returning to pursuit of commercial enrichment.

The Bush administration’s proposed Global Nuclear Energy Partnership may be accelerating the trend toward national nuclear capability. The proposal, which the administration is pursuing in cooperation with Russia, is to have countries with existing facilities supply fresh fuel to other countries and take back the spent fuel under international guarantee. Essentially, the proposal would void the “inalienable right” guarantee for those countries without enrichment or plutonium separation technology.

Another unique danger of nuclear power is the potential for a catastrophic accident or well-coordinated terrorist attack to release a large amount of radiation. Such a release could have severe health and environmental consequences, as the 1986 Chernobyl accident showed. The accident at Three Mile Island was not a radiological catastrophe of Chernobyl’s magnitude because the secondary containment (the concrete wall encasing the entire reactor structure) held. But even an accident without a breach of the secondary containment would cost a great deal.

The Three Mile Island accident was followed by a rapid escalation of nuclear power plant costs, partly because of necessary new safety rules and partly because of rapidly rising interest rates. The largest bond default in utility history, which was a major element in the collapse of Chemical Bank, occurred

in the early 1980s because of unrecoverable investments in canceled nuclear power reactors in Washington State. The accident and the bond default figured significantly among the factors that made Wall Street skittish about financing more nuclear power plants, and that hesitation persists today.

The risk of an accident is very difficult to estimate. The calculations rely on estimates of failure where data are scant; the result is that there are many subjective factors in such estimates. William D. Ruckelshaus, the head of the U.S. Environmental Protection Agency under Presidents Richard M. Nixon and Ronald Reagan, cautioned that “risk assessment data can be like the captured spy: If you torture it long enough, it will tell you anything you want to know.”

Uncertainties in risk estimates make it much more difficult for Wall Street to assess the risk that an investment will go sour. As Peter Bradford, a former commissioner of the Nuclear Regulatory Commission, told *The New York Times* last year, “The abiding lesson that Three Mile Island taught Wall Street was that a group of NRC-licensed reactor operators, as good as any others, could turn a \$2 billion asset into a \$1 billion cleanup job in about 90 minutes.”

In the nearly 3,000 reactor-years of experience at U.S. nuclear plants, there have been one partial core meltdown and a number of near misses and close calls. By comparison, the total number of reactor-years worldwide if 2,500 reactors were to be built between now and 2050 would be roughly 46,000, assuming a constant rate of growth. Using the median accident probability derived from the American experience, and assuming that future plants will be 10 times safer than today’s, we find a likelihood of better than one chance in two that at least three accidents comparable to the one at Three Mile Island would occur by midcentury. A single severe accident by itself could bring the whole approach of using large numbers of nuclear reactors to a screeching halt, leaving plans for CO₂ reduction in disarray.

Finally, there is the difficulty of managing radioactive waste. Building 2,500 reactors by 2050 would lead to nearly a quadrupling of the average rate at which spent fuel is generated. Assuming a constant rate of growth, one repository with the legal capacity of the U.S. government’s Yucca Mountain facility in Nevada would have to come online somewhere in the world every three years. The seri-

ousness of that challenge is illustrated by the fact that Yucca Mountain itself is years from being operational. Its opening was originally scheduled for 1998. It is now set, at the earliest, for 2017, and even that target is unlikely to be met. And the U.S. Department of Energy has already spent nearly \$9 billion on Yucca Mountain—money that federal law requires nuclear utilities to charge their ratepayers. In the meantime, the cost of storing spent fuel at the country's 66 reactor sites has been soaring, and utilities have sued the Energy Department for breach of contract for not removing their spent fuel. The lack of a repository has become a major stumbling block to the expansion of nuclear power.

Alternatives to repository disposal are unlikely to be feasible. Reprocessing the spent fuel, as some propose, would greatly increase the dangers of nuclear power because it involves the separation of weapons-usable plutonium from fission products. While proponents claim that reprocessing would greatly reduce the space needed for a repository, the claim depends largely on the assumption that uranium, which constitutes 95 percent of the weight of spent fuel, would be disposed of in shallow storage facilities of the type used for "low-level" radioactive waste, even though it is far too radioactive for such disposal.

The authors of the 2003 MIT study argued against reprocessing. Instead, they proposed interim storage of nuclear wastes accompanied by expanded research on a technique called deep borehole disposal. At several thousand feet, the boreholes would be deeper than a typical geologic repository, and in concept, each borehole would contain less spent fuel while the great depth would produce smaller environmental impacts. But the costs and pitfalls of this strategy are not yet well understood.

Committing to a large increase in the rate of waste generation based only on the potential plausibility of a new waste management strategy such as deep boreholes would be to repeat the central error of the past. The concept of repositories like Yucca Mountain dates back to at least 1957, but not one spent fuel rod has yet been permanently disposed of.

Even with optimistic but plausible assumptions for

cost improvements, nuclear power is likely to remain an expensive source of electricity compared to fossil fuels. According to the 2003 MIT study and a 2004 study by researchers at the University of Chicago, both of which advocated the pursuit of nuclear power, electricity from new nuclear plants is likely to cost between six and seven cents per kilowatt hour (kWh). By contrast, new coal fired plants produce power at about four cents per kWh (without CO₂ sequestration). Proponents of nuclear power speak of further cost improvements, but these remain speculative. Rising interest rates and skepticism on Wall Street, the ultimate underwriter of any nuclear expansion in the United States, suggest that costs actually could be much higher.

Are there any reasonable alternatives that can reduce CO₂ emissions for the same cost? Of the available near-term options (i.e., those likely to be available during the next 10 years), the two most important in the United States are an increase in efficiency and an expansion of the develop-

WIND POWER AT favorable sites in the United States is already cost competitive with natural gas and new nuclear power.

ment of wind power. Efficiency is a no-brainer, since it comes without any price tag—in fact, it comes with a net economic gain. So we will assume that any approach would adopt all economical efficiency measures. What about supply?

At approximately four to six cents per kWh, wind power at favorable sites in the United States is already competitive with natural gas and new nuclear power. With the proper priorities on upgrading the transmission and distribution infrastructure and changing regulations, wind power could expand rapidly. Without any major changes in the existing electricity grid, wind power could generate 15 to 20 percent of the U.S. electricity supply—almost the same fraction as nuclear power now supplies. In other words, wind energy can accomplish what nuclear advocates claim, at a lower cost, and without the proliferation headaches, so long as the total amount of wind energy is less than about 20 percent. (Because wind is an intermittent

energy source whose availability varies from day to day, boosting wind's share of the electricity supply in the United States beyond these levels would require the development of new energy storage facilities.) Wind energy development in sensitive or scenic areas is not necessary to achieve this. The potential wind energy supply in the Midwest, Southwest, and Rocky Mountain states, where the prospect of substantial royalties makes turbines very attractive to farmers and ranchers, is two-and-a-half times total U.S. electricity generation and 12 times total U.S. nuclear power generation.

As for solar power, recent technological breakthroughs in thin-film solar cells promise to lower costs from about \$5 or \$6 per peak watt today to only \$1 to \$1.50 per peak watt in less than five years. (A peak watt is a measure of output at the peak of sunshine in the summer.) This would put solar in about the same cost category as wind. But solar has the advantage of low transmission and distribution costs, since the units can be located right where their output is used. On-site solar can be put into the same grid as off-site wind in an arrangement called a "distributed grid." Such a grid can reduce the fluctuations associated with each of these intermittent power sources by capitalizing on the fact that they often do not fluctuate in tandem.

Still, intermittency remains a challenge. For instance, there are many times when the wind falls off after sunset, but electricity is still needed. The problem can be overcome in two ways. The first is to invest in some form of storage. The second is to install capacity that can operate on demand—that is, capacity that is not dependent on the weather. These can be used in complementary fashion.

The most immediately available form of storage is pumped hydropower. Wind and solar electricity can be used to pump water into existing reservoirs, from which hydroelectricity could be generated during periods of insufficient sunlight or wind. Also immediately available are gas turbines and "combined-cycle" power plants; these are already in use today. Natural gas is now so expensive as a fuel that it would pay to idle a part of existing capacity of gas-fired power plants to keep it available for use when electricity generated from the wind and sun is not available in sufficient amounts. When used together, wind, sun, pumped hydro, and natural gas can provide as large a share of electricity as coal does today (about 50 percent) for about the same cost as new

nuclear power. And that's only at current prices. In the future, nuclear power will likely be more expensive than promised, while wind and solar costs have been coming down steadily and are likely to continue falling.

Yet another non-nuclear route to reducing CO₂ emissions lies in applying new techniques and technologies to today's largest and dirtiest source of electricity. Integrated gasification combined-cycle (IGCC) plants turn coal into a gas that can be burned, making it easier to capture coal-related pollutants, including toxic metals such as mercury, and, most important, CO₂. The captured CO₂ can be injected into geologic formations, such as exhausted oil and gas fields, where it is estimated they can remain for centuries or longer. Injection is not an exotic technique; it has been used as a way to enhance oil recovery since at least 1972. And the energy industry has demonstrated the feasibility of sequestering CO₂ at both the Sleipner gas fields in the North Sea and the In Salah natural gas fields in Algeria. The Sleipner sequestration project began after the imposition of a tax on carbon emissions by the Norwegian government, and the In Salah project was undertaken, in part, to further demonstrate the viability of geologic storage of CO₂. While the costs of such strategies are more uncertain than those of other mitigation options, estimates of the cost of electricity from IGCC plants with carbon sequestration range from 4.2 to 8 cents per kWh. Of course, this technique does not overcome other disadvantages of coal, such as the destruction wrought by surface mining, which can only be mitigated by government regulation.

Physics was never an obstacle to nuclear power. In theory, fission could be the world's biggest source of electrical power. But the nuclear promise was defeated by engineering realities that led to high costs, the risk of accidents with consequences for many generations, waste disposal headaches, and, most worrisome of all, a much increased potential for the proliferation of nuclear weapons. To rely upon nuclear power to combat global warming would pose risks so severe that they should, by any sensible accounting, be unacceptable, given that safer alternatives exist. These alternatives are not cost free. But if our children don't like to look at windmills or solar panels, they can always do away with them. The same cannot be said of nuclear weapons and nuclear waste spread to the far corners of the world. ■

In ESSENCE

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FOREIGN POLICY & DEFENSE

Iraq's Disappearing Oil

THE SOURCE: "How Iraqi Oil Smuggling Greases Violence" by Bilal A. Wahab, in *Middle East Quarterly*, Fall 2006.

IN LATE AUGUST, A BATTLE BETWEEN the Iraqi Army and the militant Shia Mahdi Army diverted the attention of pipeline guards in Diwaniya, 100 miles south of Baghdad, and at least 67 people were killed when a looter flipped on his cigarette lighter to check the level of siphoned gasoline in his jerrycan.

In a 24-hour period in April in Rabiya, police stopped and confiscated 1,200 tanker trucks that were smuggling oil across the nearby border into Syria.

In the Persian Gulf, near Basra, two Iraqi government ships were attacked by Iranian naval vessels when they tried to stop a steamer smuggling oil.

These incidents illustrate the central role of oil in a web of corruption and criminality that is helping to destabilize Iraq, according to Bilal A. Wahab, a Kurdish Fulbright fellow at American University. Iraq's oil

wealth was supposed to pay for the nation's reconstruction. Instead, it is breeding violence and corruption and financing the country's slide toward chaos and civil war.

Corruption in the oil business is hardly new. The Revolutionary Council of Saddam Hussein's Baath Party allocated five percent of the nation's oil revenues to a party slush fund, and oil was controlled by his supporters and family. Between 1997 and 2003, Saddam's government took in more than \$8 billion in illicit oil revenues when oil proceeds were supposed to be spent on food and other humanitarian needs.

The collapse of Saddam's government drove smuggling operations underground, Wahab writes. The security vacuum after the invasion helped the existing smugglers and created new opportunities for criminal gangs. After the Iraqi police seized 400,000 barrels of crude oil being illegally shipped to Syria this past April, Dawud al-Baghistani, head of the Commission on Public Integrity in Mosul, said he was

offered \$1 million to release a \$28 million shipment of contraband. Significant numbers of government officials are said to have dirty hands. Fifteen judges have been murdered after investigating instances of corruption and criminality.

Insurgents attack Iraqi oil pipelines in part to force the government to rely on trucks—a business controlled by smugglers, who usually pay protection money to the insurgents. Fuel smuggling may have cost Iraq between \$2.5 and \$4 billion in 2005 alone, according to Wahab. Independent specialists have said that at the peak of production, in 1978, Iraq was pumping 3.5 million barrels of oil a day. Now the figure is estimated to be about two million barrels and barely holding steady. About 10 percent of Iraqi oil is lost to smuggling.

Smugglers get a second shot at Iraq's oil wealth when the country imports as refined products some of the crude oil it originally sent abroad. Iraq's huge consumer subsidies—it sells diesel fuel at less than three cents per gallon to its citizens, even as diesel fetches at least \$1 on the black market—practically invite smugglers to ship as much dirt-cheap diesel fuel and gasoline as they can across the border to neighboring countries

where prices are higher. In Iraq, with the second-largest oil reserves in the world, ordinary citizens are forced to wait in lines up to 24 hours to fill up their gas tanks.

FOREIGN POLICY & DEFENSE

Not-So-Great Guns

THE SOURCE: "Coming Full Circle: Replacing the 9mm with the .45 Caliber Pistol" by Maj. Craig R. Wonson, in *Marine Corps Gazette*, July 2006.

IN 1985, WHEN THE U.S. MILITARY changed its standard sidearm from the Colt .45 pistol to the Beretta M9 9mm, the decision seemed sound. The .45 had been in service since 1911, and though it was effective in battle, it was also much criticized: Its strong recoil made it difficult for inexperienced shooters to manage, it was too large for small hands, it was tricky to clean, and its single-action firing mechanism was a safety hazard. Not only was the M9 easier and safer to use, it also held twice as many rounds, and its 9mm ammunition

was the same size as the standard NATO cartridge, as well as cheaper and lighter.

But according to Maj. Craig R. Wonson, future operations planner with the First Marine Expeditionary Force in Iraq, one crucial factor was overlooked in the selection of the 9mm pistol: the weapon's effectiveness—or lack thereof—in "stopping" an enemy combatant. Now, with close-quarter combat becoming "the norm" for American troops in Iraq and Afghanistan, Wonson says, the 9mm pistol has been seeing a lot of use, and it is not getting rave reviews. "Recent reports of the M9's subpar performance . . . have left Marines with little confidence in the weapon," he writes.

The shortcomings of the 9mm will not come as news to federal, state, and local law enforcement agencies. Many of them once used the 9mm but switched to larger-caliber sidearms, including the .45, after incidents such as a disastrous 1986 FBI shootout in Miami in which suspects suffered multiple gunshot wounds but were still able to kill two agents.



The safer, cheaper, and lighter Beretta pistol, chosen 20 years ago over the clunky Colt .45 for military use, often fails to stop enemies in close-quarter-combat conditions such as those in Iraq.

The problem is "stopping power"—the gun's ability to take an opponent out of a fight immediately. Advocates of the 9mm argue that although it does not do as much damage as the .45, other factors—such as the "neurological effect" of a bullet entering the body, the pain of a gunshot wound, and skillful shot placement—should be sufficient to stop an enemy. Not so, says Wonson, especially if the enemy has taken drugs such as methamphetamines, as is reportedly the case sometimes in Iraq. And accurate shot placement is a risky thing to depend on in the less-than-ideal conditions of an actual fight.

Wonson advocates a return to a .45. Newer models by other manufacturers are easier to use than the old Colts, and just as effective. Indeed, the military had to learn this lesson once before: The switch to the .45 in 1911 came after smaller-caliber pistols failed to do the job in battle.

FOREIGN POLICY & DEFENSE

Saving Sanctions

THE SOURCE: "Making Sanctions Humane and Effective" by Uli Cremer, in *Internationale Politik*, Summer 2006.

TODAY'S LIBERALS EXPRESS far less confidence in the efficacy of international sanctions than did Woodrow Wilson, who said in 1919 that "a nation boycotted is a nation in sight of surrender." Sanctions are only as effective as the political will to implement them, writes Uli Cremer, the former foreign policy spokesman for Germany's Green Party, and many existing and aspiring trading partners of sanctioned countries are weak reeds indeed.

The United States indulged in “sanctions excess” in the 1990s, Cremer says, and the rest of the world was happy to capitalize on America’s actions. When Congress prohibited U.S. firms from doing business with Iran in 1993, French, Russian, Malaysian, and Chinese companies seized the opportunity.

Unilateral sanctions are almost always ineffective, but even multinational actions work no more than half the time, according to research cited by Cremer. Every relevant nation must be on board. Even then, sanctions often hurt the wrong people—the weak within the sanctioned nation, as well as nearby

trading partners. When the United Nations imposed sanctions on Yugoslavia in the 1990s, neighboring Romania claimed that it suffered \$10 billion in damages.

Cremer advocates a “United Nations Sanctions Compensation

EXCERPT

Evangelical Foreign Policy

Evangelical power is here to stay . . . and those concerned about U.S. foreign policy would do well to reach out. As more evangelical leaders acquire firsthand experience in foreign policy, they are likely to provide something now sadly lacking in the world of U.S. foreign policy: a trusted group of experts, well versed in the nuances and dilemmas of the international situation, who are able to persuade large numbers of Americans to support the complex and counterintuitive policies that are sometimes necessary in this wicked and frustrating—or, dare one say it, fallen—world.

—WALTER RUSSELL MEAD, a senior fellow at the Council on Foreign Relations, in *Foreign Affairs* (Sept.–Oct. 2006)

Fund” of about \$20 billion, underwritten by annual contributions from all UN members, to compensate legitimate trading partners and others and remove the economic imperative to cheat. He also calls for scrutinizing claims and ensuring that the

money is not siphoned off to the politically well-connected. In Iraq, where the nation’s own oil sales were used to finance a UN compensation fund between 1992 and 2000, a committee plowed through 2.6 million applications and reduced valid claims to only one percent of the requests, but “political approvals” increased final payouts above the original figures. Such massive corruption would have to be eliminated and the process made transparent for the initiative to succeed.

Since 1945, the UN has imposed sanctions on a rogue’s gallery of regimes, including ones in Angola, Cambodia, Liberia, Libya, Rhodesia, Sierra Leone,

and South Africa. Now Iran, with its vast oil wealth, is on the agenda unless it suspends moves toward developing nuclear weapons capability. Cremer argues that sanctions will work only if the UN first takes steps to head off the likely economic fallout.

POLITICS & GOVERNMENT

Founding Skeptic

THE SOURCE: “Jefferson the Skeptic” by Brooke Allen, in *The Hudson Review*, Summer 2006.

THOMAS JEFFERSON WAS NO Christian, writes critic Brooke Allen. He revered Jesus Christ as a

philosopher and moral leader, but he described Christianity as “our particular superstition” and rejected the Immaculate Conception; Jesus’ deification, miracles, resurrection, and ascension; plus the Eucharist, original sin, and

atonement. He thought the Holy Trinity “hocus pocus,” and the God of the Old Testament to be “cruel, vindictive, capricious, and unjust.” In his day, he was as popular among the clergy as atheist Madalyn Murray O’Hair was after she won her case against prayer in public schools in 1963.

Yet when Jefferson sat down to write the Declaration of Independence, he cited the “Laws of Nature

and of Nature's God" in its first sentence and ended with the assertion of "a firm Reliance on the Protection of Divine Providence."

Jefferson said just enough good things about religion for the Moral Majority and throngs of born-again Christians to cite him in support of their claim that America was founded as a Christian nation. Former Speaker of the House Newt Gingrich even included the Jefferson Memorial on his Christian tour of the District of Columbia, where he pointed out on the inner dome the inscription, "I have sworn upon

Jefferson tried harder than any other Founding Father to remove religion definitively from the political life of the new nation.

the altar of God eternal hostility against every form of tyranny over the mind of man."

Reconciling Jefferson's words with his beliefs requires context, writes Allen, author of several books, including *Moral Minority: Our Skeptical Founding Fathers*. When Jefferson's polite nods to the prevailing religious beliefs of his day are examined in situ, they reveal his views to be consistent and supportive of a strict "wall of separation between Church and State" (in Jefferson's own phrase).

Jefferson introduced the "wall of separation" concept in a letter to a committee of the Danbury Baptist Association in 1802: "Believing with you that religion is

a matter which lies solely between man and his God. . . . I contemplate with sovereign reverence that act of the whole American people which declared that their legislature should 'make no law respecting an establishment of religion, or prohibiting the free exercise thereof,' thus building a wall of separation between Church and State."

Jefferson's phrase "upon the altar of God" actually came as part of a "characteristically Jeffersonian explosion against priests and clergymen," Allen writes. Mocking the clergy in his presidential campaign in 1800, Jefferson said they all hoped to have their own sect enshrined as the established church. But he said he had sworn eternal hostility upon the "altar of God" to religious tyrants who jockeyed for power and money.

Other religious-sounding invocations, such as the phrase "Laws of Nature and of Nature's God" in the Declaration of Independence, were standard language used, not by conventional Christians, but by deists in the 18th century. The declaration's phrase "firm Reliance on the Protection of Divine Providence" was added by Congress.

Allen says that the efforts of modern political figures to establish that Thomas Jefferson was a good Christian who really didn't mean what he said about the separation of church and state are flimsy and smack of desperation.

"Jefferson," Allen writes, "tried harder than any other Founding Father to remove religion definitively from the political life of the new nation."

POLITICS & GOVERNMENT

Smart and Smarter

THE SOURCE: "Presidential IQ, Openness, Intellectual Brilliance, and Leadership: Estimates and Correlations for 42 U.S. Chief Executives" by Dean Keith Simonton, in *Political Psychology*, August 2006.

ANYBODY WHO HAS EVER been to an American high school knows that intelligence doesn't always equal success either in the adolescent world or in life. A new study of the intelligence quotients (IQs) of the 42 U.S. presidents is similarly confounding. Our smartest president, John Quincy Adams, was defeated after only one term and spent the rest of his life in the House of Representatives. Our dullest, Ulysses S. Grant, according to the study, won the Civil War.

Dean Keith Simonton, a psychologist at the University of California, Davis, estimated the IQs of the presidents based on their writings, early developmental milestones, openness to ideas, and other traits generally associated with intelligence. Simonton also drew on previous studies by other researchers. Biographical profiles of each president, stripped of identifying factors, were prepared, and traits such as "inventive," "curious," and "sophisticated" were assessed. Missing values were imputed using standard statistical techniques. All the presidents scored at least 130, in the top 2.2 percent of the population. The average IQ is 100.

Simonton found that John Quincy Adams, son of President

Presidential Smarts



All 42 presidents have had IQs in the top two percent of the population; above, some of the smartest.

John Adams and the nation's sixth president, had an estimated IQ of 175. Other top scorers were Thomas Jefferson, 160; James Madison, 160; John F. Kennedy, 159.8; and Bill Clinton, 159. The lowest, Grant, scored 130 on a measurement of his IQ. Next lowest was President George W. Bush, at 138.5.

Simonton writes that although George W. Bush's estimated IQ is below average when compared to those of other chief executives, he is "certainly smart enough to be president of the United States." Bush's scores were dragged down by his lack of "openness"—to aesthetics, feelings, actions, ideas, and values—and something called "integrative complexity," a gauge of the ability to integrate multiple perspectives on an issue into a coherent point of view.

Simonton acknowledges that intellect is not by any means the only predictor of good presidential leadership, but says that, "the conclusion remains, however tentative at this point in time, that Bush's

intellect may be more a liability than an asset. . . . His strengths most likely lie elsewhere."

POLITICS & GOVERNMENT

Waikiki, North

THE SOURCE: "Extreme Makeover" by Alan Ehrenhalt, in *Governing*, July 2006.

MOST CITIES WOULD KILL TO HAVE Vancouver's problems. Exquisitely set near both mountains and the sea, the Canadian city is dominated by a glamorous downtown full of residential apartments, bustling with pedestrian traffic, and populated by people with money to spend. Municipalities in the United States consider themselves lucky to

Vancouver may be in danger of becoming a resort, a Waikiki or Miami Beach, with mild winters—and an inadequate tax base.

entice five percent of their residents to move downtown. In Vancouver, the figure is 20 percent and rising, according to Alan Ehrenhalt, executive editor of *Governing*. But condonization is beginning to generate a backlash. The hundreds of green glass towers that have sprung up on less than five square miles have shut out commercial development. Critics are beginning to use the dreaded "R" word, according to Ehrenhalt. Vancouver, they fear, is in danger of becoming a *resort*, a Waikiki or Miami Beach, with mild winters—and an inadequate tax base.

The transformation began quietly in the summer of 1991 as recession moved across North America and flattened the market for office space in Vancouver. Without fanfare, the city council enacted a zoning change—just to see if the market would respond—that loosened up limits on apartments in commercial areas. "Overnight, we got these huge condo towers," says a city council member. Fifteen years later, nearly one in five residents of Canada's third-largest city lives in one of the slender high-rise towers in the downtown center. And these newcomers include members of that urban endangered species, the family with young children.

The "Living First" program has worked too well, some people in Vancouver are saying. Developers seized the chance, making a return on investment in condominiums that has been five times as high as the return on office space. And though business has not fled central Vancouver, the percentage of metro-area jobs located there keeps shrinking.

The residential boom runs the risk of squeezing hard-pressed cities financially. Commercial properties, which currently account for 40 percent of Vancouver's tax base, are taxed at a higher rate than residential properties, and require less in city services. As the balance tips toward condos, the burden on business grows, potentially driving commercial uses out of the city. Vancouver's planners have imposed what amounts to a moratorium on residential construction while they figure out how to attract more office projects.

No American city is close to Vancouver on the downtown-living front, Ehrenhalt writes, but there is a shift in the residential direction. Census figures show that downtown populations in major U.S. cities increased by about 10 percent in the 1990s after decades of decline. Since 2000, Philadelphia's central-city population has grown even as office space stagnated and the number of office and professional jobs declined. In New York City, where the local government's primary commitment after the September 11 attacks was to restore the

lost commercial and office space, no new office buildings have been started on the World Trade Center site, while nearby commercial space is rapidly going condo. Even in St. Louis, the office vacancy rate is very low because so much office space has gone residential. If it can happen in St. Louis, it can probably happen anywhere. So it is likely that the "Vancouver question"—keeping a balance between commercial and residential uses—could well be a sleeper issue American cities never thought they would have to face.

ECONOMICS, LABOR & BUSINESS

Trading in Dreams

THE SOURCE: "Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875-1905" by Jonathan Ira Levy, in *American Historical Review*, April 2006.

NOTHING EPITOMIZES GLOBAL capitalism more than the world's burgeoning futures markets, where trillions of dollars ride on everything from tomorrow's interest rates to next year's price for a bushel of wheat. This trade in the ephemeral seems dubious to many people even today, and at its birth more than a century ago it seemed downright scandalous, requiring the help of a Harvard philosopher and the U.S. Supreme Court to ensure its survival in the United States.

Trade in commodity futures has a long history; it involves nothing more complex than signing a con-

tract today to deliver wheat or some other commodity at a certain price in the future. In the 1870s, however, traders in the United States and abroad began using a technique called "setting off" that allowed contracts to be bought and sold even though no goods actually changed hands, notes Jonathan Ira Levy, a graduate student in history at the University of Chicago. In 1888, for example, American farmers produced 415 million bushels of wheat, but U.S. traders handled futures contracts for perhaps 25,000 *trillion* bushels. By then, the action had expanded from the trading pits of organized markets such as the Chicago Board of Trade to informal "bucket shops," mostly in rural America, where ordinary folk could wager on movements in

the big-city commodity markets.

Futures markets served an economic need. As the production and distribution of commodities such as corn and oil grew to national and international scale in the late 19th century, the need for new risk-management tools grew too. Futures allowed farmers and the many other players in the complex new marketplaces to protect themselves against price fluctuations and other risks. One midwestern grain elevator owner explained to a congressional committee in 1892 that he might have 100,000 bushels of wheat to sell on a day when buyers around the country demanded only 75,000. The ability to sell a futures contract for the 25,000 remaining bushels helped keep him afloat financially.

The title of those House hearings, "Fictitious Dealings in Agricultural Products," gives a sense of the public reaction to the new futures trading. It wasn't just that the exchanges encouraged speculation—indeed,



A Chicago bucket shop, where the masses could wager against prices telegraphed from commodities trading floors, when it was raided by police in 1906.

they couldn't survive without it—but that they trafficked in pure abstractions rather than actual goods. Agrarian populists in particular raged against the hocus-pocus of financial wizards who had the power to influence what prices midwestern farmers could get for their crops. But federal legislation that would have destroyed the pits was narrowly defeated in 1892. That left the matter in the hands of the courts.

Justice Oliver Wendell Holmes Jr. wrote the decisive opinion for the U.S. Supreme Court in 1905. Just a year before, his friend, the philosopher William James, had published a key essay in the evolution of pragmatist philosophical thought in which he argued that thoughts could be as “real” as things if they had consequences in the world. Earlier in his

thinking, James had leaned on financial metaphors, noting that bank notes themselves have value chiefly because we believe they do. Without citing James, Holmes followed a similar line of thought in upholding organized futures markets: However incorporeal the contracts, the futures trade had positive practical consequences; “speculation of this kind by competent men is the self-adjustment of society to the probable.” The casually operated bucket shops, however, were another matter, and the Court shut them down.

The American experience was atypical. As trade in commodities expanded during the late 19th century, futures markets sprang up in other countries, Levy notes, but most did not survive. Today, they are

once again common in the developed world, and many newly capitalist countries make it a high priority to create them. But without adequate regulatory mechanisms and customs—or philosophers to justify their existence—most have expired.

ECONOMICS, LABOR & BUSINESS

Dying for Taxes

THE SOURCE: “Toying With Death and Taxes: Some Lessons From Down Under” by Joshua Gans and Andrew Leigh, in *The Economists' Voice*, June 2006.

A CURIOUS THING HAPPENED IN 1979 as Australia prepared to repeal its estate tax. During the final week the tax was in effect, the death rate declined. When the tax was eliminated, the rate rose.

The U.S. congressional calendar

this year has been consumed by efforts to repeal the American estate tax, or as its opponents say, the death tax. The tax is no small matter, having accounted for \$25 billion in revenue in 2005. Could the Grim Reaper possibly be kept on hold to save on taxes? And could an estate tax repeal create an unpleasant surprise for the U.S. Treasury by slashing projected revenues during the final days of taxation?

As its ongoing American counterpart has already done, the Australian campaign to repeal the tax took years, according to Joshua Gans and Andrew Leigh, of the University of Melbourne and the Australian National University, respectively. About nine percent of Australian estates were large enough to owe the tax. On June 30, 1979, estates of \$1 million (Australian) or more paid 27.9 percent in taxes, with

EXCERPT

Best of Times

The economic situation during the past 20 years has been unprecedented in the history of the world. You will find no other 20-year period in which prices have been as stable—relatively speaking—in which there has been as little variability in price levels, in which inflation has been so well-controlled, and in which output has gone up as regularly. You hear all this talk about economic difficulties, when the fact is we are at the absolute peak of prosperity in the history of the world. Never before have so many people had as much as they do today.

—MILTON FRIEDMAN, Nobel Prize-winning economist, in *Imprimis* (July 2006)

lesser rates for some legacies greater than \$100,000. On July 1, the tax was zero. Death certificates showed that about five percent fewer people died during the tax's last week than during that period in previous years, and that the death rate rose a similar amount the next week. The researchers assumed

that everybody whose death was "postponed" from June to July would have been required to pay the tax.

"Over half of those who would have paid the estate tax in its last week of operation managed to avoid doing so," Gans and Leigh write.

Popular medical writing is full of anecdotes of patients who temporarily cheated death—staying alive for a festival, a wedding, or a birthday. Despite these examples, however, a huge scientific study of cancer victims from 1989 to 2000 found no evidence of any ability

to time one's death to stay alive for important holidays such as Thanksgiving or Christmas. Tax-averse Australians are apparently an exception to this finding. Even the super-rich, the authors write, cannot postpone death forever, but some may be able to stay alive long enough to avoid the estate tax.

SOCIETY

Cooking Up America

THE SOURCE: "Cuisine and National Identity in the Early Republic" by James E. McWilliams, in *Historically Speaking*, May–June, 2006.

THE FIRST CONSUMER REVOLUTION in America probably occurred around 1730, when the

settlers began to make real money and the British began to ship affordable luxuries to the colonies. High on the colonists' shopping lists were stoves, cooking tools, tables, chairs, and English cookbooks. State-of-the-art imported kitchen products

helped American cooks balance the culinary refinement they sought with the rustic provisions available in the New World.

Regional differences already had appeared. New England tilted toward Old Country tastes, using its farms to grow vegetables and fruit, to keep livestock for beef and dairy, and to cultivate as much English wheat, rye, and oats as the size of their family-based work force would allow.

Archive password: BUNTING

SOCIETY

The Lonelier Crowd

THE SOURCE: "Social Isolation in America: Changes in Core Discussion Networks Over Two Decades" by Miller McPherson, Lynn Smith-Lovin, and Matthew E. Brashears, and "Trends in Civic Association Activity in Four Democracies: The Special Case of Women in the United States" by Robert Andersen, James Curtis, and Edward Grabb, in *American Sociological Review*, June 2006.

The Deep South, by contrast, nearly abandoned traditional British fare, according to James E. McWilliams, an assistant professor of history at Texas State University, San Marcos. Growing rice with a labor force of slaves, southerners were much more likely to eat rice or peanuts along with local game and Native American and African-American crops such as Indian and Guinea corn.

A growing American hunger for rum and molasses from Barbados in the early 18th century spurred culinary cross-fertilization among the colonies. Ships that started out trading only rum and molasses began to carry foods. Okra appeared in Rhode Island, New England cod went to the middle colonies, Virginia ham was available in South Carolina.

As the Revolution approached, the culinary repertoire of the colonial cook was abruptly truncated not only by embargoes but by a sense that proper American food should be different from that of Europe, frugal and unpretentious rather than refined.

Patrick Henry once condemned Thomas Jefferson for his love of fine French food instead of "native victuals." Increasingly, the elevation of the simple American over the fancy European became a defining American feature in food as well as in manners, dress, and leisure pursuits. In the election campaign of 1840, William Henry Harrison delivered the coup de grâce to his opponent, President Martin Van Buren, by charging that Van Buren's tastes ran not to real American food, but to soup à la reine and pâté de foie gras.

WHEN IT COMES TIME TO let down their hair and talk, Americans have fewer people to confide in than they did just a generation ago. The number of people the average person would consider going to for advice fell from about three to two between 1985 and 2004. Almost half the population now says they can discuss important topics with only one other person or no one at all.

The greatest change has come in the decline in intimates outside the family circle. Twenty years ago, 80 percent of Americans who responded to the national General Social Survey had at least one confidante who was not a relative. By 2004, that number had fallen to 57 percent, according to sociologists Miller McPherson and Lynn Smith-Lovin, of the University of Arizona and Duke University, respectively, and Matthew E. Brashears, a Ph.D. candidate at Arizona. The number of people who depend totally on their spouse has doubled, to not quite 10 percent.

Better-educated and younger people have larger "discussion networks" than others. Women have slightly more confidantes, statisti-

cally, than men, and whites have more than nonwhites. Intimate friendships between neighbors and fellow participants in civic activities have declined the most.

The authors say that their research may have detected another trend. "Shifts in work, geographic, and recreational patterns" and increasing use of the Internet may be leading to the development of larger, less localized groups of friends than in the past, when strong, tightly interconnected networks were more the norm.

Similar social forces may be responsible for the purported decline in civic engagement in the United States. Sociologists Robert Andersen, James Curtis, and

Women have more confidantes than men, and whites more than nonwhites. Intimate friendships between neighbors and fellow civic participants have declined the most.

Edward Grabb, of, respectively, McMaster University, the University of Waterloo, and the University of Western Ontario, all in Canada, studied civic activity in the Netherlands, Great Britain, Canada, and the United States. They found a decline only in America—and, significantly, only among women. While the lessening of civic involvement in the United States has been blamed on television watching and the fading of the more selfless World War II

generation, the authors note that the same factors are at work in the other three countries. Because the decrease in civic involvement is limited to women, Andersen and colleagues suggest that the “greater demands” on American women’s free time may be responsible. Women’s child-care duties have increased in the United States, while declining in Canada and the Netherlands, for example. “The larger time commitment American women now make to paid work, combined with their increased time for child care, could be the principal explanation behind the decline in civic association activity of Americans,” the authors say.

SOCIETY

The Poverty Conundrum

THE SOURCE: “The Mismeasure of Poverty” by Nicholas Eberstadt, in *Policy Review*, Aug.–Sept. 2006.

WHEN THE CENSUS BUREAU reported in August that the U.S. poverty rate essentially held steady at 12.6 percent of the population in 2005 instead of rising, as it had every year since 2000, the Bush administration hailed the news, while Democrats charged that it proved once again that the economy

EXCERPT

Ah! Old Age

I am old and I feel and look old. . . . Ever since I have inhabited old age . . . I have looked and listened, mostly in vain, for news of what it is like for other people who inhabit it as I do. Naturally, I'm interested in its well-known deprecations, the physical and mental ones that people in their forties and fifties so publicly dread. . . . The pills and sticks, the shrieking hearing aids and dental weaponry, the tricks for countering the loss of names and threads and glasses and for circumventing insomnia, the visits to the back shop. But that's not all. I have a fond hope that there may be new kinds of time and new kinds of pleasure, perhaps even new kinds of vitality, and that though we forget and muddle and fail to hear things, there may be moments when we understand what's going on for the first time.

—JANE MILLER, author and poet,
in *Raritan* (Summer 2006)

was failing to lift the downtrodden.

The annual announcement of the number of Americans living in absolute poverty—now defined as less than \$19,806 a year for a family of four—has turned into a political circus. Nicholas Eberstadt, a demographer at the American Enterprise Institute, writes that the poverty rate has become “an ever less faithful and reliable measure with each passing year.”

The statistic is a relic of the Johnson administration’s War on Poverty. Developed in 1965 by Mollie Orshansky, an economist at the Social Security Administration, it is set at roughly three times the cost of the Agriculture Department’s

“thrifty food plan,” a nutritionally adequate but bare-bones diet, adjusted for family size.

It’s hard for Eberstadt to believe that all the social spending of the last three decades has failed to budge the poor out of conditions in which “everyday living implied choosing between an adequate diet of the most economical sort and some other necessity,” as Orshansky put it. Although statistics show that some groups, such as the elderly and African Americans, are better off now than they were in 1973, the official poverty rate has bobbed steadily above 11.1 percent for 32 consecutive years. Last year, 37 million Americans were classified as poor.

Year after year, the number has stubbornly failed to fall—even as the nation’s per capita income rose 60 percent, the percentage of working-age people with jobs went up by six points, the proportion of Americans with a high school diploma increased 24 points, and government spending on the poor tripled. By 2001, more than half of all poverty-level homes had cable television and two or more TV sets. One in four households had a personal computer, and by 2003, nearly three out of four poverty-level households had some sort of motor vehicle. And yet, with nearly every increase in statistical well-being, the poverty rate has gone up. “Something is badly

amiss,” Eberstadt writes.

A very different picture emerges when government researchers ask people about what they spend rather than about their income. Household expenditures for the poorest fifth of the population have increased greatly since 1973, even accounting for inflation. In 1960, the poorest quarter of the population spent 12 percent more than their annual income; by 2002, the poorest fifth were spending double their reported annual income.

How can this be? Are poor Americans sinking deeper and deeper into debt? Eberstadt says the more likely explanation is something economists call “transitory variance.” Nine out of 10 people are poor only temporarily. Like other people, they base their consumer behavior on the long, not the short, term, and they spend accordingly. “Transitory variance” better fits the growing discrepancy between spending and income because year-to-year income variability is rising.

Eberstadt notes that criticizing the official poverty measure is sometimes taken as proof of indifference to the poor. To say that Americans are incontestably better off “is not to assert that material progress for America’s poverty population has been satisfactory, much less optimal,” he says.

The nation’s official measure of poverty is biased, flawed, and inconsistent with almost every other gauge of well-being, he writes. It fails the test of common sense.

PRESS & MEDIA

Covering Corruption

THE SOURCE: “The Corruption Eruption in East-Central Europe: The Increased Salience of Corruption and the Role of Intergovernmental Organizations” by Alexandru Grigorescu, in *East European Politics and Societies*, Summer 2006.

CORRUPTION IS DRAWING more news media attention around the world than it did only a couple of decades ago, but in no region has there been so radical an increase as in east-central Europe. Between 1996 and 2004, the number of stories on political and economic corruption rose seven-fold in the region’s six countries.

“Today all of the major newspapers from the area run, on a regular basis, multiple stories about everyday corrupt practices, high-level corruption scandals, or governmental and non-governmental declarations regarding the fight against corruption,” writes Alexandru Grig-

orescu, a political scientist at Loyola University in Chicago. About seven percent of the region’s print and broadcast news stories in 2004 that were included in his study dealt with corruption. And there has been action: tougher prison sentences for bribery in the Czech Republic, civil service reform in Poland, and many other measures. High officials accused of illicit activities in Bulgaria and Slovakia have lost their jobs.

Yet Grigorescu isn’t about to rhapsodize about the glories of a free press. News media coverage of corruption in other parts of the world has not increased since the mid-1990s, even in areas where the problem is more severe, such as East Asia and Latin America. Nor has there been much change in global media, such as *The New York Times*. A few local factors explain the performance of the east-central

European news media, including the special concern with fairness in these countries after decades of communist egalitarianism. But Grigorescu thinks the decisive factor was the role of the European Union. It’s no mystery why. The Czech Republic, Hungary, Poland, and Slovakia were all slated to join the EU in 2004; Bulgaria and Romania will enter in 2007.

In part because of fears of a contagion effect introduced by new members, the EU has zealously promoted anticorruption efforts. Its annual country progress reports have been especially effective in drawing attention to the problem, Grigorescu says, and it made membership contingent on certain systemic reforms. About 80 percent of the region’s news stories on corruption mentioned the EU.

With the region’s accession to the Union now nearly complete, Grigorescu worries that the EU will take its eye off the ball, and that the news media will consequently lose interest. The region’s track record—a score of only 3.8 on Transparency

International's 10-point corruption scale—is hardly sterling, and surveys show that little more than a third of its people express confidence in their national governments. A public that perceives its government as ineffective and riddled with corruption, Grigorescu writes, is a public ripe for arguments that the weaknesses of democracy itself are the problem.

PRESS & MEDIA

Democracy in a Sentence

THE SOURCE: "Rejected by *The New York Times*? Why Academics Struggle to Get Published in National Newspapers" by Douglas A. Borer, in *International Studies Perspectives*, Aug. 2006.

NOTHING IS QUITE AS GRATIFYING to the Ph.D.-animated ego as hearing the phrase, "I loved your op-ed in the paper." Two impulses spur academics to submit opinion

pieces to the brutal cursor of newspaper editors. One is disgust with published pundits, and the second is celebrity, according to Douglas A. Borer, associate professor of defense analysis at the Naval Postgraduate School in Monterey, California. The chances of making it into one of the big four—*The New York Times*, *The Washington Post*, *The Christian Science Monitor*, and *The Wall Street Journal*—are only somewhat better than the odds of winning the Powerball lottery. Even so, some intrepid scholar breaks the barrier every week.

Academics must speed up, tighten up, and keep trying, Borer writes. Get an idea and deliver a finished product in 24 to 36 hours. Keep even the most profound topics to 700 words—



"We do not usually acknowledge unsolicited manuscripts, but we want you to know that we tore yours into tiny pieces. Yours sincerely, The Op-Ed Page."

newspapers have to cede much of their space to advertisements that pay the bills. Avoid long definitions. "We know that use of that ever-loaded term 'democracy' in a journal article entails a commitment of four or more pages of literature review in order to dodge the finely honed machetes of peer reviewers," Borer writes. "In an op-ed you can explain democracy in a sentence."

RELIGION & PHILOSOPHY

Why Be Reasonable?

THE SOURCE: "The Morality of Human Rights: A Problem for Nonbelievers?" by Michael J. Perry, in *Commonweal*, July 14, 2006.

THOUGH THE 20TH CENTURY witnessed some of the worst instances of man's inhumanity to man, it also saw the birth of the human rights movement. As German philosopher Jürgen Habermas has noted, the language of human rights is now the only one

"in which the opponents and victims of murderous regimes and civil wars can raise their voices against violence, repression, and persecution." But on what authority does that language rest? If human rights, as some have suggested, have their foundation only in religious teachings, how long, as the Polish poet Czeslaw Milosz asked, "can they stay afloat if the bottom is taken out?"

According to Michael J. Perry, a professor of law at Emory University, the three documents that make up what is informally called the International Bill of Rights—the Universal Declaration of Human Rights (1948), the International Covenant on Civil and Political Rights (1966), and the International Covenant on Economic, Social, and Cultural Rights (1966)—are "famously silent" on the question of why we should live our lives in a way that respects human dignity. Perry says that "a number of contemporary thinkers have tried to provide a nonreligious ground for the moral-

ity of human rights,” notably Ronald Dworkin, Martha Nussbaum, and John Finnis, but falter at the point of justification. Finnis, a Catholic thinker who nevertheless looks for a nonreligious basis of morality, is reduced to arguing that it is “*unreasonable* for those who value their own well-being to intentionally harm the well-being of other human beings,” says Perry. Leaving aside the fact that some people don’t care about being reasonable, it’s easy to imagine circumstances in which one’s self or one’s child were threatened and the only recourse was to harm another person.

In a 1993 address to the World Conference on Human Rights, U.S. secretary of state Warren Christopher made the case for human rights by arguing that “states with the worst human-rights records tend also to be the world’s aggressors,” and sources of instability. True, says Perry, but self-interest isn’t enough to motivate the United States or other powers to promote strongly what one scholar calls “the human rights of foreigners.”

Philosopher Richard Rorty believes that the whole quest for a secular justification is misguided. If Westerners are “trying to get everyone to be more like us,” says Rorty, “it would be better to say: Here is what we in the West look like as a result of ceasing to hold slaves, beginning to educate women, separating church and state, and so on.” In other words, lead by example.

But Perry believes that such “pragmatism gives you nothing to fall back on, no recourse and no solace, if you fail to swing the deal.” In

the face of monumental horrors such as Auschwitz, the world cannot afford simply to appeal to the better nature of evildoers, waiting for them to adopt good behavior.

Perry appreciates the ability of nonbelievers to carry on with “the important work of ‘changing the world,’” yet he questions how long secular societies can sustain their “bedrock conviction” that “the Other possesses inherent dignity and truly is inviolable.”

RELIGION & PHILOSOPHY

Religious Dysfunction

THE SOURCE: “Is Faith Good for Us?” by Phil Zuckerman, in *Free Inquiry*, Aug.–Sept. 2006.

WHEN JERRY FALWELL blamed the 9/11 terrorist attacks in New York and Washington on Americans’ lack of piety, he spoke for many religious conservatives who believe that the failure to place God at the center of national life is responsible for crime, poverty, disease, and warfare.

To the contrary, Phil Zuckerman, an associate professor of sociology at Pitzer College, writes that “the most secular countries—those with the highest proportion of atheists and agnostics—are among the most stable, peaceful, free, wealthy, and healthy societies.” The presence of atheists and agnostics doesn’t cause a country to be better off, he says, nor does the presence of religiosity plunge a nation into chaos. The well-being of a nation is caused by political, historical, economic, and

sociological factors quite separate from religious beliefs.

Even so, the top five nations on the United Nations’ Human Development Index—Norway, Sweden, Australia, Canada, and the Netherlands—are all in the top 25 in proportion of nonbelievers. Between 64 and 85 percent of Swedes and 19 to 30 percent of Canadians say there is no God. The other countries are in between. The bottom 50 countries on the human development index lack statistically significant levels of atheism.

Zuckerman does not count the countries, such as North Korea and Vietnam, where atheism has been imposed. But nations where citizens have abandoned religion by choice tend to fare well on measures of well-being such as life expectancy, literacy, income, and education, while highly religious states do poorly.

Less religious countries have the lowest infant mortality rates in the world, religious countries the highest. Among the 40 poorest countries in the world, all but one—Vietnam—are deemed religious. Two separate studies of non-African countries show that most nations with the highest rates of homicide are religious, while those with the lowest rates are generally not.

The exception to the trend is suicide; people who are religiously observant tend to be less likely to kill themselves than others.

“Belief in God may provide comfort to the individual believer, but, at the societal level, its results do not compare at all favorably with [those] of the more secular societies,” Zuckerman writes.

SCIENCE & TECHNOLOGY

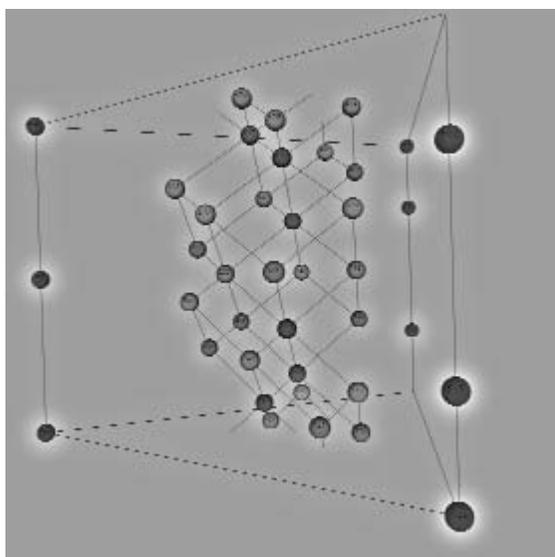
The Music of the Spheres

THE SOURCE: “The Geometry of Musical Chords” by Dmitri Tymoczko, and “Exploring Musical Space” by Julian Hook, in *Science*, July 7, 2006.

DISCOVERIES BY THE ANCIENT Greek philosopher Pythagoras (c. 569–c. 475 BC) forged an unbreakable link between music and mathematics. Pythagoras showed that a string two feet long would vibrate with a certain tone, and that a string half as long would yield a tone an octave higher. Further divisions, into fifths, thirds, and quarters, unlocked the 12 tones—C, D, E, etc., along with intervening sharps and flats—that make up the 12 notes in an octave, the basis for Western music. Given how long this system has been in place, says Julian Hook, a music professor at Indiana University’s Jacobs School of Music, “it is perhaps surprising that our understanding of the mathematical structure of the spaces in which musical phenomena operate remains fragmentary.” Now Dmitri Tymoczko, a music theorist at Princeton University, has developed a way of viewing those spaces that may reveal some of their mysteries.

Hook points out that a conventional musical score is itself a kind of “graph whose vertical axis represents pitch and whose horizontal axis rep-

resents time.” Plotting the positions of those tones, he says, and their internal relations to one another reveals something fundamental about the structure of music. Hugo Riemann (1849–1919) invented one such map, called a Tonnetz, based on the work of mathematician Leonard Euler. The



In this prism-shaped segment of musical space, known as an orbifold, notes (represented by dots) are shown along with their related tones.

Tonnetz is a two-dimensional model of a musical piece showing the links between individual notes and chords: Perfect fifths get linked diagonally, major thirds vertically, and minor thirds horizontally. A section of a Beethoven string quartet, perhaps not surprisingly, yields a Tonnetz with an elegant geometric structure, like the honeycomb of a bee.

What of modern composers, such as Arnold Schönberg (1874–1951) and

his successors? Schönberg rejected the notion that any of the 12 familiar tones ought to be more dominant—one might also say pleasing to the ear—than any other, and his work opened the way for experimentation with the spaces between tones, which the Tonnetz cannot describe.

Tymoczko’s solution is to create a new kind of musical map, one based on a geometric shape called an orbifold.

To mimic the structure of an octave, each half of Tymoczko’s map

is a reversed mirror of the other, with a half-twist in the middle; this is easiest to visualize in two-note chords, in which the pathway resembles a Möbius strip. Traveling 12 notes in any direction brings one back to the original tone, as the map loops back upon itself. As additional notes are added, and the chords become more complex, the map expands into multiple dimensions, creating a unified framework for all possible chord progressions.

Although the relationships of perfect fifths and thirds lie within Tymoczko’s orbifold map—and retain their geometric structures—infinite spaces within the 12 tones now emerge, made up of subtones, or fractions, of the intervals between the notes. Notes from music that sounds jarringly dissonant, tellingly, are clustered in very tight spaces in the corners of Tymoczko’s orbifolds. Major chords, on the other hand, lie toward the center, allowing them efficient linking with minor

keys and inverted chords. Many composers exploit such connections to inject counterpoint into their compositions.

Using the orbifold map, says Tymoczko, it is possible to track common chord progressions in classical music and see that they lie along a predictable trajectory. He can discern, for instance, how certain chords—C, D-flat, E-flat—and chords closely related to them define the music of Schubert, Wagner, and Debussy. “My geometric models show us that there are important strands of commonality running through the last thousand years of music,” Tymoczko says, that previously went unrecognized. Tymoczko also believes that his system is invaluable for studying the music of non-Western cultures, which frequently employ tones and pitches off the 12-tone scale. The orbifold map might even open up new tonal possibilities for contemporary composers to explore, though with no guarantee that they will inspire listenable music.

SCIENCE & TECHNOLOGY

Splog Alert

THE SOURCE: “Spam + Blogs = Trouble” by Charles C. Mann, in *Wired*, Sept. 2006.

WITH ALL THE HYPE SURROUNDING the rapidly expanding blogosphere, a world where anybody can write interminably on anything, it may come as a surprise that something far less familiar or friendly is growing even faster: the splogosphere.

Splogs are sand in the machine of the Internet, and they could cripple the online world, warns Charles C. Mann, a science journalist. A splog (from “spam blog”) is a bogus blog website containing nothing but gibberish and advertisements. The gibberish is full of keywords carefully selected to lure users of search engines such as Google and Yahoo.

Sploggers work on the principle that once Web surfers arrive

at their site, a few will click on one of the accompanying advertisements. Each click sends a few cents into the splogger’s bank account. And since any one splogger can run thousands of splogs, the scam can apparently be rather lucrative. One splog partnership claimed \$71,136.89 in earnings from August to October 2005.

To be sure, Google and its search engine peers are rushing to fight off the splogs, teaching their search engines to distinguish between legitimate blogs and spam. It’s a tricky business; computers just aren’t as good as people are at recognizing junk. For every tweak Google makes in its search algorithms, the sploggers tweak back, with a protracted “Google dance” the result.

More ominous possibilities are raised by other techniques sploggers employ to snare Web surfers, such as using robo-software to implant links to their sites in the comment sections of legitimate

EXCERPT

To See or To Think

Cats have iridescent tapeta in their eyes for gathering the palest traces of light; but all that gathered scattery light in their eyes, then, prevents cats from perceiving fine details. And hawks detect details, but since they do not have tapeta for collecting flickers, they must depend on the sun to boom down obvious light for them to see by. Your blessing is your curse and your curse is your blessing. Because you see details, you cannot see hints of light; because you see hints of

light, you cannot see details. You would need diverse eyes if you wished to be equally penetrating and sensitive.

You would need to have eyes like the box jellyfish, with its 16 light-sensitive eyes and eight acute camera-like eyes—all 24 eyes hanging down on stalks.

However, you would also need a brain.

But maybe that is not possible; maybe, in fact, the brainlessness of the box jellyfish is a direct consequence of its tremendous powers of sight. Perhaps neither the animal nor the prophet has been invented who could process so thorough a vision.

—AMY LEACH, an Evanston, Illinois-based writer, in *A Public Space* (Summer 2006)

blogs. “Great point,” the fake lead might read. “For more on this issue, click here.” Some heavily trafficked blogs, such as Instapundit and Talking Points Memo, don’t allow readers to post their own responses to their sites’ articles, in part to evade the sploggers.

That represents a grave wound, since interactivity and user-generated content are key attractions of the blogosphere. But it’s not just the interminable talkers who may be affected, Mann notes. The whole promise of the emerging vision of what’s called Web 2.0 is that people in their professional and personal lives will be able to interact, share, and learn from others using new technologies on the Internet. A plague of splogs could strangle this possibility. At the moment, however, splogs are not much more than an annoyance, and one that savvy Web surfers can surely dodge.

SCIENCE & TECHNOLOGY

In Praise of Competence

THE SOURCE: “Shop Class as Soulcraft” by Matthew B. Crawford, in *The New Atlantis*, Summer 2006.

THE 21ST-CENTURY RAT RACE requires every warm body to go to college and from there to the cubicles where workers begin their career-long glide through the supposedly crystalline air of the information economy, writes Matthew B. Crawford, a postdoctoral fellow at

How did it happen that manual work, given its intrinsic richness, became so devalued?

the University of Virginia. It is time to reconsider an ideal that has fallen out of favor: manual competence.

Skills that require the ability to perfect something concrete are derided as “jobs of the past.” While manufacturing jobs have flowed away from America like lava down a steep slope, manual work has not. If a deck needs to be built, or a car repaired, the Chinese are no help. They are in China. And one of the surest paths to a good living is the manual trades, although that is not the main reason to pursue them, Crawford writes. The principal reason to develop manual competence is intrinsic satisfaction.

As a teenager Crawford worked as an electrician, and after attending college he started a small firm. “In those years I never ceased to take pleasure in the moment, at the end of a job, when I would flip the switch. ‘And there was light.’ It was an experience of agency and competence. The effects of my work were visible for all to see, so my competence was real for others as well; it had a social currency. The well-founded pride of the tradesman is far from the gratuitous ‘self-esteem’ that educators would impart to students, as though by magic.”

Craftsmanship means learning to do one thing really well. It is the opposite of the modern profes-

sional’s credo, which venerates the management consultant, for example, who can swoop into different companies and whip underperforming divisions into shape. Craftsmanship means dwelling on one task for a long time to get it right. In management-speak, that culture is called “ingrown.” By contrast, the roving consultant has soaring freedom.

Yet thousands of years ago, Aristotle recognized the weaknesses of the virtual as opposed to the concrete. Lack of experience diminishes our power to take a comprehensive view of the facts, the philosopher said. Those who dwell in intimate association with nature and its phenomena are better able to lay down principles of wide and coherent usefulness.

How did it happen that manual work, given its intrinsic richness, cognitively, socially, and psychically, became so devalued? Crawford attributes the decline to “scientific management,” the discipline that arose in the last century to boost the efficiency of factories. He quotes Frederick Winslow Taylor, an early evangelist of workplace efficiency, who called for managers to gather all the knowledge possessed by workmen and then classify it and reduce it to minute rules. “All possible brain work should be removed from the shop and centered in the planning or lay-out department,” Taylor wrote. This made it possible to hire workers who were less skilled and less expensive.

With the degradation of manual labor on the factory floor, the decline accelerated. Now Crawford sees a similar trend in office work,

as more people are employed as disseminators, rather than originators, of information. The rising tide of “knowledge work,” he says, will not lift all boats. “More likely is a rising

sea of clerkdom.”

By all means, go to college, Crawford advises young people. But in the summers, and for life, many would be well advised to pursue a

manual trade. Tomorrow’s craftsman will be less damaged and quite possibly better paid than the legions of cubicle-dwelling tenders of information systems.

ARTS & LETTERS

The Limits of Architecture

THE SOURCE: “Goodbye Columbus” by Philip Nobel, in *Metropolis*, July 2006, and “Columbus Explored” by John King, in *Dwell*, July–Aug. 2006.

J. IRWIN MILLER OF CUMMINS Engine Company was a civic-minded industrialist who believed that uplifting architecture could make the world a better place. He

started in 1942 in his hometown, Columbus, Indiana, population 39,000. Over the next six decades, Columbus was transformed into an outdoor museum of Modernist design that is listed among the top six American cities in architectural distinction. Now, however, its downtown is suffering from the

same enervating forces that have killed so many small urban centers across the United States. Columbus is beginning to consider the unthinkable: Should it tear down some buildings designed by the nation’s leading architects to keep its downtown alive?

When Eiel Saarinen’s First Christian Church was commissioned in 1940, it was only the first of what would become more than 60 architecturally significant buildings in town. Saarinen’s son, Eero, returned two decades later to build



Eero Saarinen’s 1964 North Christian Church, with a soaring 192-foot spire, is one of the most distinctive and influential church buildings in America.

the even more striking hexagonal North Christian Church, topped by one of the most famous spires in America. I. M. Pei designed the public library, whose plaza is dominated by sculptor Henry Moore's *Large Arch*. William Rawn conceived Fire Station No. 6 as an abstract takeoff on a barn, Richard Meier built a school, and the list goes on: Harry Weese, Cesar Pelli, Kevin Roche, James Polshek, Charles Gwathmey, John Johansen, Robert Venturi, Gunnar Birkerts, Edward Larrabee Barnes, and John Carl Warnecke—almost a complete roll call of Modernist stars.

But Columbus's masterful, if small, buildings have not saved the city from the fate of many similar towns across the country, according to Philip Nobel, an architectural writer. Washington Street, the main drag, is dotted with empty storefronts. A restaurant once noted in guidebooks is shuttered. The retail lifeblood of the city has drained away to the Wal-Mart and other "big box" stores on the outskirts. The dense city center surrounded by small single-family houses does not have enough stores to attract much street life, and the downtown has an "8 to 5 existence," Tom Vujovich, president of the city's redevelopment commission, told John King, the urban design critic for *The San Francisco Chronicle*.

Now, a redevelopment commission is debating whether the town needs all its showcase buildings. Number one on the endangered list is the Kevin Roche post office from 1970. It occupies an entire block off the main street, and, despite its provenance, is a "leaden exercise in

Columbus's Modernist jewels have not saved the city from the ills that beset other American cities.

funereal pomp," according to King. An enclosed shopping mall by Cesar Pelli also faces the redevelopment commission's scrutiny. In a city with so much, there has been no outcry. Columbus architect Nolan Bingham observes that "there are only a few buildings that will last a truly long time."

ARTS & LETTERS

A Novel Approach to History

THE SOURCE: "In Praise of the Novel" by Carlos Fuentes, in *Critical Inquiry*, Summer 2006.

WHAT THE WORLD NEEDS NOW is novels. Mexican writer Carlos Fuentes—himself the author of numerous works of fiction—points to the impact of Miguel Cervantes's *Don Quixote de la Mancha* when it appeared in 1605, in an age in which Cervantes's native Spain was an aging empire on the verge of breakdown.

"As Cervantes responded to the degraded society of his time with the triumph of the critical imagination," writes Fuentes, we citizens of the world today "face a degraded society and must reflect upon it as it seeps into our lives, surrounds us, and even casts us upon the perennial situation of responding to

the passage of history with the passion of literature."

As the 21st century begins, he observes, military spending far outstrips expenditures on health, education, and development. The needs of women, the elderly, and the young are left unaddressed. The environment is under siege. And terror is met with terror, while its root causes remain untended. Images have collapsed space and pulverized time, and we humans are in danger of becoming "cheerful robots amusing ourselves to death."

These realities "should move us to affirm that language is the foundation of culture, the door of experience, the roof of the imagination, the basement of memory, the bedchamber of love, and, above all, the window open to the air of doubt, uncertainty, and questioning." That "air of doubt" that writers stir is why, though "considered politically feeble and unimportant," they are persecuted by totalitarian regimes.

Yes, Cervantes wrote as a man of his times, but what perhaps made him great—*Don Quixote* was recently voted the best novel of all time by 100 writers from around the world—is that he transcended them. He wrote as an inhabitant of "the house of world literature," which is capacious enough to hold the traditions from which great works of literature spring as well as those they create.

We in the modern era need to shore up this house, according to Fuentes, to ensure our very survival. "Humankind will prevail, and it will prevail because, in spite of the accidents of history, the novel tells us that art restores the life in us that

was disregarded by the haste of history. Literature makes real what history forgot. And because history has been what was, literature will offer what history has not always been. That is why we will never witness—bar universal catastrophe—the end of history.”

ARTS & LETTERS

R.I.P., *Iron John*

THE SOURCE: “Remembering *Iron John*” by Jess Row, in *Slate*, Aug. 8, 2006.

A LACK OF IRONY IS WHAT killed *Iron John*, poet Robert Bly’s call to arms for a men’s movement published in 1990. It’s been largely reduced to a joke, and that’s too bad, says Jess Row, a writer and English professor at the College of New Jersey.

Recent books such as Caitlin Flanagan’s *To Hell With All That: Loving and Loathing Your Inner Housewife* and Harvey Mansfield’s *Manliness* criticize modern domestic life and argue that our culture’s attempts to press for gender equality have produced unhappiness and social breakdown. “Flanagan and Mansfield are united in nostalgia for a kind of Douglas Sirk version of the ’50s, without the irony, in which men provided, led, fought, and defended, and women cultivated, nurtured, healed, and willingly acquiesced to men’s desires,” writes

Row. Such books prop up old stereotypes and prejudices, he says, but they aren’t being met with better books “that examine contemporary relationships and gender roles without panic, dread, or shame.” This dearth is particularly evident in the men’s department.

In *Iron John: A Book About Men*, which is structured on an allegorical interpretation of a German fairytale, Bly argues that contemporary American men are sorely lacking nurturing fathers, meaningful mentors, self-respect, and “most of all,” Row says, “the ability to cultivate their inner resources—as Socrates said, to know themselves.” Though reviled by many feminists, Row writes, Bly supports the women’s movement, as long as both sexes acknowledge that men’s and women’s inner needs are different.

The book has its share of flaws—myopia, a failure to grapple with Freud, overgeneralizations,

etc.—but what was fatal to it “was simply that it was too easy a target for satire.” Bly himself—a shambling bear of a man who strummed a lute and wore colorful vests—cut an unfortunately comic figure, and many misconstrued his book and the men’s seminars he conducted to mean that “contemporary men need to somehow return to nature, re-create tribal ceremonies, or otherwise fetishize what they have lost.” Yet the affirmation and hope Bly offered to men set numbly adrift in the post-World War II industrial economy were real, as were his optimism, his generosity, and his fearless reliance on poetry.

The value of his message is lost in the post-*Seinfeld* landscape. “Irony, and the fear of ridicule, have, in a way, made any serious discussion of men’s emotional lives impossible,” writes Row. The sensitive-man ethos Bly espoused is now the butt of advertising cam-

paigns and wisecracks. The resulting repression means that “we still lack a basic vocabulary for, say, the experience of a stay-at-home father, or the difference (from a man’s point of view) between flirtation and harassment at work. If we don’t find a way of emulating Bly’s generosity of spirit and willingness to risk truth-telling, we’re going to remain stuck with recycled arguments and archetypes, lacking a language that applies to our own era.”

EXCERPT

Museum Leadership 101

I was appointed director [of New York’s Metropolitan Museum of Art] in May of 1977 and I would have to say it’s a different world, to the point that, knowing everything I know, were I offered the job again I’m not sure I would take it. . . . It has become bureaucratized and legalized, with a paralyzing near-zero risk-tolerance level, and . . . financial issues dominate everything we do.

—PHILIPPE DE MONTEBELLO, director of the Metropolitan Museum of Art, in *The New Criterion* (Sept. 2006)

OTHER NATIONS

If Found Innocent, Try, Try Again

THE SOURCES: "Trust In Public Institutions in Russia: The Lowest in the World" by Vladimir Shlapentokh, in *Communist and Post-Communist Studies*, June 2006, and "Not Guilty Until the Supreme Court Finds You Guilty: A Reflection on Jury Trials in Russia" by Kristi O'Malley, in *Demokratizatsiya*, Winter 2006.

THE TYPICAL RUSSIAN TODAY is almost as suspicious as was Stalin, who mistrusted peasants, bureaucrats, officers, allies, agents, and his own wife—for a start. No Russian institution commands even a moderate level of trust from more than half of the population. Russians have the lowest level of confidence in their social institutions in the world, according to Michigan State University sociologist Vladimir Shlapentokh.

Russia's courts, for example, enjoy the trust of only 15 percent of the pop-

ulation. And when it comes to juries, a post-Soviet innovation, typical Russians appear not to trust even one another. The nation's experience with jury trials has triggered controversy and criticism. The recurring theme during academic and judicial conferences, and in the news media, is that the Russian people are not "mature enough" for jury trials and too many criminals are escaping punishment.

In 1993, when jury trials were first permitted, under the new Russian constitution, a total of two were held. By 2004, the number had jumped to 1,000. In some regions more than 60 percent of all defendants now demand jury trials, writes Kristi O'Malley, a Washington lawyer who has worked on judicial reform efforts in Russia for the U.S. Justice Department.



Jurors hear a 1994 double homicide case in one of Russia's first jury trials. Jurors are more likely to find defendants not guilty than judges are, and acquittals are often overturned by the Supreme Court.

That's not surprising. Juries acquit about 15 to 20 percent of defendants, judges about 1 percent. Not-guilty verdicts are new in the country, where the Soviet system convicted virtually 100 percent of the accused.

But an acquittal can be only the beginning of the story. Both convictions and acquittals can be appealed. In 2005 the Russian Supreme Court overturned 49 percent of the acquittals that were appealed, compared with only 14.5 percent of the guilty verdicts.

A Russian told O'Malley that prosecutors often appeal and re-appeal an acquittal "until they get what they want." That's a mistake, she believes. She argues that the Supreme Court should stop overturning so many acquittals and reform the haphazard lower court procedures that open the door to numerous appeals. Jury acquittals send "a message to the authorities that there are some uses of state power that people are not willing to tolerate."

OTHER NATIONS

David and Goliath in Africa

THE SOURCE: "West Africa Versus the United States on Cotton Subsidies: How, Why, and What Next?" by Elinor Lynn Heinisch, in *The Journal of Modern African Studies*, June 2006.

WHEN THREE IMPOVERISHED African countries took on American cotton producers in 2003, charging that subsidized U.S. cotton was flooding the market and reducing the price of their main export, it was a watershed event in international

trade relations, according to Elinor Lynn Heinisch, a press officer with the aid organization CARE. It proved that politically and economically weak countries can effectively challenge farm subsidies in the world's strongest nations.

Cotton is the most important export crop of Burkina Faso, Mali, and Benin, the world's 4th-, 10th-, and 16th-poorest countries. Farmers in landlocked Burkina Faso, located to the north of Ghana, can grow cotton at a cost of 21 cents per pound, working plots of two to three acres by hand and relying on rain for irrigation. The cost of cotton production for U.S. farmers is between 68 and 80 cents per pound.

Simple arithmetic would suggest that the African farmers would put the Americans out of business, but America's 30,000 cotton farms claim to provide some 440,000 jobs, and the cotton lobby is an important political player in Washington. The U.S. government spends \$3.9 billion a year on subsidies to American cotton farmers, Heinisch writes, paying many producers the difference between the market price—currently hovering a bit above 50 cents per pound—and a “target price” of 72 cents per pound.

The Africans took their complaints about the subsidies to the World Trade Organization (WTO), piggybacking on a cotton-related unfair trade practice case brought by vastly richer Brazil. (Few developing countries have the legal or financial resources to bring a case on their own.) They contended that subsidies caused U.S. farmers to produce more cotton than they would otherwise grow, sell it at an artificially low price, and undermine the livelihoods of farmers in the three West

African nations. Cotton producers there are not subsidized, and government intervention in cotton markets has been cut back, leaving farmers' incomes to rise and fall with world prices.

The Africans became the public face of an immensely complicated world trade issue. For the first time, an African head of state testified before the U.S. House of Representatives International Relations Subcommittee on Africa. President Amadou Toumani Touré of Mali and President Blaise Compaoré of Burkina Faso published an op-ed piece in *The New York Times*. Officials of all three countries flew to Geneva, where the WTO was meeting, and spoke elsewhere in Europe. They enlisted allies in international agencies and charities. At one point, the WTO director-general broke from “conventional neutrality” to say that the African complaints had merit, according to Heinisch. The cotton campaign paid off in March 2005, when the WTO ruled in favor of Brazil—and its African allies—and the United States announced it would move to comply.

Brazil, seizing the possibility that a revived Doha round of trade talks might permanently level the playing field for international cotton producers, put off its demand for \$3 billion in damages from the United States. Now that the trade negotiations have collapsed, it remains to be seen whether Brazil's African supporters will try to wrest more from the U.S. Department of Agriculture than the \$7 million “cotton improvement program” offered. It is a paltry substitute, the Africans have said, for fair prices in the global free market.

OTHER NATIONS

The 1.3-Million-Person Gap

THE SOURCE: “Voodoo Demographics” by Bennett Zimmerman, Roberta Seid, and Michael L. Wise, in *Azure*, Summer 2006.

ISRAELI AND PALESTINIAN LEADERS sing from the same score on only one topic: demographics. The rapidly growing Palestinian population could eventually overwhelm Israeli Jews by sheer force of numbers. As the late Yasir Arafat said, “The womb of the Palestinian woman will defeat the Zionists.”

But the numbers behind the Palestinian “demographic time bomb” are inflated, contend Bennett Zimmerman, a former strategy consultant with Bain & Company, historian Roberta Seid, and Michael L. Wise, a specialist in mathematical modeling. The actual Palestinian Arab population is only 2.5 million—not the 3.8 million reported by the Palestinian Authority. Palestinians are nowhere close to outnumbering Israel's 5.5 million Jews, even if the Israeli Arab population of more than a million is included.

The 1.3-million-person gap began to open up in 1997, when the Palestinians conducted their only census, say the authors. In one dramatic leap, the official Palestinian population jumped by 30 percent. The new figure was achieved by double-counting 210,000 Arabs who lived in Jerusalem—they had already been counted in Israel's census—and by adding at least 325,000 Palestinians who were living outside the Palestinian Authority's territory, including many residing overseas. Since then, the Palestinian

Authority has routinely increased its population estimates by 4.75 percent annually, based on high 1997 estimates of growth and immigration rates. In fact, Palestinian birthrates have dropped. The Palestinian Ministry of Health recorded 308,000 fewer births than were expected between 1997 and the end of 2003. And it's a dirty little secret that more Palestinians are leaving the West Bank and Gaza than are moving in, thanks to Palestinian-incited violence, the authors argue.

Demographic projections need not be demographic destiny, the authors say. It's even possible that Israeli Jews could increase their share of the population in Israel and the West Bank. Palestinian fertility rates are falling while Jewish rates (already the highest in the advanced industrial world) are rising, and there's always the possibility of a fresh influx of Jews from abroad akin to the unexpected arrival of one million Soviet Jews.

Palestine's millions remain a challenge to Israel, the authors allow, but the "Arab demographic time bomb is, in many crucial respects, a dud."

OTHER NATIONS

The Guggenheim Effect

THE SOURCE: "The Return on Investment of the Guggenheim Museum Bilbao" by Beatriz Plaza, in *International Journal of Urban and Regional Research*, June 2006.

WHEN A DECAYING INDUSTRIAL city in the Basque country decided in the 1990s to spend the equivalent of about \$200 million on a modern art museum, critics sput-

tered over the squandering of so much public money on something so irrelevant and exclusive. But today, Bilbao, Spain, is known throughout the world for its "Guggenheim effect."

Bilbao provides an ideal laboratory for the study of the effects of "signature architecture" on a city. Unlike London, Madrid, or New York, where museums and cultural attractions are launched almost as frequently as computer upgrades, Bilbao changed only one major thing in 1997: it opened a spectacular Guggenheim museum. Noted, if at all, for its pollution and past Basque

Bilbao's success still depends on razzle-dazzle shows to complement the architecture.

separatist activity, Bilbao was transformed by the inauguration of Frank O. Gehry's building, considered a masterpiece of 20th-century architecture. Yet many of its original critics have questioned whether it has performed the hoped-for economic miracle.

Beatriz Plaza, an economist at University of the Basque Country in Bilbao, reports that the museum paid for itself in nine years, a world record. When it opened, tourism increased immediately. The number of hotel stays rose by 61,742 a month, Plaza writes, producing an "extra" 740,000 hotel stays a year. The museum has generated 907 jobs,

and helps support 4,500 more. It has had positive effects on such occupations as translation, library services, and handicrafts, and has increased the demand for knowledge of foreign languages, tourism packaging, advertising, marketing, film, and business management.

Plaza notes that signature architecture, even by celebrity architects, is no guarantee that expensive high culture can turn around a stagnating city. Bilbao was fortunate in getting Gehry's most acclaimed building. "It must be remembered that it could also have failed," Plaza writes. Even the most noted architects have their "off" buildings. The new Santiago Calatrava wing of the Milwaukee Art Museum has not attracted as many visitors as first projected. The Royal Armouries Museum in Leeds, England, which expected 1.3 million annual visitors, has had fewer than 200,000.

Rare for Europe, the Guggenheim has adopted market-oriented budgeting aimed at making the museum staff more efficient and sensitive to customers' tastes. Seventy percent of operating costs must be covered by museum revenues and 30 percent by the Basque government. To raise the necessary funds, the museum has staged blockbuster exhibitions.

Bilbao should not be "uncritically replicated elsewhere," Plaza cautions, because the risks were high, and success even now depends on the curators' coming up with new razzle-dazzle shows to complement the architecture and keep the public coming.

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David Lindley
on string theory's
tangle

Eric Weinberger
on the murder that
transfixed Holland

Aviya Kushner
on Isaac Bashevis
Singer

Victor Navasky on
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Roy Reed on white
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Lauren F. Winner
on evangelical
youth

David Macaulay
on anatomical
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CURRENT BOOKS

REVIEWS OF NEW AND NOTEWORTHY NONFICTION

Old Master, New Mimic

Reviewed by Paul Maliszewski

IN AUGUST 1937, ABRAHAM BREDIUS produced a masterpiece. Bredius, the foremost expert on Dutch painting, examined a picture for a lawyer who said he represented a young woman from a wealthy Dutch family that had fallen on hard times. Two days later, Bredius declared that he'd discovered a painting by Jan Vermeer (1632–75): "This magnificent piece . . . has come to light—may the Lord be thanked—from the darkness where it has lain for many years, unsullied, exactly as it left the artist's studio." With a brief letter of authentication and, later, a scholarly article, Bredius transformed some paint and a roughly mounted rectangle of canvas into a national treasure.

But Bredius was wrong. *The Supper at Emmaus*, as the painting came to be known, was a forgery, and not a crafty one. It depicts Jesus after his resurrection breaking bread with two disciples while a serving woman holding a pitcher stands to the side. The figures are lumpy and ill formed, their clothes concealing what the forger couldn't render. The space behind Jesus is unadorned, whereas in Vermeer's finest work, maps, tapestries, and paintings hang from the walls, and individually rendered tiles—usually Delftware, a product of the painter's hometown—decorate the baseboards. Ver-

meer's windows are often ornate and thrown open to the day, with figures mirrored in the glass.

Light reflects off a bowl's lip or the beads of a pearl necklace, and glows from within his human sub-

jects. In the forgery, just the corner of a window is visible, and the only light is drab.

The *Emmaus* wasn't a knockoff by a lesser-known 17th-century artist or a student of the master. Not more than a few weeks old when Bredius inspected it, the painting was the handiwork of Dutch artist Han van Meegeren (1889–1947). While still a student, van Meegeren won a prestigious national art prize, but the rewards for being the year's best young Dutch painter were modest. He turned to forgery for fast profits and out of frustration with his contemporaries, whose abstractions and experiments he thought pointless, decadent, and dull. By painting in the guise of more famous artists, he became a shameless success.

The story of van Meegeren has been told before, in several out-of-print biographies and scholarly works of art history. Frank

I WAS VERMEER:
The Rise and Fall of
the Twentieth
Century's
Greatest Forger.

By Frank Wynne.
Bloomsbury USA.
276 pp. \$24.95



Han van Meegeren, jailed in Holland after World War II as a traitor for selling masterpieces by Dutch artist Jan Vermeer to the Nazis, tried to prove that he had forged the paintings by creating another “Vermeer” for his captors: *The Young Christ Teaching in the Temple*.

Wynne, a London-based journalist and the English translator of Michel Houellebecq’s novel *The Elementary Particles*, adds little to those accounts of the forger’s fizzy rise and ignominious fall, and he only cursorily considers the uncomfortable questions about the art world raised by a forger’s achievements. What makes one painting—or one painter—more valuable than another? Are such determinations rational, or arbitrary and faddish? Wynne treats such questions as brief pauses in a brisk page-turner. He has his story to tell.

Reading this easily digested, only occasionally thoughtful historical reenactment is rather like watching the actors at Colonial Williamsburg, or the weekend warriors who band together to replay the Battle of Gettysburg. In a typical passage, Wynne describes a domestic argument between the painter and his wife when they were

alone, in which her “sensuous lip” quivers. Van Meegeren and others speak in so many unsourced passages of dialogue that one wonders whether Wynne has purchased liveliness of plot and character at the expense of solid history. His eagerness to embellish what is already dramatic leads him to overreach, not unlike Bredius and his expert colleagues.

The *Supper at Emmaus* is larger than most works by Vermeer, about whom so little is known that one writer called him “the sphinx of Delft.” Its subject matter bears only a glancing resemblance to his better-known, achingly detailed domestic scenes—the milkmaid with a pitcher, the noblewoman writing a letter, the woman standing before a window as daylight shines in upon her. Vermeer’s oeuvre includes few religious subjects, but Bredius and other

prominent critics had long supposed that the artist, who converted to Catholicism so that he and his wife-to-be could marry, painted other religious works now unknown to us.

Those critics further speculated that there must have been a transitional period between Vermeer's early canvases, which tend to be larger, more romantic, and clearly influenced by Caravaggio, and his smaller, more placid later works. With so few paintings credited to Vermeer—in Bredius's day there were roughly 50; today there are only 35, and even that number is thought to be padded with forgeries—the critics believed that the paintings of his middle period were lost, casualties of time and the neglect into which Vermeer's work fell for nearly two centuries after his death.

Van Meegeren's success in passing off his *Emmaus*, for which he received 520,000 guilders, the equivalent today of about \$4.7 million, encouraged him to continue forging. During the next few years he rushed off six more Vermeers, including *The Last Supper*, which fetched 1.6 million guilders, and three other religious canvases, which sold for a combined 4.2 million guilders—extraordinary sums of money for any artist, in any age, but all the more jaw dropping when set against the widespread deprivation in Europe during World War II.

Van Meegeren's later forgeries piggybacked on his earlier work. He copied himself, creating paintings that resembled his own fakes more than original Vermeers. Critics dutifully called attention to the striking way in which each latest discovery was so much like *The Supper at Emmaus*. In all, van Meegeren is believed to have painted 11 Vermeers, three canvases in the style of Frans Hals, and a couple mimicking Pieter de Hooch.

Through a web of intermediaries, van Meegeren sold *Christ with the Woman Taken in Adultery*, his sloppiest Vermeer by far, to Hermann Göring for the price of 1.65 million guilders and the return of hundreds of Dutch old masters looted by the Nazis. After the war, van Meegeren was arrested and imprisoned

for treason—for selling a national treasure to the enemy. Six weeks in custody sufficed to extract his confession: He was Vermeer. Few people believed him—nobody, after all, likes being fooled—until he forged one last Vermeer for the authorities. Convicted of lesser fraud charges and sentenced to a year in prison, he died in 1947, before serving a day.

Van Meegeren's patrons were not rich, uninformed collectors, people with all the money in the world and no taste.

Rather, they represented major museums, galleries, and private collections. Wynne speculates, correctly, that nationalism and wartime anxiety fueled the intense bidding for the fakes. As the world came undone, the least the Dutch could do was preserve their cultural heritage. To seal the deals, the forger relied on the art world's overly cozy network of buyers,

critics, and museum curators. That world, like all small worlds, protects its own. After van Meegeren's deceptions were made plain, few people sought to press charges. Most didn't want to acknowledge publicly that they'd been duped. Others simply refused to accept the truth. One critic insisted that van Meegeren was a boastful liar, and prided himself on having rescued the fakes from being destroyed, as Dutch law dictates.

Van Meegeren understood, as other forgers do, that the stamp of authenticity can trump art. The proof, however spurious and cobbled together, that a painting is by Vermeer (or any other name-brand artist) is at least as important as the quality of the work. It was enough for the forger to create a plausible resemblance to Vermeer. Van Meegeren's early forgeries crassly combined elements of authentic paintings, cut-and-paste style, into pastiches. While he eventually became an accomplished mimic, he was never a great painter. But he didn't need to be, for a painting's market value derives not just from the

Van Meegeren understood, as other forgers do, that the stamp of authenticity can trump art.

quality of the individual canvas but largely from the reputation of its putative creator. Today the art world is not appreciably different. Wynne concludes with an object lesson: In 2004, casino developer Steve Wynn paid \$30 million at auction for a Vermeer that is far from the artist's best—and one not all experts agree is authentic.

Everyone wanted van Meegeren's forgeries to be masterpieces. The buyers and curators wanted desperately to acquire a Vermeer for their collections. The critics wanted, no less desperately, to claim responsibility for adding one more work to Vermeer's all-too-slim catalogue raisonné. And experts such as Bredius wanted to confirm their pet theories. Pride and self-regard colored judgment, and no one truly saw what he was looking

at, because no one dared look closely.

The forger's story may be read as an enduring fable about the art world. A modern-day Aesop might cast the tale with a wily crow and selfish foxes: One day, the crow set the foxes fighting for control of an apple. The apple, the crow swore, was unlike any other in the world, and the foxes chose to believe him. But the apple was really nothing special, and the crow, in the end, was found out and driven from the forest for its lies. But what of the foxes that desired blindly and wildly, and so were fooled? Should not they too learn a moral from such a story?

PAUL MALISZEWSKI'S writing has appeared in *Granta*, *Harper's*, and *The Paris Review*. He is currently completing a collection of essays about the varieties of faking.

Strung Out

Reviewed by David Lindley

UNTIL JUST OVER TWO DECADES AGO, STRING theory was an esoteric branch of mathematical physics that held the attention of only a handful of maverick researchers. For their efforts, these pioneers endured a mixture of puzzlement and derision from their colleagues, and had trouble finding positions at academic institutions where they could pursue their quirky endeavors. But nowadays, it's hard to land a job in a high-powered department of theoretical physics if you don't do string theory.

Aficionados claim that string theory provides the foundation for a "theory of everything"—a harmonious unification of all of fundamental physics. To the contrary, declare Lee Smolin, a physicist at Canada's Perimeter Institute, and Peter Woit, a mathematician at Columbia University, string theory has thus far explained exactly nothing. But Smolin and Woit offer conflicting recommendations on how to restore sanity to theoretical physics, suggesting that string theory's dominance does not yet face a wholly persuasive challenge.

The essence of string theory is a literal asser-

tion: Elementary particles—electrons, photons, quarks, and their numerous cousins—are not pointlike objects but "strings" of energy forming tiny, wiggly loops. If a stringy loop vibrates one way, it manifests itself as an electron. If it shimmies some other way, it looks like a quark. Wacky as this idea may sound, there are good reasons why physicists so fervently embraced it. Smolin, the more elegant writer, is far better at conveying the conceptual import of physical theorizing with a minimum of technical detail. Neither book, though, is easy reading for the uninitiated.

To put it very briefly, what turned interest in string theory from an oddball enthusiasm to a mainstream occupation was a twofold realization that came in 1984. That's when two of the early string pioneers, John Schwarz of Caltech

THE TROUBLE WITH PHYSICS:

The Rise of String Theory, the Fall of a Science, and What Comes Next.

By Lee Smolin.
Houghton Mifflin.
392 pp. \$26

NOT EVEN WRONG:
The Failure of String Theory and the Search for Unity in Physical Law.

By Peter Woit. Basic.
291 pp. \$26.95

and Michael Green, who was based in London, published a paper showing that just a handful of possible string theories were free of mathematical inconsistencies that plagued traditional particle-based models, and also had sufficient capacity (the number and variety of internal vibrations, roughly speaking) to accommodate all the known elementary particles and their interactions. There was one little difficulty: The systems these theories described existed only in 10 dimensions.

Since we live in a world that has but three dimensions of space and one of time, that last point might seem to be a deal breaker, but so appealing were the other virtues of string theory that physicists found a solution. The “extra” dimensions, they proposed, could be wrapped up so tight that we couldn’t see them. In effect, what we thought of as points in our world were tiny six-dimensional structures. A little bizarre, to be sure, but not impossible.

It even seemed possible, in those heady early days, that mathematical reasoning alone might select one unique string theory to play the role of a theory of everything. That utopian dream, alas, quickly faded. Not only were several distinct string theories plausible candidates, but for each theory, the wrapping up of the extra dimensions could happen in an enormous number of different ways, with no obvious reason to choose one over another. In the early 1990s, a new proposal emerged: String theories were not, after all, fundamental, but rather the numerous manifestations of a still-deeper mathematical system dubbed M-theory (the M standing for mystery, murk, mother of all, or something similarly clever). Trouble is, no one has yet proved that M-theory exists, or, if it does, what it looks like.

And the multiplicity of possible string theories has forced physicists to a desperate resort. Enthusiasts now declare blithely that an almost unimaginably large number of universes exists, each with its own implementation of string theory. If you ask why the universe we live in happens to look the way it does, with its particular complement of elementary particles and forces,

the only answer is no answer at all. It just happens to be that way.

The concern that string theory might lead physicists into a rarefied regime beyond the reach of experimental scrutiny is not entirely new. John Horgan, in his book *The End of Science* (1996), adverted to this danger, and, if I may be immodest, so did I in my 1993 book *The End of Physics*. (And perhaps I should add that Woit makes a brief reference to my book, in which he misstates one of its arguments.)

But Smolin and Woit go much further, arguing that by making string theory infinitely malleable, theorists have now consciously put their work beyond the reach of any conceivable experimental test. Even so, they continue to declare that string theory is the only game in town.

Ambitious young researchers must either worship at the altar of string theory or risk accusations of heresy for trying out alternative theoretical strategies (putting themselves, as Smolin points out, where the string theorists themselves were not so long ago).

If their assessment of these ills is broadly the same, however, Smolin and Woit differ on how a way forward may be found. Woit has the narrower perspective. A mathematician by training and inclination, he is peeved, evidently, at the sloppy way in which physicists have made use of mathematics, and thinks that if physicists persuaded themselves to think more rigorously—more like real mathematicians, that is—they could reason their way out of trouble.

That’s almost the opposite of Smolin’s diagnosis. He has a deep knowledge of the history of physics, and understands that physicists have always been a little cavalier in their use of mathematics. He focuses instead on the conceptual puzzles that physicists face, and emphasizes, as

By making string theory infinitely malleable, Smolin and Woit argue, theorists have now consciously put their work beyond the reach of any conceivable experimental test.

Woit does not, that string theory from the outset possessed serious deficiencies in its ability to address certain crucial issues.

Advocates of string theory have always touted, as one of its chief virtues, its prediction of the existence of a particle known as the graviton, which had been hypothesized earlier as a key element in efforts aiming to unite general relativity, Albert Einstein's theory of gravity, with quantum mechanics. But as Smolin makes clear, a genuine theory of everything must do more than merely possess a graviton. The most profoundly new aspect of general relativity was the way it transformed space-time into a dynamic quantity. That is, the presence of mass causes space-time to become curved, and as matter moves around, the shape of space-time changes in response. String theory captures none of this. It exists in a static geometry only, and no one has any idea, Smolin says, whether it can be adapted to live in space-times that shift and flow as Einstein requires.

The problem with string mania, Smolin concludes, is that it suits the wrong kind of mentality. He makes a nice distinction between scientific seers—people such as Einstein and Niels Bohr, his heroes, who deeply pondered the working of nature and were by no means brilliant mathematicians—and craftspeople, who are

enormously adept at intricate calculation but don't seem to think much about the larger meaning of their ingenious manipulations. Seers are always in short supply, and the technical demands of mastering string theory are such that would-be researchers of a more philosophical stripe can rarely meet the price of entry.

Both authors plead for universities and granting agencies to consciously find room, every now and then, for the mavericks and eccentrics who might bring much-needed new ideas into the excessively closed world of theoretical physics. Fat chance, unfortunately, was my instant reaction, given the way the scientific world, like academia in general, rewards careerism more than brilliance.

On the other hand, as Smolin suggests, the true originals have always had to find their own paths. Think of Einstein, hatching his most brilliant ideas in the patent office in Bern. As for string theory, it's likely to unravel only when its practitioners begin to get bored with their lack of progress. Like the old Soviet Union, it will have to collapse from within. The publication of these two books is a hopeful sign that theoretical physics may have entered its Gorbachev era.

DAVID LINDLEY is the author, most recently, of *Degrees Kelvin: A Tale of Genius, Invention, and Tragedy* (2004), and is at work on a history of Heisenberg's uncertainty principle.

The Perils of Going Dutch

Reviewed by Eric Weinberger

"FIRST OF ALL YOU HAVE TO SAY THERE IS provocation, and the guilty one is the one who does the provoking. The response is to always punish the reaction, but if I react, something has happened." So said the French soccer hero Zinedine Zidane on why he head-butted an Italian opponent during the World Cup final, offering an apology that expressed no regret for his action, which he saw as the defense of his honor against the Italian's insults.

It would surely pain the carefully apolitical Zidane, a non-practicing Muslim born to Algerian immigrants, to be drawn into the aftermath of the 2004 murder, in Amsterdam, of the Dutch filmmaker and provocateur Theo van Gogh. But we should note the similar cause-and-effect reasoning offered by van Gogh's killer, a

MURDER IN AMSTERDAM:
The Death of Theo van Gogh and the Limits of Tolerance.

By Ian Buruma. Penguin. 266 pages. \$24.95

young Dutch Muslim (and son of Moroccan immigrants) named Mohammed Bouyeri. It is the calculus of an unrepentant absolutist: There is provocation, demanding a crushing response.

Bouyeri killed van Gogh and drove into hiding his Somali-born collaborator, the Dutch activist Ayaan Hirsi Ali, for the insult they supposedly dealt to Islam in producing an 11-minute film called *Submission*. The film, which aired once on Dutch television, showed Muslim women with words from the Qu'ran projected onto their bare skin as they recalled beatings and rapes by male relatives. This was the "provocation." Language is met not with language but physical violence, the underclass signal to the rest of us that often means we have not been paying attention.

Van Gogh's murder was the most shocking event in Holland in recent years, more shocking, even, than the killing two and a half years earlier of the man who might be dubbed his predecessor in provocation, the gadfly and dandy Pim Fortuyn (about whom van Gogh made a film). Fortuyn was shot in Hilversum days before national elections that made his eponymous party one of the largest in Parliament. Fortuyn campaigned against immigration, by which he meant Muslim immigration, and his contempt for Islam was personal: As a gay man, he despised its homophobia and its efforts to undermine traditional Dutch tolerance. To much of the country's relief, it was a white animal-rights activist (though a Muslim sympathizer) who killed Fortuyn. But with the ritual murder of van Gogh—shot, stabbed, his throat cut—by a Muslim, Dutch postwar multiculturalism seemed on the brink of collapse.

Now Ian Buruma has stepped onto the scene. Many of his longtime readers will not know he is Dutch, but will associate him with Japan, China, Britain, and, more broadly, Europe and the clash of East and West—the subjects of his many noteworthy books and essays. But there is no more prominent writer in English who is also Dutch to the bone, and we are fortunate that Buruma has turned his atten-

tion to his homeland, almost as if it had become a new country after a long absence.

Murder in Amsterdam is a tabloid title, and Buruma presents himself as something of the gentleman sleuth or boulevardier moving about in Amsterdam, The Hague, and other Dutch towns, consuming many cups of tea and coffee as he carefully draws out his subjects: an excitable Iranian-Dutch law professor who, like Hirsi Ali, is sometimes called an "Enlightenment fundamentalist"; an anti-Semitic Islamic fundamentalist yet law-abiding Dutch history teacher; other Muslim immigrants and immigrant children, many of whom are well educated; and various Dutch public figures, some of whom call themselves the "Friends of Theo." It makes for



Theo van Gogh, left, directs a film about the murder of Dutch politician Pim Fortuyn, two months before he himself was killed by a Muslim extremist for producing the controversial film *Submission*.

suspenseful reading, and Buruma's investigations reveal van Gogh to be more complex than either caricature or his enemies would have us believe.

Buruma's book is notable for its calm narrative informed by a total immersion in Dutch language and culture. The analysis isn't as exceptional; many of the book's insights into the radicalization of Dutch Islamic youth, for instance, can also be found in public pamphlets produced by the Dutch intelligence service. Perhaps Buruma recognizes that his knowledge of Islam is limited. Instead, he elaborates an idea of

Dutchness, a cultural identity he seems to find, to some degree, in everybody he encounters: not just obvious “natives” but also the émigré Hirsi Ali and van Gogh’s Dutch-born murderer.

“Dutchness,” for Buruma, has many facets: an obsession with Holland’s moral failures during World War II (all political discussions start with or ultimately come back to the war, if only to use it as a glib analogy or invocation), sanctimonious moralism, and “a willful lack of delicacy” born of “the idea that tact is a form of hypocrisy.” And there is Dutch irony, which, as Buruma notes, can be used as “an escape from any blame” or “license for irresponsibility.” He means that you can say the most offensive things but hasten to add that you’re kidding. Van Gogh’s brand of

irony, however, seems to have been closer in spirit to that dictum famously adopted by Evelyn Waugh: “Never apologize, never explain.”

Bouyeri appears to embody few of the

above traits, except perhaps the moralism, which I would argue is no longer particularly Dutch. Still, Buruma searches for his essential Dutchness, and finds it in one of Bouyeri’s Internet ravings, in which he proclaims that the “knights of Islam” will emerge from Holland’s soil. Buruma calls this a “very Dutch delusion of grandeur,” that of the Netherlands as the “world’s moral beacon.” But the national aspect of Bouyeri’s vision seems fairly unimportant, certainly to him. Rather, Bouyeri appears to have learned to stop thinking of the Netherlands altogether; his mind dwells instead in stateless, unworldly Islam.

To some of the Dutch, then, nationality is only a placeholder. A Dutch prison imam tells Buruma that “if you get rid of tradition, you still have Islam,” or, to clarify, “Culture is made by human beings. But Islam remains.” This is eerily akin to what that enemy of Islam, Hirsi Ali, says, enthusiastically, of the

Enlightenment: that it “strips away culture, and leaves only the human individual.” Hirsi Ali’s interest is the individual; Bouyeri’s, Islam. What the two share is the ease with which they dispose of the first part of each proposition: culture. On Buruma’s evidence, Hirsi Ali, for all her perfect assimilation and perfect Dutch, is hardly more involved in the Netherlands than Bouyeri.

Lucid as he is, Buruma runs up against his own Dutch wall. Evidently it is difficult for this Dutchman to imagine compatriots so uninterested in the Dutch character and its maintenance. Fortuyn as well as the “native” Dutch with whom Buruma converses express “yearnings”—a word that appears frequently—for “something that may never really have existed.” Buruma is more clear-eyed and unsentimental than they are, but at the end of the book, he departs from his customary measured tones. Pointing to the innocent Dutch habit of dressing up in the national color, orange, for soccer games, with clogs and brass bands and other gear, Buruma exclaims that this celebration of an “invented country,” like Bouyeri’s violent fantasy, contains the “seeds of destruction.” But what seeds, and what destruction? The thing about the orange men is that they are in on the joke, which, along with the carnival spirit, is as much a Dutch trait as any.

In 1975, when Buruma was leaving the Netherlands, I was a child recently arrived in The Hague, the city where he grew up and where I would too. More precisely, I grew up in the “plush extension” of Wassenaar, where Theo van Gogh, 10 years my senior, was raised two streets away, in a house that Buruma visits to chat with Theo’s parents. Buruma’s portrait of the “Wassenaar brat” who, as an adult, still came home to do his laundry hits close to home. But, if anything, I probably had more in common with the young Mohammed Bouyeri. Of course, the fate of a young man who is white and middle class, if neither truly American nor truly Dutch, is preferable to that of the dark-skinned son of a dishwasher, “neither Dutch

Like other Europeans, the Dutch have never made it easy for outsiders to feel at home.

nor Moroccan,” as one of Bouyeri’s contemporaries described people like himself.

Like other Europeans, the Dutch have never made it easy for outsiders to feel at home. What might once have appeared, to them, anyway, to be generous—inviting huge numbers of foreign workers to a safe land where they could provide for their families—now can seem more like using, but *heedless* using. For decades, European countries carried on as if they could avoid the consequences if those workers stayed, which of course they did. Now, as French scholar Olivier Roy has noted, Islam is a Euro-

pean religion.

Theo van Gogh knew “the dangers of violent religious passions,” Buruma writes, but still acted “as though they held no consequences for him.” Yet there was charm in the way Theo spoke his obscene, unruly mind and then tottered off on his bicycle. His kind of insouciant candor is another victim of the age, and perhaps the most poignant aspect of “Dutchness” that now appears lost.

ERIC WEINBERGER teaches expository writing at Harvard University and has reviewed books for *The Boston Globe*, *The New York Times*, and other publications.

IN BRIEF

ARTS & LETTERS

A Life in Translation

MY FATHER LIKES TO TELL two stories about the writer Isaac Bashevis Singer. In the first, Singer is speaking to a group of students in New York City. Just as a shoemaker thinks of life in terms of shoes, he says, so a writer thinks of it in terms of writing. To Singer, God was, of course, a writer. “And what is God’s book?” my father remembers Singer saying to the stunned students. “Life itself. And one thing you have to admit about God’s book. It’s *interesting*. You always want to know what happens next.”

In my father’s second story, the 65-year-old Singer is glimpsed at a Holocaust memorial service on Earth Day, in 1970. He is sitting silently in the back, listening to survivors talk. Both of my father’s versions of Singer—the man who couldn’t stop thinking about God, and the writer who remained curious all his life—emerge in journalist and *Le Monde* literary critic Florence Noiville’s lovely and often disturbing take on the life of this master of the tale.

ISAAC B. SINGER:
A Life.

By Florence Noiville.
Translated by Catherine
Temerson, Farrar, Straus,
& Giroux. 192 pp. \$23

Though many Americans graduate from college without having read him, Singer (1904–91) is widely considered both a major writer of fiction and an important chronicler of European Jewish life, especially the vanished world of the shtetl, the village of the pious and usually poor. He emigrated to the United States from Poland in 1935 but persisted writing in Yiddish, even after most Yiddish speakers were killed in the Holocaust.

In America, Singer lived for years in the shadow of his older, successful-writer brother, Israel Joshua Singer, and eked out a living as a freelance journalist and contributor to the Yiddish newspaper *The Jewish Daily Forward*. He didn’t publish major work until he was 40, but from then on his production was startling. In all he published 14 novels, 16 children’s books, 10 works of nonfiction, two plays, and several hundred stories. His major works include *The Family Moskat* (1950), which was his first novel published in English, as well as *The Magician of Lublin* (1960), *The Manor* (1967), *The Estate* (1969), and *Shosha* (1978). He was awarded the Nobel Prize for Literature in 1978. The film musical *Yentl* is based on one of his short stories.

As Noiville reveals in her first sentence, Singer

disdained biographies as a means of understanding a writer. Perhaps Noiville means to signal, by this admission, that her attempt to bring Singer to life will lead to many dead ends. A scant 120,000 of Poland's three million Jews survived the Holocaust. Sixty years later, Noiville searches for the house where Singer was born, in Leoncin, 20 miles northwest of Warsaw; all that remains on the spot is an orchard. The section of Warsaw to which the Singer family relocated, memorialized in his books as the place where the thieves, the pimps, and the prostitutes were never too far from the virtuous, is gone too.

No one, Noiville discovers, wants to live on the street named after Singer in the town of his birth. Anti-Semitism runs deep. But a lot of people hated Singer the man as well. He left a five-year-old son in Poland and didn't see him again for 20 years. He lovingly described his mother in prose—but didn't write to her for a decade. He thrived on juggling the attentions of numerous women, and apparently demanded total devotion from his associates. Saul Bellow launched Singer's career in English with a beautiful translation of the short story "Gimpel the Fool," published in *Partisan Review* in 1953, but Singer failed to acknowledge this debt. Other Yiddish writers despised him, possibly because he alone managed to have an illustrious career in the English-speaking world. There is plenty of grumbling, too, that Singer's work in English has been sanitized from the Yiddish original.

I grew up hearing my father read Singer's magnificent short stories aloud. Whatever his personal shortcomings, Singer clearly loved every one of his characters. Noiville's book, translated from the French by Catherine Temerson, is eloquent, funny, and moving: a tribute to the art and importance of translation and to the life of Singer, who reached so many through devoted translators. And as Singer might say, a translation of a life may be as close as one human being can get to understanding another.

—Aviya Kushner

Long, Strange Trip

HOW DID A 2,448-MILE-LONG highway across some of the country's most unforgiving and sparsely populated territory become the road Americans think of when they dream of *really* going somewhere?

That's the question geographer Arthur Krim takes up in a book that is neither traditional road guide nor comprehensive history, but an account of the real-world origins of Route 66 and its development into a national symbol of democratic freedom, boundless promise, and westward-rolling self-exploration.

Following the pattern of Alan Trachtenberg's *Brooklyn Bridge: Fact and Symbol* (1965), Krim begins by examining the "idea" of Route 66 in its many prefigurations, from Native American footpaths to emigrant wagon trails to 19th-century railroads. Then he describes the "fact" of the road, its physical presence as a series of two-lane regional auto trails across Illinois, Missouri, Kansas, Oklahoma, the Texas panhandle, New Mexico, Arizona, and California that became a single highway when the federal system of numbered routes was established in 1925. Finally, Krim turns to the symbolic importance of the road, as reflected in such disparate cultural artifacts as John Steinbeck's Dust Bowl novel *The Grapes of Wrath* and a 2000 billboard advertisement for Kmart's Route 66 clothing line.

In that third, and longest, section of the book, we learn just how large Route 66 has loomed in the American imagination. Bobby Troup, discharged from the Marines after World War II, made a seven-day trip with his wife to Los Angeles in February 1946, following U.S. 66 all the way from St. Louis to California. By April, Nat Cole's trio had recorded three different versions of Troup's "(Get Your Kicks On) Route Sixty-Six!" the postwar anthem that effectively changed the name of 66 from "highway" to "route" (always pronounced with an eastern inflection: "root"). In the 1969 biker film *Easy Rider*, an acid-dropping

ROUTE 66:

Iconography of the American Highway.

By Arthur Krim.
Center for American Places. 220 pp. \$35



On a stretch of U.S. Highway 66, an expanse of Arizona sky above a lone Texaco gas station beckons cross-country travelers in 1947.

Captain America played by Peter Fonda crossed the Colorado River into California on the U.S. 66/I-40 bridge, as his own father, Henry Fonda, had done playing Oklahoma migrant Tom Joad in the 1940 film adaptation of *The Grapes of Wrath*. The road has meant a good deal to real-life capitalists too: In 1975, Bill Gates and Paul Allen founded Micro-Soft (later de-hyphenated) in an Albuquerque office building on U.S. Highway 66.

And just how did Route 66 come by its magically incantatory double sixes? In 1925, a planning committee of state highway engineers designated the route U.S. Highway 60, one of nine transcontinental roadways whose route number ended in zero. But Kentucky governor William J. Fields, stung by the absence of a national “zero” route through his own state, successfully lobbied Washington for a U.S. 60 across Kentucky. To maintain a cross-country tourist route from Chicago to L.A. identified by a single number, highway officials from Illinois, Missouri, and Oklahoma agreed in 1926 to give up their coveted zero, and adopted—for reasons shrouded in mystery—the number 66.

With enactment of the Interstate and Defense Highway Program 30 years later, states set to

work on a national network of high-speed, limited-access freeways that, in just a few decades, bypassed U.S. Highway 66 or supplanted it entirely. Long stretches of its original roadbed were obliterated, and much of what remained was in disrepair. In 1985, it was decommissioned as a federal route.

For younger readers, Krim’s history might assume too much familiarity with a road that was, for much of the last century, *the* route to the promised land of California. But for those who remember Bobby Troup’s near-perfect rhyme of “Winona” and “Arizona,” *Route 66* is a fascinating account of the real people and real events that built a fabled road in our minds.

—Eric Jones

HISTORY

American Iconoclast

AFTER HALF A CENTURY IN journalism, I. F. (Izzy) Stone—one-man band, self-described Jeffersonian Marxist, investigative reader, patriotic subverter of the official line, merciless monitor of the mainstream

media, early Holocaust exposé—had graduated from pariah to prophet: When he sold his 19-year-old political newsletter, *I. F. Stone’s Weekly*, to *The New York Review of Books* in 1971, its circulation was 70,000, astonishing for a publication of its kind.

Blind without his Coke-bottle glasses and deaf without his hearing aid until an operation late in life, I. F. (born Isador Feinstein) Stone (1907–89) knew how to read and listen between the lines. He was ahead of the herd on pointing out the contradictions posed by McCarthyism to a democratic society. Even as J. Edgar Hoover’s FBI spent thousands of man-hours tracking and reading him, he counter-investigated, exposing the follies, illegalities, and excesses of the FBI director and his Bureau. Vociferously opposed to totalitarians (although he was a little late in dis-

ALL GOVERNMENTS LIE!

The Life and Times of Rebel Journalist I. F. Stone.

By Myra MacPherson. Scribner. 564 pp. \$35

covering that Stalin was one), this man, who blasted the Soviet Union for rejecting the Marshall Plan and eventually became a severe critic of Soviet repression, was falsely accused by his critics of following the party line, or worse.

Izzy denounced the Kennedy administration's invasion of the Bay of Pigs, which he regarded as illegal and unwise, and its conduct during the Cuban Missile Crisis, which he saw as reckless. After JFK's assassination, he warned his readers, "Think it over carefully before canonizing Kennedy as an apostle of peace." In contrast to his journalistic brethren who accepted the Johnson administration's invocation of the 1964 Gulf of Tonkin episode



Journalist I. F. Stone at his desk in 1968

as an excuse for American engagement in Vietnam, Izzy highlighted the antiwar remarks of senators Wayne Morse and Ernst Gruening in the bold-faced boxes featured in his newsletter.

All of this and much more may be found in Myra MacPherson's *All Governments Lie!* The book acknowledges Izzy the iconoclast's minor shortcomings and vanities even as it celebrates and captures his prescience, his independence, his moral perspective ("He had no master but his conscience"), his humor, and his gift for the apt phrase. (*The Washington Post*, he said, was exciting to read "because you never know on which page you will find a front-page story.")

Like Plutarch, who illuminated his subjects by devoting chapters to parallel lives (Alcibiades and Coriolanus, Demosthenes and Cicero, etc.), MacPherson punctuates her affectionate portrait of Izzy, the quintessential outsider, denied admission to the Overseas Writers group, by periodically contrasting him with fellow journalist Walter Lippmann, who dined regularly at the White House. But MacPherson, a former reporter for *The Washington Post*, tells Stone's story primarily through his journalism (for *PM*, *The Nation*, *The New York Post*, his newsletter, and *The New York Review of Books*), supplemented by revealing

personal anecdotes and the requisite historical context.

Her impressive book, 16 years in the making, draws on but goes far beyond the two previous Stone volumes: Andrew Patner's invaluable collection of interviews recorded in 1984, and Robert C. Cottrell's updated doctoral thesis, published in 1992 as *Izzy*. She generously credits D. D. Guttenplan, whose own unpublished biography of Izzy is much anticipated, with putting the lie to the allegations of those who tried, a few years ago, to argue that he was some sort of Soviet agent. Izzy once famously said, "I have so much fun I ought to be arrested." *All Governments Lie!* makes everlastingly clear that the last thing I. F. Stone would ever be arrested for is serving as anybody's agent but his own.

—Victor Navasky

The South's Hard Swallow

NEGROES KNOW THEIR place and are happy with segregation.

They have no desire to vote or take part in political affairs.

Integrating schools and public accommodations will lead to mongrelization of the races.

The civil rights movement is a communist plot and a threat to the freedoms of white people.

God is a segregationist. He says so in the Bible.

If you were a white person living in the South before the world turned upside down in the 1960s, you probably believed every one of those statements. You probably believed them if you were a white Northerner, too, but that's another story. Jason Sokol, a young historian at Cornell University, is concerned with white Southerners, and he is determined that we not forget how far the South had to go to expel the poison of racism.

Here is but a sample of how deep the poison ran and how casually it was accommodated by otherwise-decent people. A white woman who

THERE GOES MY EVERYTHING:

White Southerners in the Age of Civil Rights, 1945–1975.

By Jason Sokol.
Knopf. 433 pp. \$27.95

headed the Dallas County, Alabama, chamber of commerce told an interviewer in 1952, "I'd say this is a nigger heaven. . . . The niggers know their place and seem to keep in their place. They're the friendly sort around here. If they are hungry, they will come and tell you, and there is not a person who wouldn't feed and clothe a nigger."

Sokol naturally devotes much space to the netherworld of Alabama and Mississippi, but he also reminds us that the upper South, from Virginia to Arkansas, produced politicians willing to exploit the racism of the white majority. He does not rely on some collective memory to remind us how widespread such thinking was, but presents his evidence—oral histories from libraries and universities across the South, books and articles on the civil rights era, and a paper trail of apparently thousands of records left from the period—so relentlessly that it almost appears as if he fears not being taken seriously. He means to let no skeptic get away unpersuaded.

A young white Southerner reading this book today may be tempted to think, "Those attitudes could not have been pinned on me," but Sokol produces several polls from the 1950s and '60s demonstrating that a vast, embarrassing majority of white Southerners certainly did harbor such thoughts. As late as 1968, a poll in North Carolina found that more than three-quarters of the state's whites believed that "whites work harder than Negroes" and 58 percent believed that "Negroes are happier than whites."

The history Sokol chronicles is not all bleak. He goes to pains to find the open-minded exceptions and the born-and-bred segregationists who slowly—or, in rare cases, abruptly—changed their minds. He makes clear that those people helped the civil rights movement accomplish as much as it did. There were the small bands of newspaper editors, educators, church leaders, and others who were simply blessed with inquiring minds and a sense of morality that finally weighed heavier on their consciences than the beliefs they had inherited.

But the whites who did the right thing do not

need to have their story told again. It is the others who deserve to be memorialized. These were not evil people, as evil is generally conceived. It was their very ordinariness that made their poison so toxic. If millions of people could pray in church every Sunday and live side by side with millions of other people they believed to be inferior beings, that can only mean that a great sickness was among them. The astonishing thing is that the sickness prevailed through so many generations without destroying the society.

Look closely and you can still find signs of a lingering fever—on both sides of the Mason-Dixon Line.

—Roy Reed

Never Enough Numbers

THE GREAT APPEAL OF STATISTICS is that they tell stories. Consider these numbers from the latest *Historical Statistics of the United States*:

- From 1960 to 1995, the number of students attending Catholic schools (elementary and secondary) dropped more than 50 percent, from 5.25 million to 2.49 million. In those same years, membership in Catholic congregations increased 43 percent, from 42.1 million to 60.3 million.

- Since 1900, U.S. farmers have more than tripled wheat production per acre to 40 bushels in 1997, up from 12. For corn, the gains have been even larger—127 bushels per acre in 1997 versus 28 in 1900. But in the previous century, crop yields barely improved at all. In 1800, wheat yields were 15 bushels per acre and corn yields 25 bushels per acre.

- In 1890, the average U.S. tariff on all imports was almost 30 percent. On those imports on which tariffs were actually levied (some goods weren't subject to any tariffs), it was about 45 percent. These rates typified the 19th century. By 2000, the average tariff was 1.6 per-

HISTORICAL STATISTICS OF THE UNITED STATES: Millennial Edition.

Edited by Susan B. Carter, Scott Sigmund Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, and Gavin Wright. Cambridge Univ. Press. 4,489 pp. \$825 (\$990, beginning in Nov.)

cent, and, on dutiable items, 4.8 percent.

- From the end of the Civil War to 1900, Americans experienced persistent deflation. From 1865 to 1900, the overall drop in prices was 48 percent, or about 1.4 percent annually. The price of wheat dropped from \$2.16 a bushel to about 70 cents.

Now ponder the stories in those numbers.

Catholics have traditionally run the nation's largest sectarian school system; its decline suggests that, despite an apparent religious revival, the influence of religious schools is waning. The wheat and corn numbers indicate that technology (better seeds and more fertilizers, pesticides, and tractors) explains the 20th century's explo-

The new *Historical Statistics of the United States* is a five-volume monster, reflecting the wealth of data that have appeared since 1970.

sion of food production; previously, the expansion of farmland was the main cause. High tariffs in the 19th century contradict the notion that free trade aided America's early economic growth—

though it may aid economic growth now. Economists sometimes express fears about deflation, but modest deflation historically has not been crippling. The economy was four times larger in 1900 than in 1865.

This is the first edition of *Historical Statistics* since 1975. The Census Bureau, which had published the three earlier editions beginning in 1949, didn't receive sufficient congressional funding to continue doing so. In 1995, a group of scholars headed by economic historians (and wife and husband) Susan Carter and Richard Sutch of the University of California, Riverside, took up the job. In the end, 83 scholars contributed their tables and time in return for a copy of the finished product.

The new edition is a monster—five volumes, versus two for the 1975 edition. But that's understandable. By some estimates, more than four-fifths of the scholarly historical data series have appeared since 1970. New topics include poverty, American Indians, and the Confederacy. Many of

the statistics are eye opening. For example, from 1945 to 1995, the number of guns per capita nearly tripled, from 35 per 100 people to 92. But the share of homes with a gun decreased, from 49 percent in 1959 (the earliest year for which data are provided) to 40 percent in 1996. Apparently, guns are like TVs: People who have them have more of them.

Omissions? Well, yes. Public-opinion polling data are almost entirely absent. And there's nothing on sex (though statistics do exist). But the set's biggest defect is its price—\$825, rising to \$990 in November. Statistics fanatics will probably be able to find copies at many libraries. Universities and colleges likely will buy the online version for their faculties and students. Still, here are a couple of better ideas for the publisher: How about a one-volume abridged edition at \$75? Or a CD-ROM of the full set for \$250?

—Robert J. Samuelson

CONTEMPORARY AFFAIRS

A House Divided

THOMAS MANN AND NORMAN ORNSTEIN, two of political Washington's most astute and prolific observers, have been involved with congressional reform efforts for decades.

Now they have reached a point of utter dismay about Congress. *The Broken Branch* is a well-documented explanation of their frustration.

Mann, a senior fellow at the Brookings Institution, and Ornstein, a resident scholar at the American Enterprise Institute, have two chief complaints: Members of Congress no longer have a sense of loyalty to the institution and its constitutional responsibilities, and majority-party leaders violate all standards of openness, fairness, and decency to ram through their agendas, with the result being shoddy, ideology-driven policies. Moderates in both parties, who might bridge the

THE BROKEN BRANCH:

How Congress Is Failing America and How to Get It Back on Track.

By Thomas E. Mann and Norman J. Ornstein.
Oxford Univ. Press.
272 pp. \$26

partisan divide, are a vanishing breed because districts are growing more politically and ideologically homogeneous.

Unfortunately, the best the authors can do is recommend that America return Congress to Democratic control, though they admit that Democrats may not do things any differently. Notwithstanding this partisan solution, they concede that the legislative branch's current problems have their roots in 40 consecutive years of Democratic rule in the House, or at least in the last decade of that rule in the 1980s and early '90s, when "cracks in the institution began to show." But Mann and Ornstein leave no doubt that the open fissure today is primarily the responsibility of the Republican revolutionaries who came to power in 1995 under Newt Gingrich.

While in the minority, the authors contend, Gingrich and his firebrands launched an aggressive campaign to discredit Congress and its leaders as corrupt. Once in power, the Republicans ruled with near-total disregard for the Democratic minority's right to participate in the legislative process. And since the election of George W. Bush in 2000, they say, congressional Republicans have been little more than presidential handmaidens. Expressing shock that Speaker of the House Dennis Hastert (R-Ill.) announced proudly "that his primary responsibility . . . was to pass the president's legislative program," they take Republicans to task for distorting the Speaker's role as a neutral House officer, "above normal party politics." Yet in 1992, when Mann and Ornstein issued the first report of their Renewing Congress Project, they called for strengthening the Speaker's powers as party leader (though it's clear from the report that they were not contemplating a Republican Speaker).

The authors do not point to some past "golden age" as a model to resurrect; nor do they offer a yet-to-be-tried ideal that is in any way practicable. Committee government gave us arrogant and autocratic chairmen, while today's party government can produce haughty, hammer-handed leaders. Voters, Mann and Ornstein conclude, are the only ones who can mend the broken branch,

if they are given proper guidance from leaders "intent on shaking up the existing party system." In this regard, they foresee the possibility of a presidential candidate emerging in the next election, Teddy Roosevelt fashion, "to build a political center where none now exists." In a book devoted to restoring Congress's self-image and independence, a president seems a peculiar savior—especially a TR type. He barely got along with his more conservative party leaders in Congress and had a tendency to bypass them altogether, using executive orders.

In the end, *The Broken Branch* offers few realistic prescriptions for Congress other than closer adherence to the rules (known as "regular order"), greater institutional loyalty, and more deliberation. The authors are vague about how these admirable goals are to be achieved without replacing members of Congress with apolitical philosopher-kings or sending them all to a cultural re-education camp. They never grapple with the central reality of Congress: Its members are re-election seekers whose primary loyalty is not to their party, president, or institution, but to their constituents. Their parties keep them in office with generous servings of pork and plenty of time off to spend with their constituents—meaning less time in Washington for deliberation and oversight. Changing that reality would require voters to insist that their representatives ignore their parochial interests and work full time on the national interest. Now that would be a paradigm shift.

—Don Wolfensberger

RELIGION & PHILOSOPHY

Sanctity for Sale

EVERY SUMMER, A FEW tourists in Jerusalem fall prey to something psychiatrists call Jerusalem syndrome. Overwhelmed by the sight of the actual holy city, they become convinced they are biblical fig-

**SELLING
JERUSALEM:**
Relics, Replicas,
Theme Parks.

By Annabel Jane Wharton.
Univ. of Chicago Press. 272 pp. \$32.50

ures and wander the streets prophesying, often wrapped in white sheets from their hotel beds. Jerusalem authorities and paramedics take these episodes in stride: They know they live in a city whose daily reality pales beside its existence in the world's imagination.

How Jerusalem came to belong as much to its visitors as to its residents intrigues Annabel Jane Wharton, a professor of art history at Duke University. Jerusalem, she points out, didn't become the pinnacle of world sanctity without the church's active "selling" of that status throughout the centuries. (Though Jerusalem is holy to three religions, the book treats its role in Judaism and Islam only in passing.) And selling Jerusalem, in her account, has been accom-

Today, purportedly authentic pieces of the True Cross and Jesus' crown of thorns are hawked on eBay.

plished not by devious or unscrupulous means but by the production of a long series of material objects—from relics to postcards to Bible theme parks—that allow believers to experience Jerusalem vicariously. It's wonderful terrain for an art historian, especially

one interested, as Wharton is, in authority, authenticity, and fakery. Who would guess that the Vatican collections contain the alleged fore-skin of Jesus? Or that even today purportedly authentic pieces of the True Cross and Jesus' crown of thorns are hawked on eBay?

But Wharton doesn't pursue such themes far; she has a broader and odder argument to make. The evolving nature of these surrogate objects over two millennia, she contends, shows curious parallels to the development of the global economy in the same period. In late antiquity and the early Middle Ages, when the world ran on a gift-and-barter economy and profit and usury were considered sins, believers trafficked in relics of saints and pieces of the True Cross. These could not be legitimately bought or sold but only given as gifts. Later, the Crusades spurred international contact and

commerce. The Knights Templar, an order of military monks based in Christian Jerusalem, may have been the first to build replicas of the Jerusalem "temple"—the Holy Sepulcher, the structure traditionally considered to house Christ's tomb—in Paris and London. When Jerusalem came under Muslim rule, the Franciscan order encouraged the construction in France and Italy of sacred mountains, actual mountains reconfigured into detailed landscapes that reproduced the experience of traveling to the Holy Land. A trip to one of these could earn a pilgrim the same plenary indulgence, or remission of sins, as a visit to the real thing, which was then relatively inaccessible.

This drift toward copies, Wharton argues, mimicked the rise of negotiable currency and credit. In today's electronic, postmodern age, in which money is virtual, concrete souvenirs or experiences of Jerusalem have yielded to "the progressive abstraction or commodification of sacred space." As examples, Wharton cites Mel Gibson's movie *The Passion of the Christ* and places such as the Holy Land Experience theme park in Orlando, Florida, where visitors can "experience" the events and characters of the Gospel in roughly the style of Disney World.

One may quibble with these definitions—what makes a movie rendition of the Passion more abstract than, say, a medieval passion play?—but the real problem with Wharton's argument is that it seems overly schematic, or worse, simply beside the point. People pay for their pilgrimages today with credit cards instead of gold coins, but their religious impulses—to stand on holy ground, to take away a piece for themselves—appear consistent from age to age. If believers have so utterly embraced postmodern abstraction, then why, as Wharton reports, would the official website for *The Passion of the Christ* offer fans the opportunity to buy their very own concrete object, a replica of one of the iron nails used in the movie's crucifixion scene?

—Amy E. Schwartz

God's Children

ADD LAUREN SANDLER'S *Righteous* to the growing stack of books that attempt to explain American evangelicalism. Sandler's particular interest is young evangelicals, a population she believes is growing prodigiously. She calls this cohort the "Disciple Generation." To belong, you've got to be age 15 to 35, and "equally obsessed with Christ and with culture as a means to an Evangelical end." Sandler makes the rounds through young evangelicals' subculture across the country, attending Christian rock concerts, talking to pastors about their cruciform tattoos, wandering the halls at Patrick Henry College (a Purcellville, Virginia, conservative Christian college founded in 2000 for students who were homeschooled), and interviewing biology teachers who endorse intelligent design. At a Colorado Springs megachurch, Sandler finds fervent Air Force cadets who view the conflict in Iraq as a holy war of the end times. Over coffeecake in a Seattle kitchen, she listens to a young wife and mother explain her belief in "wifely submission"—the idea, drawn from Ephesians 5:22, that wives should submit to their husbands "as to the Lord."

Sandler is a skilled reporter whose work has appeared in *The Atlantic Monthly* and *Elle*, but here she writes as a secular prophet too, and her book is something of a secularist's *cri de coeur*. She is baffled by the religious, philosophical, and political choices that members of the "Disciple Generation" make. How can kids whose moms burned their bras at Equal Rights Amendment marches grow up to embrace "wifely submission"? How can college students who've read Locke and Rousseau proclaim that the Bible is the inerrant word of God? And more than baffled, she is fearful. "There is a tyranny over the hearts and minds of this generation," she writes, and everyone, religious and secular, should be concerned.

RIGHTEOUS:

Dispatches From the Evangelical Youth Movement.

By Lauren Sandler.
Viking. 254 pp. \$24.95

Sandler's conclusion—that people in the modern world are lonely and isolated, and that loneliness brings people to religion—is not especially innovative. People have been spinning variations on this functionalist theme for centuries. Then Sandler makes a less predictable move: She turns her scrutiny on herself and her own community. Secularists "can't even find the words to express why life is worth living," she writes. In Sandler's account, they have left the task of meaning making to the likes of Rick Warren, the California pastor who wrote the best-selling manifesto *The Purpose-Driven Life*, and novelist Tim LaHaye, coauthor of the apocalyptic *Left Behind* series. If those on the secular left want to prevent America's takeover by fundamentalists, they must do a better job of articulating a vision of the good life that is compelling and humane: "It is time for our own secular Great Awakening," Sandler writes.

Perhaps she ought to give us a sequel in which, instead of describing a community she perceives as inimical, she uses her journalistic skills to paint pictures of secular folks who are living that good life, and does a little evangelizing for the values she believes are under threat.

—Lauren F. Winner

Party til the Cows Come Home

IF A PARENT SINCERELY believes that everyone is bound for either eternal paradise or eternal damnation, what could be worse than a child's selecting the wrong destination? The threat is doubly harrowing for the Old Order Amish, for whom the separation from a wayward child is as real in this life as it will be in the next. Amish adolescents who walk away from their faith do so literally, abandoning the drab attire and buggies of their communities for the fashionable dress

RUMSPRINGA:

To Be or Not to Be Amish.

By Tom Shachtman.
North Point. 286 pp. \$25



Amish teenagers taste life outside the strictures of their religion during rumspringa, a period of worldly experience that their elders condone, as shown here in the 2002 documentary *Devil's Playground*. Afterward, the vast majority of Amish youth return to the church.

and fast cars of the open society. Many of the seemingly excessive strictures in the unwritten rulebook, or *ordnung*, adhered to by the 200,000 Plain People concentrated in Indiana, Ohio, and Pennsylvania are designed to bind families together. It's hard to get far from home when your buggy can travel only 10 miles before your horses need to rest.

How then to explain *rumspringa*? This "running around" time is a culturally endorsed opportunity for Amish offspring in their teens and early twenties to taste as much forbidden fruit—alcohol, sex, fast cars—as they like, without leaving the faith. Most don't even leave home. *Rumspringa* participants can be baptized as soon as they turn 16, or can dabble with experimentation indefinitely. The practice, which emerged when Anabaptists took to farming in pluralist 18th-century Pennsylvania, is essentially an institutionalized period of apostasy, a rush of experience preceding the determination to reject the wider world and join the church permanently.

Consider a typical weekend party described in *Rumspringa*, journalist Tom Shachtman's

uneven but enlightening study of the practice. While their elders sleep, hundreds of Amish teenagers travel back roads by buggy and the occasional recently purchased car, using cell phones pulled from beneath aprons to find the farm where festivities will be held. "A good party is when there's, like, 200 kids there," one reveler explains, "really loud music, and everybody's drinking and smoking and having a great old time." Couples wander into the dark pasture to hook up, while Amish drug dealers sell marijuana, cocaine, and crystal methamphetamine. The party ends when it's time for the hosts to milk the cows.

Shachtman and several colleagues spent more than 400 hours interviewing teenagers and Amish leaders for this book and the 2002 documentary *Devil's Playground*. Though Shachtman ably records *rumspringa's* excesses in both projects, he aims to provide a sympathetic portrait of confused adolescents faced with a decision between religious order and worldly freedom. The reporting is anecdotal and the pace often slack, but the conversations do reveal subjects who find their lib-

erty unsettling. A young Lancaster County, Pennsylvania, farmer considers a new life but wonders, “If it isn’t any better out there, why would I leave?”

Between 80 and 90 percent of Amish teenagers choose not to leave the order. The deck is stacked—their schooling ends after age 14, they are pressured to avoid socializing with their mainstream peers, and, as Shachtman notes, “the experiences they have on the outside are usually shallow, most of them involving minor excursions into sex, drugs, and rapid transport.” Few gain the imaginative tools needed for radical self-reinvention; for most, the choice is between being an Amish day laborer or a partying factory worker.

Base pleasures, fleetingly encountered, are no match for the safety of familiar community, the support of parents, and the promise of salvation. Says one young man, “It’s in the back of my mind every day: If I don’t change my ways I might not get to Heaven.” In the end, for most who grow up Amish, the God they know is better than the devil they don’t.

—Aaron Mesh

SCIENCE & TECHNOLOGY

The Body Sketchers

WITH THE NOTABLE EXCEPTION of the work of Leonardo da Vinci, anatomical illustration has generally been a collaborative effort. There is the anatomist who dissects the bodies and at least one artist who, working with the anatomist, his notes, and sometimes his sketches, illustrates the findings. Since illustration is by definition an editorial process—things are left out, subdued, or emphasized for clarity or impact—it is an ideal tool for the anatomist who wishes not only to record what has been observed but also to teach it. Over the past 500 years, these partnerships between artists and anatomists have produced many works both useful and occasionally even magnificent, and *Human Anatomy: From the Renaissance to the Digital Age* offers an enjoyable look at them.

HUMAN ANATOMY:

From the Renaissance to the Digital Age.

By Benjamin A. Rifkin, Michael J. Ackerman, and Judith Folkenberg. Abrams. 343 pp. \$29.95

ATLAS OF HUMAN ANATOMY AND SURGERY:

The Complete Coloured Plates of 1831–1854.

By Jean Baptiste M. Bourgey and Nicolas Henri Jacob. Taschen. 714 pp. \$200

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Art historian Benjamin Rifkin's insightful overview of anatomical works, from Andreas Vesalius and Jan Stefan van Kalker's *The Fabric of the Human Body* (1543) to *Anatomy, Descriptive and Surgical* (1858) by Henry Gray and Henry Vandyke Carter, is largely given over to brief biographies of the anatomists and portfolios of their plates. In the closing chapter, biomedical engineer Michael Ackerman considers the present and future of anatomical illustration. With the latest scanning technology, it is no longer necessary to create the illusion of three-dimensionality or to suffer inaccuracies of placement or relative dimension. And yet one cannot help but mourn the loss of images created by informed human observation rather than digital data sets. The book's only disappointment, aside from its wee format, is the inclusion at the end of "illustrations" from the *New Atlas of Human Anatomy* (2000). They may be accurate. They may be the way of the future. But they also suggest, by their lack of subtlety and garish colors, that we are made of plastic.

Still, all is not lost. That eclectic publishing house, Taschen, has released a truly extraordinary volume, *Atlas of Human Anatomy and Surgery*. Where the Abrams book serves as a handy guide to possible journeys through the art of anatomy, the Taschen publication is the Grand Tour itself. Its 714 pages contain all the plates from the eight volumes produced by French anatomist Jean Baptiste Marc Bourguery (1797–1849) and his primary artistic accomplice, Nicolas Henri Jacob (1782–1871).

The original plates were printed using lithography, a technique that allows both remarkable detail and a lifelike softness when practiced by artists of Jacob's caliber. His illustrations are so successful in capturing both the procedures and the sense of human life that the surgical plates—showing, for example, how to remove a leg step by step, so to speak—are not for the squeamish. On the other hand, the illustrations of specimens observed through the microscope are worth the journey all by themselves, and the book's double foldouts take your breath away.

The care with which this book has been produced, not to mention the fact that it was pro-

duced at all, is a fitting tribute to Bourguery, whose work never received the recognition he felt it deserved. The original work was without doubt a tour de force, and so, appropriately, is this new edition.

—David Macaulay

Gray Matters

IN *Second Nature*, NOBEL Prize-winning neuroscientist Gerald Edelman proposes what he calls "brain-based epistemology," which aims at solving the mystery of how we acquire knowledge by grounding it in an understanding of how the brain works.

Edelman's title is, in part, meant "to call attention to the fact that our thoughts often float free of our realistic descriptions of nature," even as he sets out to explore how the mind and the body interact. He favors the idea that the brain and mind are unified, but has little patience with the claim that the brain is a computer. Fortunately for the general reader, his explanations of brain function are accessible, buttressed by concrete examples and metaphors.

Edelman suggests that thanks to the recent development of instruments capable of measuring brain structure within millimeters and brain activity within milliseconds, perceptions, thoughts, memories, willed acts, and other mind matters traditionally considered private and impenetrable to scientific scrutiny now can be correlated with brain activity. Our consciousness (a "first-person affair" displaying intentionality, reflecting beliefs and desires, etc.), our creativity, even our value systems, have a basis in brain function.

The author describes three unifying insights that correlate mind matters with brain activity. First, even distant neurons will establish meaningful connections (circuits) if their firing patterns are synchronized: "Neurons that fire together wire together." Second, experience can either strengthen or weaken synapses (neuronal connections). Edelman uses the analogy of a police officer stationed at a synapse who either facilitates or reduces the traf-

SECOND NATURE:

Brain Science
and Human
Knowledge.

By Gerald M. Edelman.
Yale Univ. Press.
203 pp. \$24

fic from one neuron to another. The result of these first two phenomena is that some neural circuits end up being favored over others.

Finally, there is reentry, the continued signaling from one brain region to another and back again along massively parallel nerve fibers. Since reentry isn't an easy concept to grasp, Edelman again resorts to analogy, with particular adeptness: "Consider a hypothetical string quartet made up of willful musicians. Each plays his or her own tune with different rhythm. Now connect the bodies of all the players with very fine threads (many of them to all body parts). As each player moves, he or she will unconsciously send waves of movement to the others. In a short time, the rhythm and to some extent the melodies will become more coherent. The dynamics will continue, leading to new coherent output. Something like this also occurs in jazz improvisation, of course without the threads!" Reentry allows for distant nerve cells to influence one another: "Memory, imaging, and thought itself all depend on the brain 'speaking to itself!'"

Edelman concedes that neurological explanations for consciousness and other aspects of mind are not currently available, but he is confident that they will be soon. Meanwhile, he is comfortable going out on a limb: "All of our mental life . . . is based on the structure and dynamics of our brain." Despite this cheeky optimism about the explana-

tory powers of neuroscience, Edelman acknowledges the pitfalls in attempting to explain all aspects of mind in neurological terms. Indeed, culture—not biology—is the primary determinant of the brain's evolution, and has been since the emergence of language, he notes.

In light of Edelman's enthusiasm for a brain-based epistemology, I was surprised to learn that he considers Sigmund Freud "the key expositor of the effects of unconscious processes on behavior." Such adulation ignores how slightly Freud's conception of the unconscious, with its emphasis on sexuality and aggression, resembles the cognitive unconscious studied by neuroscientists. More important, as Edelman concedes, Freud's grasp of biology was poor, and he perhaps made too much of certain brain activities, such as dreams. Dreams may simply result from the state of consciousness that occurs during rapid eye movement sleep.

Despite these minor quibbles, *Second Nature* is well worth reading. It serves as a bridge between the traditionally separate camps of "hard" science and the humanities. Readers without at least some familiarity with brain science will likely find the going difficult at certain points. Nonetheless, Edelman has achieved his goal of producing a provocative exploration of "how we come to know the world and ourselves."

—Richard Restak

CONTRIBUTORS

■ **Eric Jones** is a travel writer and household mover. His most recent book is *New Hampshire Curiosities* (2006).

■ **Aviya Kushner** covers books for *The Jerusalem Post*. She is at work on *And There Was Evening, And There Was Morning*, a book about the experience of reading the Bible in English for the first time after reading it in Hebrew all her life.

■ **David Macaulay** has been explaining things in books for more than 30 years. He is currently at work on his own exploration of the human body, *The Way We Work*.

■ **Aaron Mesh** is a news editor and movie critic for *The Pulse*, an alternative

weekly newspaper in Chattanooga, Tennessee.

■ **Victor Navasky** is publisher emeritus of *The Nation* and director of the George Delacorte Center for Magazine Journalism at Columbia University.

■ **Roy Reed** was born and raised in Arkansas and covered the civil rights movement for *The New York Times* during the 1960s. He is the author of *Faubus: The Life and Times of an American Prodigal* (1997).

■ **Richard Restak** has written 18 books on the human brain, including *The Naked Brain: How the Emerging Neurosociety Is Changing How We*

Live, Work, and Love, published last month.

■ **Robert J. Samuelson** is a columnist for *Newsweek* and *The Washington Post*.

■ **Amy E. Schwartz** is a contributing editor of *The Wilson Quarterly*.

■ **Lauren F. Winner**, a visiting lecturer at Duke Divinity School, is the author of *Girl Meets God: A Memoir* (2002).

■ **Don Wolfensberger** is director of the Congress Project at the Wilson Center, former staff director of the House Rules Committee, and author of *Congress and the People: Deliberative Democracy on Trial* (2000).

PORTRAIT



*Woodrow Wilson,
ca. 1916*

A Slice of Woodrow Wilson

Solemn pronouncements in this sesquicentennial year of Woodrow Wilson's birth may help clinch his reputation as a cold fish, but no one gets to the White House without some spark and fire. One Wilsonian passion was sports. While a student at Princeton, Wilson was president of the baseball association despite his mother's pleas that he abandon the distraction. As a professor, he helped coach the Wesleyan and Princeton football teams and was known to play a formidable game of tennis.

Wilson took up golf in his forties, and found himself grappling with the same demons that plague all duffers. "I come away from my game every time I play wondering why Nature made me so stubbornly awkward," he wrote to a friend. But neither war nor an average score of about 115 deterred him from logging more rounds in office than any other president. He played almost daily until 1918. Golf, the stress-prone Wilson wrote, "is the only thing that really diverts me and gets me 'out of myself.'"



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871 United Nations Plaza, 15th Floor, New York, NY 10017-1814
Tel: (212) 497-3510 Fax: (212) 497-3535 E-mail: alfa@cdsintl.org <http://www.cdsintl.org>