FOREIGN AFFAIRS
MARCH/APRIL 2014 • VOLUME 93 • NUMBER 2 • NEXT TECH

WERE SNOWDEN'S LEAKS JUSTIFIED?

MARCH/APRIL 2014

FOREIGN AFFAIRS

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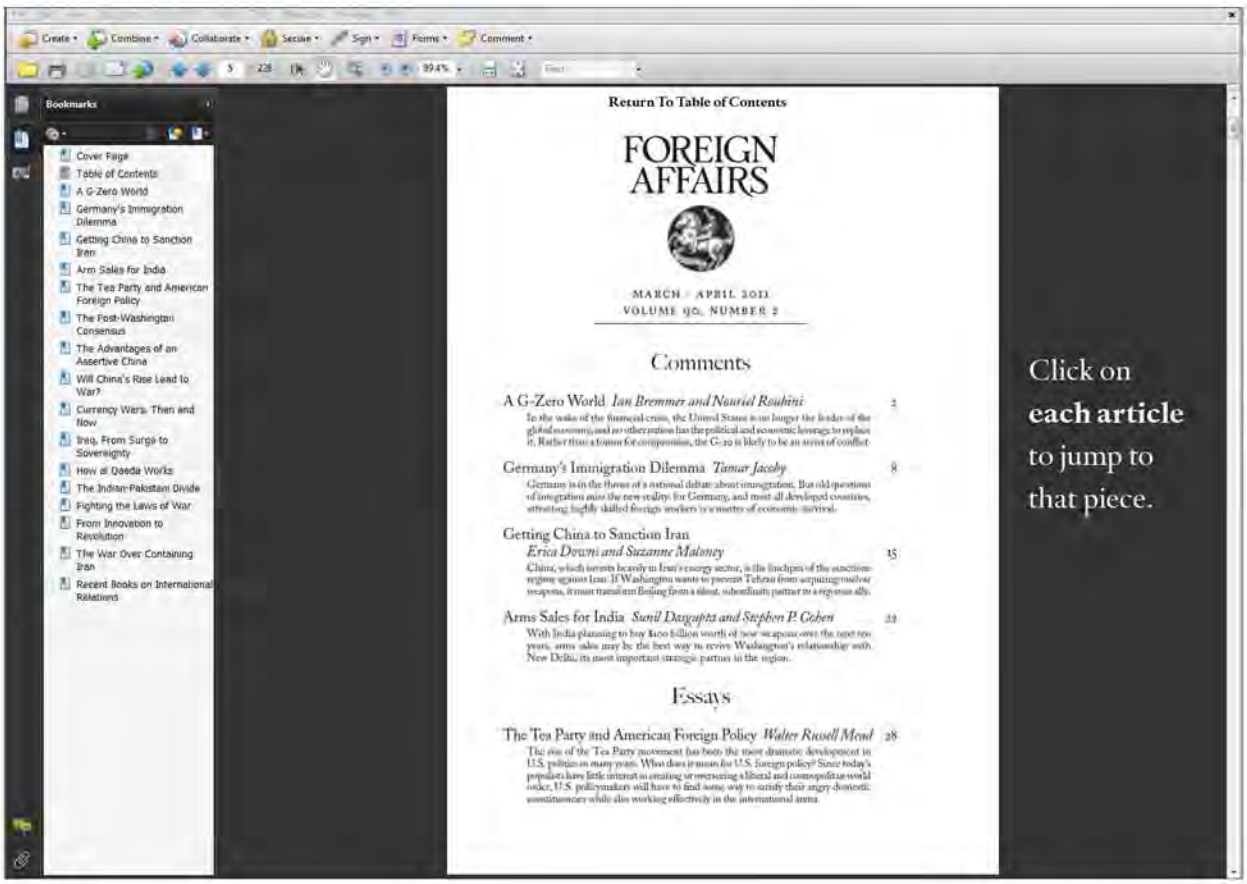

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COMMENTS

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- **Alex de Waal** and **Abdul Mohammed** on South Sudan.
- **David Edmonds** on ethics and the trolley problem.
- **Ananda Rose** on forensics along the U.S.-Mexican border.

The magazine was established as means to host and foster an even-handed and authoritative debate on energy issues, promoting understanding and awareness among increasingly broad energy sector audiences.

The goal of Oil is and always has been to deepen public knowledge about energy and finance issues, on the basis of reliable documentation, conversations among experts, and in-depth explorations of core global topics.

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In 2011, Oil magazine made its first appearance in China. Issue fourteen was the first edition, titled Oil China.

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Archibald Cary Coolidge, Founding Editor
Volume 1, Number 1 • September 1922

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During his 21 years at Microsoft, **CRAIG MUNDIE** has worked on everything from operating systems to video games to digital television. In 2006, he became the company's chief research and strategy officer, overseeing one of the world's largest computer science research organizations. Currently senior adviser to the CEO, Mundie also serves as Microsoft's principal technology policy liaison to the U.S. and foreign governments. In "Privacy Pragmatism" (page 28), he argues that the world's data-protection efforts should focus less on collection and more on use.

Having grown up in Montreal, Canada, **BERNARD AVISHAI**—a former journalist turned academic and business consultant—now splits his time between Dartmouth College and the Hebrew University of Jerusalem. Avishai has written three books on Zionism and Israel and contributed to *Harper's*, *The New York Review of Books*, and *The New Yorker*, among other publications. In "Among the Believers" (page 115), he examines the surprisingly current relevance of a half-century-old travelogue by the late Iranian critic Jalal Al-e Ahmad that shows the way Israel and the Islamic Republic of Iran mirror each other.

Raised in China during the Cultural Revolution, **MINXIN PEI** worked in a foundry before getting his bachelor's degree at the Shanghai International Studies University. Now a professor of government at Claremont McKenna College, Pei has written two books and many articles on Chinese political development. In "How China and America See Each Other" (page 143), he explores what a new collection of debates between Chinese and American scholars shows about the two countries' differing worldviews.

U.S.A. & R.O.C. (TAIWAN):

PARTNERING TOGETHER TO PRESERVE ASIA'S PEACE AND PROSPERITY THROUGH THE TAIWAN RELATIONS ACT

The Taiwan Relations Act (TRA), signed into law thirty-five years ago by President Jimmy Carter on April 10, 1979, has stood the test of time. For three-and-a-half decades, this bipartisan legislation has served as a cornerstone not only for U.S.-Taiwan relations, but for the entire Western Pacific region. It has not only promoted regional peace and stability but has also continued to flourish through the further strengthening and closeness of U.S.-Taiwan relations.

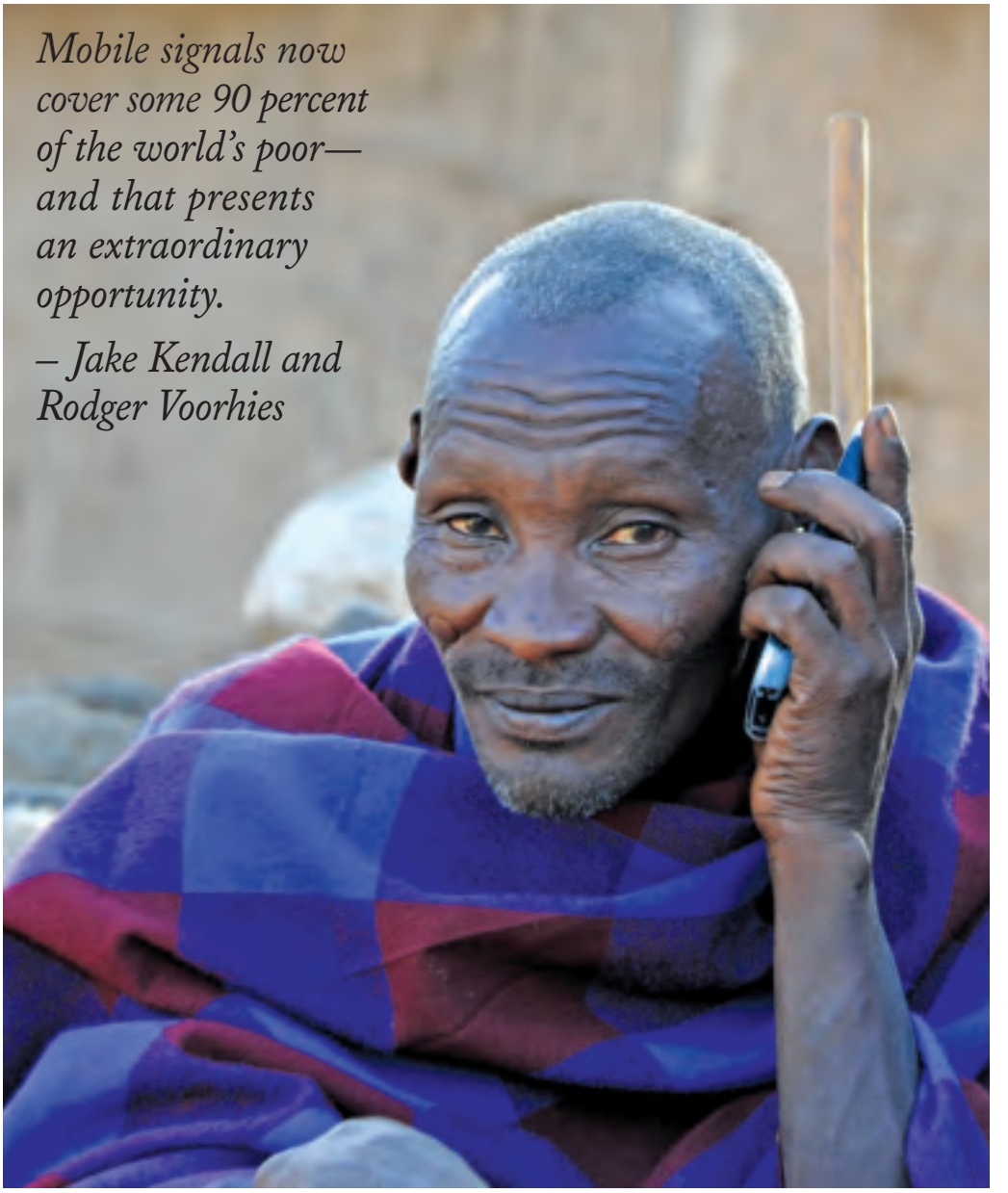
Simply put, without the TRA neither Taiwan nor current U.S. strategic and commercial interests in the Asia-Pacific region would exist in their present form. The TRA achieved this through its public pledge to "help maintain peace, security, and stability in the Western Pacific and to promote the foreign policy of the United States by authorizing the continuation of commercial, cultural, and other relations between the people of the United States and the people on Taiwan." The TRA has been a critical mechanism for maintaining Taiwan's economic well-being and security as well as for preserving key U.S. national interests.

In 1982, just three years after enactment of the TRA, trans-Pacific trade surpassed trans-Atlantic trade for the first time. Forty-three percent of the world's exports now pass through the Pacific region as opposed to thirty-four percent in the Atlantic. The Republic of China (Taiwan) sits astride those sea lanes in the Western Pacific that are vital to this expanding world trade. Since the end of the Second World War, the United States has provided the security umbrella for that freedom of navigation on the high seas which has made this Pacific commerce possible.

Taiwan has been, as General Douglas MacArthur famously observed, an "unsinkable aircraft carrier" dedicated to open trade and freedom of navigation. The Taiwan Relations Act stipulates that the United States will "provide Taiwan with arms of a defensive character." This has ensured that a confident Taiwan, free of a "resort to force or other forms of coercion," has been able to evolve into a free market-oriented, democratic society which has served as a model for other Asian societies.

The United States and Taiwan, as partners, have achieved all of this by working together. This 35th anniversary year is a fitting occasion to commemorate the Taiwan Relations Act and its vital role in advancing the understanding of the critical importance of U.S.-Taiwan relations throughout the United States, including in Congressional and academic circles. The TRA is clearly the bedrock of the warm and enduring relations between two proud and free peoples!

COMMENTS



Mobile signals now cover some 90 percent of the world's poor—and that presents an extraordinary opportunity.

– Jake Kendall and Rodger Voorhies

CORBIS / KAI-UWE WARNER

Reforming Nigeria

A Conversation With Ngozi Okonjo-Iweala

Born to professors in what was then still a British colony, Ngozi Okonjo-Iweala was a teenager when civil war broke out in Nigeria seven years after independence, and she ended up working as a cook for the Biafran rebels on the frontlines. After leaving Nigeria to study economics at Harvard and then MIT, she spent two decades at the World Bank, eventually becoming a vice president. In 2003, Okonjo-Iweala returned to Nigeria to serve as finance minister in the administration of President Olusegun Obasanjo, but she resigned in frustration in 2006. (To opponents of her reform agenda, she had become known as "Okonjo-Wahala," a play on the Hausa word for "trouble.") After another stint at the World Bank, this time as a managing director, she was invited back to Nigeria by President Goodluck Jonathan in 2011 to head his economic team and once again take up the post of finance minister. She spoke with *Foreign Affairs* senior editor Stuart Reid in Abuja last December.

As a student in the United States, what did you find was the biggest misconception Westerners had about Africa?

Where do you start? Then, you didn't have the Internet. Many people didn't travel to Africa. Some people forget that it's made up of 54 countries. Africa to them becomes one large country. They don't contend with the diversity of it. Within academia, it was a little bit better. People knew about the economics, maybe the geography—but they didn't know how people lived. They were not aware that African countries had an emerging middle class. There was just the image of a continent full of poor people who were not very educated, and beautiful scenery and animals. Now, I think, this has changed.

You were Nigeria's first female finance minister. How much progress have women made in Nigeria, and how much work is left?

Women are extremely active in the private sector, as entrepreneurs and in the professions. Nigerian women have been educated for some time. But we have a problem in the north, where not enough girls are in school and there's early marriage. A law has just been passed against that.

In politics, we're not making enough progress. Let me qualify that. Within the executive branch of government, tremendous progress has been made, because the president believes in promoting women and putting them into positions of responsibility. From having the cabinet be 16 percent women the first time I was minister, we're now at about 33 percent. That's unprecedented. But in the legislature, there's still not quite the acceptance of letting women break through the glass ceiling. It's clearly a man's world.

What were the most important reforms you enacted during your first stint as finance minister?

We started with trying to understand why Nigeria had been growing at about 2.4 percent for the previous decade,

CORBIS / RAMIN TALAIE

The finance minister in New York City, September 2009

when the population had been growing at about 2.8 percent to 3.0 percent—negative per capita growth. It was the first time I'd really thought through some of the fundamental issues of my own economy. We noticed that a big problem was volatility, and we needed to come up with a way to manage this. So we devised the oil-price-based fiscal rule, which delinks the budget from the international price. This is a huge achievement. It's steadied the management of the economy so much, by making expenditure and revenues more predictable. At times of high oil prices, it also led to some savings, which we put in what we call the Excess Crude Account, and we eventually created a sovereign wealth fund. During the financial crisis, the money in that Excess Crude Account was used as a fiscal stimulus to the economy. Then, having a monetary policy in tandem with a tighter fiscal policy, we were able to begin to fight inflation.

Having stabilized the macroeconomy, I then put in an exchange-rate regime that was acceptable to the IMF [International Monetary Fund], with more flexible, market-determined rates. Then we moved on to one of the key fiscal issues in the economy, which was the debt. Many Nigerians think that the biggest achievement of the Obasanjo administration was clearing our debt of $30 billion from the Paris Club, because it was a huge overhang on the economy, had deterred investment, and was just not manageable. We had been trying for so many years to get rid of that debt, and it was like a miracle.

We also made inroads on privatizing our state sectors. Telecoms was liberalized, and it's now the fastest-growing sector in the economy. We began the privatization of power. We concessioned ports. We didn't do it all very nicely and neatly. It was a little bit messy. We tried to reform the civil service. We didn't do that quite as well. But we unleashed enough sectors that the economy started to grow at six percent and has continued ever since.

What obstacles did you encounter?
The obstacles were vested interests, because we needed to fight corruption within the economy. In every developing country, even developed ones, vested interests prevent sectors from being reformed. It was really fierce in the ports. With customs, we didn't succeed. In every single sector, people who were benefiting from the way that it was were very resistant to the way we wanted it to be. It remains a problem today.

Why did you ultimately leave?
At some point, with some of the reforms we were trying to do, I felt that I was no longer able to stick to my principles. The political atmosphere was just like now. It was heating up. When it comes to election time, everybody wants all sorts of things. The sensible thing to do was to resign.

Won't politics always get in the way of technocratic reforms?
It's not insurmountable, but we need a social contract where everybody agrees that certain things have to be done. I don't think we have that in Nigeria yet. Our politicians need to realize that you do not politicize the budget. In a developing country, that's lethal. If developed countries are holding the budget hostage, well, they've already reached a certain level of maturity and of income.

In 2012, you became a candidate for president of the World Bank. Yet the position ultimately went to Washington's pick, Jim Yong Kim. Is it time to end the gentleman's agreement whereby the United States gets to pick the head of the World Bank and Europe gets to pick the head of the International Monetary Fund?
Absolutely. The boards of these institutions had said previously that it should all be done on merit. I think people took them at their word. When the position came open at the fund, obviously that wasn't quite followed. There was a contest, but I think the Europeans jumped by selecting and pre-anointing a candidate—who is actually a great friend, great woman, fantastic mind—Christine Lagarde.

When it came to the World Bank, I had just been in office as finance minister for eight months, so it was not in my mind. But the other African presidents all called President Jonathan to tell him that they had come to a meeting of minds and that Africa wanted to put forward a candidate and they wanted it to be me. My president thought about it quite a bit. He told me, "Look, it's been almost a week, and they've been calling me and saying I must allow you." Of course, he was reluctant, because it had taken quite a bit of persuasion for me to come here. But he agreed to it. The long and short is I feel very honored that Africa could produce a candidate, could think that we have something to give the world. I think things will never be the same again, because it was a credible contest.

Should developing countries have more influence in these institutions?
I think they should. The world has changed since Bretton Woods. Fifty percent of the world's growth and trade at some point was being provided through the emerging markets. During the height of this economic crisis, the emerging markets were the engines of growth for the world. No matter how you look at it, the dynamics have changed. The low-income countries in Africa and elsewhere are some of the most rapidly growing economies in the world. These countries ought to be given more of a voice. If the whole idea of Bretton Woods is to assist developing countries, those being assisted also ought to have more of a voice in how that assistance should work, don't you think? That kind of paternalistic relationship can't obtain.

Back to Nigeria: How can you diversify the economy away from oil to prepare for a world of lower energy prices?
Nigeria has always talked about diversification, but we actually have to deliver it, and that is what this administration is doing. We've completely revamped the agricultural sector. Young people are now all trying to be in agriculture. There's a program called Nagropreneurs—not a very pretty name—for young agricultural entrepreneurs, who are being supported. We are almost the largest rice importer in the world, and we mean to be self-sufficient by 2015.

Housing: we've never seen housing as a source of growth in this economy, as it is in the United States. The housing sector has never really been unleashed and unfettered, and we are going to do it. We will announce in January a program for a Nigerian mortgage refinance facility that will put more liquidity into the economy. We have only 50,000 mortgages in this country of 170 million. Everybody tries to save

over their lifetime to buy a house. There are no affordable mortgage rates. That's not acceptable.

Manufacturing: Nigeria is the largest recipient of FDI [foreign direct investment] on the continent. A lot of companies are coming in to invest. Procter & Gamble invested $250 million in baby products in the southwest of the country, and they're adding another $50 million. Indorama invested $1.2 billion in fertilizer and petrochemicals plants. [Aliko] Dangote, the richest man in Africa, who is Nigerian, is putting $9 billion into a series of refineries and petrochemical plants. These are just a few examples.

We privatized the power sector, and investment has come in—over $2 billion—to purchase our power plants. Power is the single largest constraint on investment. A survey done by the World Bank shows that power and access to financing—it's not even corruption, that's a little bit lower down—are the top two constraints that businesses cite. Government has not been able to manage the power sector. And to diversify the economy, we must have power.

Since 2004, Nigeria's GDP has roughly tripled, largely due to oil. At the same time, by many measures, poverty has actually gone up. Nigeria seems to be suffering from the resource curse, whereby a tiny elite benefits from the oil wealth, but the mass of people don't. Why?

We do have an issue with poverty, but it's not that poverty has been going up. The World Bank and [Nigeria's National] Bureau of Statistics survey actually show a small shrinking of the proportion of those living in poverty, even though the absolute numbers may be higher. But perceptions of poverty have gone up, because there's been rising inequality.

The pace of growth should be faster. We should not be content with growing at an average of seven percent. In order to make appreciable inroads into poverty, like China did, we actually have to perform like China and grow at nine to ten percent a year. Because everybody else is growing at one percent and some are contracting, seven percent looks pretty good. But with the poverty problems we have, we actually have to grow faster.

The quality of growth must also change. It must not come with rising inequality, which is what has happened; our Gini coefficient has been going in the wrong direction. We don't need the bulk of the growth being captured by a smaller segment of the population. We have to correct that by precisely pursuing growth in sectors that create jobs. That's why agriculture is enormous.

And we haven't got good safety nets. Even if you grow, there are always those who will not get jobs because they don't have the right skills or because they happen to be in a difficult geographic place. We've just started building a conditional cash-transfer program linked to education, and it's working very well at bringing girls into school. We are piloting that for maternal and child health in eight states, and it's delivering results. We have one of the biggest maternal mortality rates, and we've now cut it from 545 per 100,000 women to 350.

When it comes to fighting corruption, how do you pick and choose your battles, given how deeply corruption has infected the political system?

The second time around, the political atmosphere is so poisonous. It was not

like that the first time. Everything has become politicized, even corruption. People throw out corruption charges, numbers of missing income, that are untrue. So much energy is spent debunking that the actual energy devoted to the problems that exist is dissipated. We have oil theft leading to production losses. We are losing income. We need to focus all energies on fighting that, not on spurious battles.

But corruption is still a real problem. You must be frustrated.

Yes, absolutely. But I'm also frustrated by diversionary attention. This is not to say that corruption is not a problem. Of course it is. But it's not good enough to just talk about a problem. The question is, what are we doing about it? We had pension fraud, and we have totally revamped the pension system. Because we didn't have a biometric system of checking, you could get phantom people put onto the pension roll. We had different pension offices, so the police, immigration, customs, all had pension offices. We totally revamped this. Some people we arrested and prosecuted. We're unifying all the pensions. We are working with the Bill & Melinda Gates Foundation to digitize the whole thing and put people on biometrics. It's beautiful. And no one is talking about that.

We cleaned up the oil subsidy. When the oil subsidy phaseout happened and we had all those demonstrations [in 2012], a presidential committee was set up. They discovered that some companies had fraudulently taken subsidy money. We published the names of the 25 companies that did this. Some we arrested. We have cleaned up the system, reduced the amount of money disappearing. You have to track the big sources of leakages and corruption and then try and deal with them. Oil theft is one. Pension fraud is another.

Turning to security: in the north, there's Boko Haram; in the south, kidnapping is a problem—a personal issue for you, as your mother was kidnapped in 2012.

When people talk about my mother's kidnapping, I want to be crystal clear: It was not a criminal kidnapping. It wasn't for money. It was related to the fight against corruption. So in terms of fighting corruption, I don't need to prove anything. I paid a personal price. My 83-year-old mother was kidnapped and kept for five days. It's a miracle she didn't die. She said, "Why have you taken me?" And they said, "Your daughter. It's about the oil subsidy and about SURE-P [Subsidy Reinvestment and Empowerment Programme]. She's not releasing money." We have this subsidy reinvestment program, and they thought I was in charge of it (which I'm not) and I wasn't releasing money from it. They thought I should resign publicly and leave the country.

It happened around Christmastime. You can imagine what a tense, terrible period it was. With the support of my family, I kept going and praying to God that my mother would not pay the ultimate price because I came back here. There was such an outpouring of support from every quarter. Some people hired their own private agents to look for her. There were prayer circles all over the country in mosques and in churches. The president went all out—police, secret service, military, everybody.

How worried are you about the general security situation?

It was very worrisome about a year ago, when there were a lot of incidents in the northeast. But the president took a number of measures that are working in the sense that the problem has been isolated to Borno State and Yobe State. And there's a three-pronged approach. There's a counterinsurgency with the army, with the help of outsiders like the U.S., France, and the U.K. This has been coupled with a political approach. A committee has been formed to talk to these people and find out what they want. The problem is that it's not very clear what they want. And the third angle is inclusion. We have to admit that the level of poverty in these two states is among the highest in the country. So the issue for us is, what are we doing to solve that problem?

Like many countries in the region, Nigeria suffers from something of a split between a Muslim north and a Christian south. Is that the inevitable byproduct of colonial borders?

I'm one of those who subscribe to the view, "OK, that was in the past; let's get on with it. We've had 60 years now." People like to focus on the things that divide Nigeria, forgetting the things that hold the country together. It will not be as easy as people think for the country to be divided. Too many southerners have a stake in the north; too many northerners have a stake in the south. It's so complex now. In church two Sundays ago, they announced that the pastor was grieving because his brother, who is Muslim, died, so he'll be leaving for the seven-day *du'a* rites. His brother was a Muslim, and he's a pastor in the Anglican Church.

What do you hope Nigeria will look like a decade from now?

I'm very excited about Nigeria, and that's why I'm frustrated and irritated by all these diversions. We need to focus on turning this country into the powerhouse that it can and should be. My vision is that ten years from now, Nigeria will have gotten it right on so many fronts. First of all, the economy will be growing at a very reasonable rate, anywhere from seven to ten percent. I hope it will be growing at nine to ten percent, because we would have sorted out the power-sector problem.

You see, this is an entrepreneurial country. Everybody's hustling. In ten years' time, the housing sector, the manufacturing sector, agriculture, creative arts, and the solid mineral sector, which we have not even started to exploit, will be leading the economy. We may not have solved all the problems of inequality and poverty, but we will have made a significant inroad. We will have built a social safety net for those at the bottom, and we'll be creating many more jobs. My vision is that Nigeria will join the group of large emerging markets.

I also hope and think that democracy will have matured a bit more, a responsible democracy with freedom of speech, which we have now in spades—actually, there's so much freedom of speech, it's not funny—and with a more educated, literate, and consuming people. And an enlightened civil society that will push the government in the right direction.

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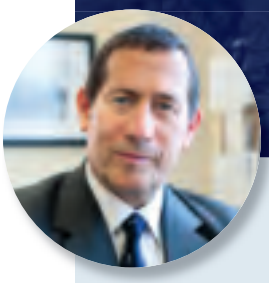

Dr. Bruce Hoffman, SSP Director, terrorism and insurgency expert. Author of *Inside Terrorism*. Senior Fellow, U.S. Military Academy's Combating Terrorism Center. Former Chair of Counterterrorism and Counterinsurgency, RAND Corporation.

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How Cell Phones Can Spur Development

Jake Kendall and Rodger Voorhies

The roughly 2.5 billion people in the world who live on less than $2 a day are not destined to remain in a state of chronic poverty. Every few years, somewhere between ten and 30 percent of the world's poorest households manage to escape poverty, typically by finding steady employment or through entrepreneurial activities such as growing a business or improving agricultural harvests. During that same period, however, roughly an equal number of households slip below the poverty line. Health-related emergencies are the most common cause, but there are many more: crop failures, livestock deaths, farming-equipment breakdowns, even wedding expenses.

In many such situations, the most important buffers against crippling setbacks are financial tools such as personal savings, insurance, credit, or cash transfers from family and friends. Yet these are rarely available because most of the world's poor lack access to even the most basic banking services. Globally, 77 percent of them do not have a savings account; in sub-Saharan Africa, the figure is 85 percent. An even greater number of poor people lack access to formal credit or insurance products. The main problem is not that the poor have nothing to save—studies show that they do—but rather that they are not profitable customers, so banks and other service providers do not try to reach them. As a result, poor people usually struggle to stitch together a patchwork of informal, often precarious arrangements to manage their financial lives.

Over the last few decades, microcredit programs—through which lenders have granted millions of small loans to poor people—have worked to address the problem. Institutions such as the Grameen Bank, which won the Nobel Peace Prize in 2006, have demonstrated impressive results with new financial arrangements, such as group loans that require weekly payments. Today, the microfinance industry provides loans to roughly 200 million borrowers—an impressive number to be sure, but only enough to make a dent in the over two billion people who lack access to formal financial services.

Despite its success, the microfinance industry has faced major hurdles. Due to the high overhead costs of administering so many small loans, the interest rates and fees associated with microcredit can be steep, often reaching 100 percent annually. Moreover, a number of rigorous field studies have shown that even when lending programs successfully reach borrowers, there is only a limited increase in entrepreneurial activity—and no measurable decrease in poverty rates. For years, the development community has promoted a narrative that borrowing and entrepreneurship have lifted large

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numbers of people out of poverty. But that narrative has not held up.

Despite these challenges, two trends indicate great promise for the next generation of financial-inclusion efforts. First, mobile technology has found its way to the developing world and spread at an astonishing pace. According to the World Bank, mobile signals now cover some 90 percent of the world's poor, and there are, on average, more than 89 cell-phone accounts for every 100 people living in a developing country. That presents an extraordinary opportunity: mobile-based financial tools have the potential to dramatically lower the cost of delivering banking services to the poor.

Second, economists and other researchers have in recent years generated a much richer fact base from rigorous studies to inform future product offerings. Early on, both sides of the debate over the true value of microcredit programs for the poor relied mostly on anecdotal observations and gut instincts. But now, there are hundreds of studies to draw from. The flexible, low-cost models made possible by mobile technology and the evidence base to guide their design have thus created a major opportunity to deliver real value to the poor.

SHOW THEM THE MONEY

Mobile finance offers at least three major advantages over traditional financial models. First, digital transactions are essentially free. In-person services and cash transactions account for the majority of routine banking expenses. But mobile-finance clients keep their money in digital form, and so they can send and receive money often, even with distant counterparties, without creating significant transaction costs for their banks or mobile service providers. Second, mobile communications generate copious amounts of data, which banks and other providers can use to develop more profitable services and even to substitute for traditional credit scores (which can be hard for those without formal records or financial histories to obtain). Third, mobile platforms link banks to clients in real time. This means that banks can instantly relay account information or send reminders and clients can sign up for services quickly on their own.

The potential, in other words, is enormous. The benefits of credit, savings, and insurance are clear, but for most poor households, the simple ability to transfer money can be equally important. For example, a recent Gallup poll conducted in 11 sub-Saharan African countries found that over 50 percent of adults surveyed had made at least one payment to someone far away within the preceding 30 days. Eighty-three percent of them had used cash. Whether they were paying utility bills or sending money to their families, most had sent the money with bus drivers, had asked friends to carry it, or had delivered the payments themselves. The costs were high; moving physical cash, particularly in sub-Saharan Africa, is risky, unreliable, and slow.

Imagine what would happen if the poor had a better option. A recent study in Kenya found that access to a mobile-money product called M-Pesa, which allows clients to store money on their cell phones and send it at the touch of a button, increased the size and efficiency of the networks within which they moved money. That came in handy when poorer participants endured economic shocks spurred by unexpected events, such as a

hospitalization or a house fire. Households with access to M-Pesa received more financial support from larger and more distant networks of friends and family. As a result, they were better able to survive hard times, maintaining their regular diets and keeping their children in school.

To consumers, the benefits of M-Pesa are self-evident. Today, according to a study by Kenya's Financial Sector Deepening Trust, 62 percent of adults in the country have active accounts. And other countries have since launched their own versions of the product. In Tanzania, over 47 percent of households have a family member who has registered. In Uganda, 26 percent of adults are users. The rates of adoption have been extraordinary; by contrast, microlenders rarely get more than ten percent participation in their program areas.

Mobile money is useful for more than just emergency transfers. Regular remittances from family members working in other parts of the country, for example, make up a large share of the incomes of many poor households. A Gallup study in South Asia recently found that 72 percent of remittance-receiving households indicated that the cash transfers were "very important" to their financial situations. Studies of small-business owners show that they make use of mobile payments to improve their efficiency and expand their customer bases.

These technologies could also transform the way people interact with large formal institutions, especially by improving people's access to government services. A study in Niger by a researcher from Tufts University found that during a drought, allowing people to request emergency government support through their cell phones resulted in better diets for those people, compared with the diets of those who received cash handouts. The researchers concluded that women were more likely than men to control digital transfers (as opposed to cash transfers) and that they were more likely to spend the money on high-quality food.

Governments, meanwhile, stand to gain as much as consumers do. A McKinsey study in India found that the government could save $22 billion each year from digitizing all of its payments. Another study, by the Better Than Cash Alliance, a nonprofit that helps countries adopt electronic payment systems, found that the Mexican government's shift to digital payments (which began in 1997) trimmed its spending on wages, pensions, and social welfare by 3.3 percent annually, or nearly $1.3 billion.

SAVINGS AND PHONES

In the developed world, bankers have long known that relatively simple nudges can have a big impact on long-term behavior. Banks regularly encourage clients to sign off on automatic contributions to their 401(k) retirement plans, set up automatic deposits into savings accounts from their paychecks, and open special accounts to save for a particular purpose.

Studies in the developing world confirm that, if anything, the poor need such decision aids even more than the rich, owing to the constant pressure they are under to spend their money on immediate needs. And cell phones make nudging easy. For example, a series of studies have shown that when clients receive text messages urging them to make regular savings deposits, they improve their balances over time. More draconian

features have also proved effective, such as so-called commitment accounts, which impose financial discipline with large penalty fees.

Many poor people have already demonstrated their interest in financial mechanisms that encourage savings. In Africa, women commonly join groups called rotating savings and credit associations, or ROSCAs, which require them to attend weekly meetings and meet rigid deposit and withdrawal schedules. Studies suggest that in such countries as Cameroon, Gambia, Nigeria, and Togo, roughly half of all adults are members of a ROSCA, and similar group savings schemes are widespread outside Africa, as well. Research shows that members are drawn to the discipline of required regular payments and the social pressure of group meetings.

Mobile-banking applications have the potential to encourage financial discipline in even more effective ways. Seemingly marginal features designed to incentivize financial discipline can do much to set people on the path to financial prosperity. In one experiment, researchers allowed some small-scale farmers in Malawi to have their harvest proceeds directly deposited into commitment accounts. The farmers who were offered this option and chose to participate ended up investing 30 percent more in farm inputs than those who weren't offered the option, leading to a 22 percent increase in revenues and a 17 percent increase in household consumption after the harvest.

Poor households, not unlike rich ones, are not well served by simple loans in isolation; they need a full suite of financial tools that work in concert to mitigate risk, fund investment, grow savings, and move money. Insurance, for example, can significantly affect how borrowers invest in their businesses. A recent field study in Ghana gave different groups of farmers cash grants to fund investments in farm inputs, crop insurance, or both. The farmers with crop insurance invested more in agricultural inputs, particularly in chemicals, land preparation, and hired labor. And they spent, on average, $266 more on cultivation than did the farmers without insurance. It was not the farmers' lack of credit, then, that was the greatest barrier to expanding their businesses; it was risk.

Mobile applications allow banks to offer such services to huge numbers of customers in very short order. In November 2012, the Commercial Bank of Africa and the telecommunications firm Safaricom launched a product called M-Shwari, which enables M-Pesa users to open interest-accruing savings accounts and apply for short-term loans through their cell phones. The demand for the product proved overwhelming. By effectively eliminating the time it would have taken for users to sign up or apply in person, M-Shwari added roughly one million accounts in its first three months.

By attracting so many customers and tracking their behavior in real time, mobile platforms generate reams of useful data. People's calling and transaction patterns can reveal valuable insights about the behavior of certain segments of the client population, demonstrating how variations in income levels, employment status, social connectedness, marital status, creditworthiness, or other attributes shape outcomes. Many studies have already shown how certain product features can affect some groups differently from others. In one Kenyan study,

researchers gave clients ATM cards that permitted cash withdrawals at lowered costs and allowed the clients to access their savings accounts after hours and on weekends. The change ended up positively affecting married men and adversely affecting married women, whose husbands could more easily get their hands on the money saved in a joint account. Before the ATM cards, married women could cite the high withdrawal fees or the bank's limited hours to discourage withdrawals. With the cards, moreover, husbands could get cash from an ATM themselves, whereas withdrawals at the branch office had usually required the wives to go in person during the hours their husbands were at work.

LOCATION, LOCATION, LOCATION

The high cost of basic banking infrastructure may be the biggest barrier to providing financial services to the poor. Banks place ATMs and branch offices almost exclusively in the wealthier, denser (and safer) areas of poor countries. The cost of such infrastructure often dwarfs the potential profits to be made in poorer, more rural areas. In contrast, mobile banking allows customers to carry out transactions in existing shops and even market stalls, creating denser networks of transaction points at a much lower cost.

For clients to fully benefit from mobile financial services, however, access to a physical office that deals in cash remains critical. When researchers studying the M-Pesa program in Kenya cross-referenced the locations of M-Pesa agents and the locations of households in the program, they found that the closer a household was to an M-Pesa kiosk, where cash and customer services were available, the more it benefited from the service. Beyond a certain distance, it becomes infeasible for clients to use a given financial service, no matter how much they need it.

Meanwhile, a number of studies have shown that increasing physical access points to the financial system can help lift local economies. Researchers in India have documented the effects of a regulation requiring banks to open rural branches in exchange for licenses to operate in more profitable urban areas. The data showed significant increases in lending and agricultural output in the areas that received branches due to the program, as well as 4–5 percent reductions in the number of people living in poverty. A similar study in Mexico found that in areas where bank branches were introduced, the number of people who owned informal businesses increased by 7.6 percent. There were also ripple effects: an uptick in employment and a seven percent increase in incomes.

In the right hands, then, access to financial tools can stimulate underserved economies and, at critical times, determine whether a poor household is able to capture an opportunity to move out of poverty or weather an otherwise debilitating financial shock. Thanks to new research, much more is known about what types of features can do the most to improve consumers' lives. And due to the rapid proliferation of cell phones, it is now possible to deliver such services to more people than ever before. Both of these trends have set the stage for yet further innovations by banks, cell-phone companies, microlenders, and entrepreneurs—all of whom have a role to play in delivering life-changing financial services to those who need them most.

Eastern Europe Goes South

Disappearing Democracy in the EU's Newest Members

Jan-Werner Mueller

Europeans love to celebrate anniversaries, especially those commemorating a terrible past overcome. This year will offer many such moments, marking as it will 100 years since the outbreak of World War I, 75 years since the beginning of World War II, and, most uplifting of all, a quarter century since the fall of the Berlin Wall. Such milestones are bound to make everyone feel good about European unity.

But another important anniversary is less likely to be celebrated, precisely because it would put a damper on those good feelings. Ten years ago, eight eastern European states joined the European Union, followed by Bulgaria and Romania three years later. Europe seemed to have overcome not just Cold War divisions but also deeper historical differences. The EU had brought East and West together, consolidating the fragile democracies that had emerged from the fall of communism.

Today, however, this supposed triumph is in serious doubt. Democracy is struggling: nearly all the countries that joined the EU during the last decade are experiencing profound political crises.

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And as western European leaders call for restrictions on free movement across the continent, new rifts are opening up. Instead of stoking the resentment of ordinary eastern Europeans seeking a better life in the west, EU leaders should learn from the mistakes of accession and enforce clearer boundaries on what political elites can get away with once their countries have joined the EU.

EASTERN PROMISES

In 2004, observers hailed the EU's "transformative power" and "invisible hand" for profoundly changing countries from within. Whereas the United States had bet on brutal military interventions to promote democracy, most recently in Afghanistan and Iraq, the EU had used ever-so-soft power to achieve the same end in its region, extending offers of membership that no country could refuse. Once governments gave in to the union's power to attract, the wonders of EU conditionality—making a country's entry to the club and, perhaps most important, the disbursement of EU subsidies dependent on its compliance with what Brussels demanded—did the rest of the work. In 1993, the EU's then 12 member states formulated the "Copenhagen criteria," which stipulated that candidate countries had to prove their liberal democratic credentials before being admitted. Candidates also had to demonstrate that they could operate within the union's common market, which governs trade among the member states, and reliably apply EU law.

All the EU members admitted in the new millennium—Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia,

and Slovenia in 2004; Bulgaria and Romania in 2007; and Croatia in 2013—seemed ready to follow the old pattern and, sooner or later, do the right thing. When, in 1998, Slovaks realized that their nationalist prime minister, Vladimir Meciar, was unlikely to lead them to EU-style prosperity, they duly ditched him. Even Bulgaria and Romania, states heavily burdened by corruption and communist legacies, eventually decided to play by the Brussels rule book in the run-up to their accession in 2007, reforming their judiciaries and establishing offices to fight graft. In Croatia, the latest country to join the EU, the same pro-EU politician who had kick-started the creation of independent legal institutions became an example of their eventual effectiveness: former Prime Minister Ivo Sanader is now serving ten years in prison for corruption.

Yet it has become clear that at least some of this success story was a fairy tale that many in the EU chose to believe despite a lot of worrisome evidence of its falsity. For such boosters, an ever-enlarging union seemed to demonstrate the world-historical importance of the entire EU enterprise, proving that, for all the Euroskepticism in countries such as the United Kingdom, Brussels was doing something right—enough so that it kept attracting aspirants.

Today, that fairy tale has become impossible for all but the most starry-eyed believers to accept in its entirety. Although the EU remains attractive to many nonmembers, the problems with the union's eastern European members have grown so numerous that they can hardly be dismissed as a matter of one or two bad apples—much as Europe's elites, preoccupied with the euro crisis, might like to do. The term usually employed to describe what is happening among the new members—"backsliding"—doesn't quite capture things. That word originally meant returning to a life of religious sin, or deconversion. What eastern European states are experiencing today is hardly a simple lapse in morals, however. Nor are they returning to any previously known form of authoritarianism. Rather, something new is emerging: a form of illiberal democracy in which political parties try to capture the state for either ideological purposes or, more prosaically, economic gain. Some countries in eastern Europe are moving toward a model of governance that resembles that of Russian President Vladimir Putin. Like Moscow, the governments of these countries are careful to maintain their democratic façades by holding regular elections. But their leaders have tried to systematically dismantle institutional checks and balances, making real turnovers in power increasingly difficult.

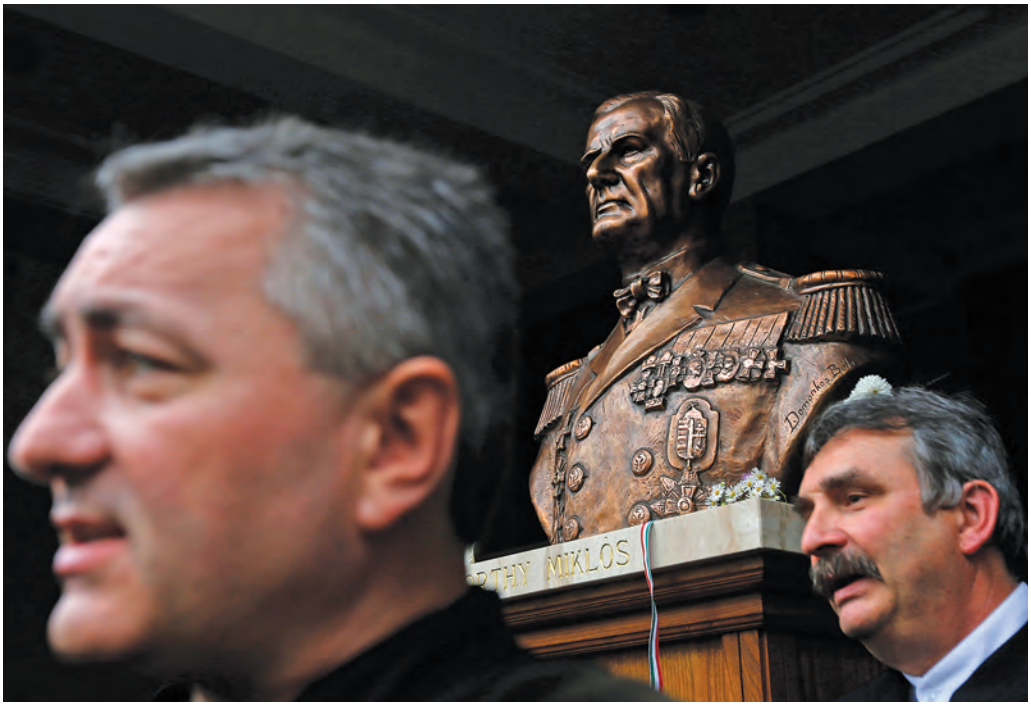
Hungary has led the trend. In 2010, after the disastrous reign of a "reform socialist" government that combined the worst of all possible worlds—the ruthless promotion of capitalism, rampant corruption, and ballooning deficits—Viktor Orban and his right-wing party, Fidesz, returned to power (Orban had been prime minister from 1998 to 2002), winning almost 53 percent of the national vote. Due to the peculiarities of Hungary's electoral system, this number translated into a two-thirds majority in parliament, allowing Fidesz to adopt a new constitution in January 2012 without the involvement of any other party, civic groups, or the public at large. Instead, Fidesz declared the 2010 victory to have

been a "revolution in the polling booths" and pushed through a highly partisan charter created in its nationalist and populist image. Under the Orwellian label "System of National Cooperation," it also attempted to purge the judiciary, the bureaucracy, and the media of nonloyalists. The party's underlying moral justification was that Fidesz and only Fidesz truly represented the Hungarian nation. As Orban, whose first tenure as prime minister began in 1998, put it after his government was ousted in the 2002 parliamentary elections, the "nation cannot be in opposition." The implication, of course, was that any opposition to Fidesz was illegitimate and not truly Hungarian.

The irony is that Hungary was once a poster child for the EU-led transition to democracy. During the 1990s, many Hungarians hoped that Budapest would soon become like Vienna (which is only a few hours away by train). During previous transitions, such hopes were eventually fulfilled—formerly right-wing authoritarian Spain was admitted in 1986, and Barcelona really did become the poor man's Paris. But for eastern Europe, the great investment boom ended around 2007. The public's faith in democracy plummeted along with the economy; as Alexis de Tocqueville noted long ago, it is not a country's objective economic situation that tends to generate serious political crises but the sense that legitimate expectations have been disappointed.

To be sure, Fidesz could not have done what it did on its own. It benefited from the way that left-wing postcommunist elites discredited themselves in the 1990s, allowing corruption to flourish while failing to ease the social transition to liberal capitalism. Fidesz managed to convince its supporters that the transition of 1989 was a sham, encouraging citizens not to blame themselves for the recent economic woes but to attribute their problems to the sins of those who negotiated the transition in 1989. The party also invoked traditional nationalism to legitimize the populist idea that checks and balances were unnecessary; in its view, only Orban could truly represent and carry out the will of the nation. As Fidesz rose, the political consensus that the Hungarian historian Balazs Trencsenyi had called "post-dissident"—favoring the basic norms and institutions of liberal democracy—broke down.

To be sure, not every new EU member has followed the same path. There are profound differences among the countries, just as there were always important idiosyncrasies in the Eastern bloc. But most of the region has suffered from deeply divided political establishments, with at least one side declaring the other one illegitimate and unfit to govern. And electoral volatility has remained high, as newcomers, such as the Czech billionaire Andrej Babis, whose party finished second in the October 2013 Czech general election, keep appearing on the scene to declare that the entire existing political establishment is immoral and needs to be thrown out. Even in countries where the recent power struggles have been less about ideology and more about grabbing state resources (Bulgaria and Romania being the obvious examples), a toxic mixture of culture wars and constitutional crises has become the new normal. One of the postcommunist transition's former paragons, the Czech Republic, suddenly looks like Weimar Germany. When the country directly elected a president for the first time last



Regression to the mean: unveiling a bust of Hungary's one-time ruler Miklos Horthy, 2013

REUTERS / LASZLO BALOGH

year, that president, Milos Zeman, defied the Parliament by installing one of his own confidants as prime minister, thereby trying to grab new powers for the presidency.

The one great exception to this pattern has been Poland, the region's largest state. The country has weathered the recent global financial crisis exceptionally well and is the only European state that has avoided a recession since 2008. Benefiting from close integration with Germany, it has tried hard to be viewed as a leader of fiscally responsible northern Europe. In the country's 2011 election, Prime Minister Donald Tusk managed to get reelected by portraying himself as the only alternative to the arch-populist Jaroslaw Kaczynski, whose antidemocratic politics had already backfired during his tenure as prime minister from 2006 to 2007.

In any case, Kaczynski never had the kind of majority from which Orban has benefited. There is a good chance, however, that he will make a comeback in the 2015 elections. By then, Kaczynski may have learned from Orban's example: don't just make nationalist speeches deriding the previous establishment; rewrite the rules and reorganize the system in your favor. Although Kaczynski is unlikely to obtain a game-changing majority, the leaders of western Europe need to recognize the temptation of following Orban's template—and the significant chance of someone's getting away with it.

Right-wing nationalists aren't the only ones trying such moves; Orban's lesson is one that the region's left is taking to heart, as well. Zeman clearly studied Orban's playbook before making his move on the Czech Parliament. And so

has Romania's prime minister, Victor Ponta. Since he won a two-thirds majority in Parliament in December 2012, Ponta and his party have been working on a new constitution that would severely limit the independence and oversight role of the country's courts, decisively tilting the balance of power away from the judiciary in favor of Parliament.

CLUB RULES

As democracy in the region has come under sustained attack, the EU has done little. Part of the problem is that the Copenhagen criteria were never as effective as Brussels claimed. They were too general and were applied too inconsistently. EU elites presumed that if new members were capable of adhering to the rules governing the EU's common market, they could be certified as full-fledged liberal democracies. Even countries that clearly weren't quite ready for full EU membership, such as Bulgaria and Romania, were let in, and with few strings attached—all in the hope that joining Europe's club would turn seeming barbarians into good liberal democrats. Such hopes proved unwarranted, and now that these countries have been admitted, Brussels has even less leverage over them. The European Commission has occasionally had stern words for Orban, with its justice commissioner calling time and again on Budapest to adhere to "fundamental European values," but it lacks the legal and political instruments to intervene. The commission does have the power to impose sanctions, but only when countries do not play by the rules of the EU common market. So at best, Brussels has been able to address political problems indirectly. In 2011, for instance, when the Fidesz government effectively decapitated Hungary's judiciary by lowering the mandatory retirement age of judges from 70 to 62, the most the EU could do was sue Hungary for age discrimination. Brussels eventually won its case, but the judges were never reinstated, and the political situation remained as Fidesz wanted it.

Theoretically, an EU member state can have some of its membership rights suspended if it persistently violates "fundamental European values," such as democracy and the rule of law. But it is the national governments of EU member states that ultimately decide whether to take such drastic measures, and they are unlikely to use this power in anything but the most dire circumstances. Their primary fear is of setting a precedent; what if someone comes after them one day? Unfortunately, the alternative—having influential European leaders apply pressure behind closed doors—has not had much effect. Public naming and shaming has helped even less; governments targeted for such criticism have responded by using it to stoke anti-EU sentiments among their constituents, as when Orban compared the EU to a colonial power in 2012, declaring a "war of independence" against Brussels.

Yet the EU has not lost all its normative power. In November, when Ukrainian President Viktor Yanukovych, under pressure from Moscow, refused to sign an agreement that would have strengthened Ukraine's trade and other ties with Brussels, tens of thousands of demonstrators took to Kiev's streets. Orban's "war of independence" has not proved popular at home, either. And although

Hungary's prime minister has flirted with the idea of turning to China and Russia in the future as alternatives to the EU, neither he nor any other leader in his neighborhood is seriously considering having his country leave the club. No country wants to refuse EU money, especially when the sums often amount to nearly two percent of GDP. All these states hope that they can misbehave badly without getting thrown out; ejection, in fact, is a legal impossibility, since one can only leave the EU voluntarily.

Clubs don't function, however, unless someone enforces the rules from time to time, and the EU is no exception. Officials in Brussels are therefore now discussing how to craft new instruments that would allow the EU to set limits on whether and how EU member states can change their constitutions. Doing so would make good sense. So would stopping talk in western Europe about limiting migration within the union; such talk, which has come, most prominently, from British Prime Minister David Cameron, only stokes resentment among ordinary Bulgarians and Romanians exercising their EU-given right to move freely. The political scientist Grigore Pop-Eleches has pointed out that allowing all EU citizens to work and travel throughout the union might have a beneficial effect on the rule of law in the most troubled states, since returning migrants bring with them higher expectations of government and are more willing to take action against corruption.

In the end, the people of eastern Europe may prove better than their political establishments. So far, not one of the profound constitutional changes in the region has been popularly ratified. The Fidesz constitution was never put to the people, and a referendum initiated by Romania's Ponta to unseat the president failed in 2012. Meanwhile, popular protests prevented the appointment of oligarchs to the Bulgarian government in 2013. On the streets of Sofia, students protesting the country's oligarchs sang western Europe's cultural anthem: Beethoven's "Ode to Joy."

In 1989, ordinary people and political dissidents managed to (in most cases) peacefully overthrow the oppressive governments of eastern Europe in a series of "velvet revolutions." Twenty-five years later, the people of the region must safeguard the legacy of their revolutions by once more showing such resolve—and blocking attempts by Orban-style populists to now steal them.

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The Indian in the Closet

New Delhi's Wrong Turn on Gay Rights

Ira Trivedi

On a bright January day, a group of around 200 lesbian, gay, bisexual, and transgender (LGBT) activists dressed in black, to symbolize mourning, gathered at Jantar Mantar, a site in New Delhi that frequently plays host to protests and demonstrations. Nearby, khaki-clad police officers warily observed the spectacle. The activists clutched rainbow flags to their chests and shouted slogans.

"My gender, my right! My sexuality, my right!"

"We want justice: you can't stop our love!"

The grim mood represented a dramatic turnaround. Just a few weeks earlier, more than a thousand people had filled the same location to take part in the sixth annual Delhi Queer Pride Parade, one of the city's biggest street parties of the year. That celebration was a distant memory for Roshini, a young woman who was at the January protest with her partner. She had a black band tied around her arm and tears in her eyes. "There will be no parade next year," she said. "That was my last parade, at least for a long while."

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Between those two gatherings, the Supreme Court of India had issued a ruling that hobbled India's fledgling gay rights movement and left the country's LGBT population fearful, angry, and depressed. Last December, in a landmark judgment, the Supreme Court overturned a 2009 ruling by a lower court that had decriminalized consensual homosexual sex between adults. The 2009 ruling had come in response to a lawsuit filed eight years earlier by the Naz Foundation (India) Trust, a gay rights and HIV/AIDS advocacy organization. The court had held that Section 377 of the Indian Penal Code, which prohibits sexual activities "against the order of nature" and which was originally established by India's colonial British rulers in 1861, violated the constitution by depriving citizens of their rights to equal treatment under the law, privacy, and freedom of expression.

Although relatively few people had ever been prosecuted under Section 377, the law threatens violators with a fine and a prison term of ten years—or even a life sentence. The 2009 ruling that found Section 377 unconstitutional represented a major turning point for India's LGBT community, which hailed the decision as a moral victory. Prior to the fight against the law, India's gay rights movement had been limited to small pockets of activism around the country; the lawsuit represented its first highly visible, collective effort. Shortly after the decision was announced, Anjali Gopalan, the director of Naz India, told me, "The judgment is fabulous, and it will be hard to counter it legally. Religious groups have their own point of view, but they can't impose it on us. We are a secular country."

That confidence turned out to be misplaced. So, too, was the belief among social liberals and younger Indians that the 2009 verdict had reflected wide, if tacit, acceptance of homosexuality in their society. In fact, far more Indians were dismayed by the 2009 verdict than applauded it. A nationwide poll conducted by the CNN-IBN television network and the *Hindustan Times* shortly after the court issued its ruling found that 73 percent of Indians believed that homosexuality should be illegal. A coalition of conservative religious and political groups immediately appealed the decision to the Supreme Court, arguing that homosexuality was an offense against public morality and Indian cultural values.

Last December, the Supreme Court sided with them. In a strongly worded decision, a two-judge panel of India's highest court overturned the earlier ruling, declaring that only "a minuscule percentage" of Indians are homosexual and dismissing the "so-called rights of LGBT persons." The court also noted that fewer than 200 people had been prosecuted under Section 377 in the more than 150 years since the law was put in place. Such a low rate of prosecution, the court averred, did not provide a "sound basis" for holding the law unconstitutional.

Many members of India's legal establishment criticized the judgment, claiming it was motivated more by the judges' personal views than by sound jurisprudence. "It is the duty and responsibility of judges to rise above their own biases and behave like true judges," said Indira Jaising, a prominent Indian lawyer who currently serves as a solicitor general. The decision, she said, is "a throwback to a bygone era where there was no concept of human rights."

Nevertheless, conservative forces saw the ruling as a triumph of traditional values over secular, liberal attitudes, which they claim are imports from the West. "We can't bring Western culture into our society," declared Mukhtar Abbas Naqvi, a spokesperson for the Bharatiya Janata Party (BJP), the right-wing Hindu nationalist party that leads the opposition in the Indian Parliament and which supported the Supreme Court's decision.

But conservatives such as Naqvi have it backward: it is homophobia, not homosexuality, that is primarily a foreign import. And although conservatives might be able to exploit anti-gay sentiments for short-term political gain, they are likely to find themselves on the wrong side of history sooner than they might expect, as fundamental changes now under way within India society will almost certainly lead to more tolerance of sexual minorities in the not-too-distant future.

NO COUNTRY FOR GAY MEN?

The idea that homosexuality is somehow un-Indian might surprise anyone who has ever visited one of the many Hindu temples built all over the country as far back as the fourth century, the walls of which are covered with carvings that depict same-sex couples copulating. Indian epics and chronicles are replete with accepting references to homosexuality, including one version of the *Ramayana*, a foundational text of Hinduism written in the fourteenth century that relates a sexual encounter between two women. The *Kamasutra* also refers directly to gay sex. And although some of the foundational texts of Hindu theology,

REUTERS / ARKO DATTA

Kiss and yell: at a gay rights rally in Mumbai, July 2009

such as the *Manu-smriti* ("Laws of Manu"), do forbid homosexuality, they do so quite mildly, recommending minor penalties, such as a cold bath, for homosexual behavior. Such tolerance in premodern Indian culture stands in stark contrast to the homophobia that prevailed during the same period in Europe and North America, where "sodomites" were often punished with persecution, torture, or execution.

Precolonial India was generally less prudish about all forms of sexuality than most Western societies during the same period. In ancient Indian culture, sex was not taboo. It was discussed openly in books (religious and secular) and depicted in paintings, hymns, and folktales. Hindu gods were frequently depicted in romantic pairs, and ancient Indian temples are full of erotic images of deities and other divine beings. This is not to say that precolonial India was always an oasis of tolerance for sexual minorities. For instance, during the Mughal era (1526–1857), homosexuals were sometimes punished with flagellation and even death, owing to extreme interpretations and applications of Islamic law.

But it was only under direct British colonial rule, which began in 1858 and lasted until India won its independence in 1947, that the minor strain of homophobia in Indian tradition became a dominant theme. "In the late eighteenth and early nineteenth centuries, India's downhill sexual journey began," said Wendy Doniger, a religious historian at the University of Chicago who specializes in Hinduism and India. "The British came with all these preconceptions about lascivious Orientals, who were seen as overerotic, or actually feminine in a way that made them supposedly unfit to govern." For Indians hoping to advance in the colonial system, she explained, "showing yourself to be asexual or anti-

sexual or puritanical also showed yourself to be fit to run your own country."

In an effort to align Indian culture more closely with British ideals, modernize Indian society, and ingratiate themselves with the colonial ruling class, several nineteenth-century Indian social reformers set about excising eroticism, including homosexuality, from Indian literature, education, and religion. Partly as a result of such efforts, a repressive attitude toward sexuality in general and homosexuality in particular became deeply intertwined with modern Indian nationalism. Many prominent Indian nationalists, including "the father of the nation," Mahatma Gandhi, subscribed to such views. (Gandhi took a vow of celibacy at the age of 36 and passionately preached the virtues of abstinence.) British influence was not the only factor driving these changes in Indian society, but it played a major role, and by the middle of the twentieth century, the country had become far less liberal on matters of sexuality.

A SEXUAL REVOLUTION

In the wake of the Supreme Court's decision in December, the question of homosexuality's legality passed to the Indian Parliament. (Technically, it is possible that the Supreme Court will review its own ruling, but most experts believe that is unlikely.) The best hope that LGBT rights advocates have of seeing gay sex decriminalized is for Parliament to amend the Indian Penal Code so as to invalidate Section 377—in other words, to explicitly endorse the right of consenting adults to have homosexual relations.

This change is unlikely to happen anytime soon, especially because of the hotly contested national elections coming later this year. Leaders of the ruling Indian National Congress—including Sonia Gandhi, the party's president, and her son, Rahul Gandhi, its vice president, who are locked in an increasingly desperate bid to hold on to power—have criticized the Supreme Court's verdict and urged Parliament to act. But the party lacks political muscle these days. Manmohan Singh, the country's once-popular prime minster, is now widely perceived as a failure thanks to India's recent corruption scandals and economic stagnation, and the party lost elections in four key states last December. Narendra Modi, the chief minister of Gujarat, who will be running as the BJP's candidate for prime minister later this year, has remained silent on the Supreme Court's verdict. But Rajnath Singh, the BJP's president, has announced that the party backs the court's decision and has affirmed the party's position that homosexuality is "unnatural." Several Muslim political leaders have also expressed support for the Supreme Court's verdict, as have some leaders of *khap panchayats*, the village councils that attempt to regulate social behavior in rural India and that play an influential role in elections.

Yet when it comes to sexual politics, these conservative forces represent an outmoded close-mindedness that is being pushed aside as Indian society barrels into the twenty-first century. India is undergoing a sexual revolution of sorts, of which the fight for LGBT rights is only one part. As a result of technological, economic, and political changes during the past decade, India is witnessing a dramatic shift in values related to sex and sexuality. The most easily observable effect of this shift is the way sexuality has once again

become part of the Indian visual and media landscape. From racy advertisements to Bollywood movies with graphic sex scenes, sexuality dominates billboards and screens that just a decade ago might not have even shown a couple kissing.

Behavior and attitudes are also transforming. Over the course of more than 500 interviews about sex and sexuality that I have conducted in recent years with people all over India, I discovered a distinct generational shift, with young people, especially those in cities, holding decidedly more liberal views than their parents. Others have reported similar findings. According to Shaifali Sandhya, a professor at the Alder School of Professional Psychology in Chicago who has researched sexuality and marriage in India, around 75 percent of young people polled in urban areas reported having had sex prior to marriage. In 2012, a survey conducted by *Outlook*, one of India's leading magazines, reported that 30 percent of Indian city dwellers found nothing wrong with homosexuality.

It is within the context of such changes that India's gay rights movement found its voice. In recent years, LGBT festivals and parades have taken place all over the country, and thousands of young people in their 20s and 30s have come out of the closet. LGBT advocacy groups have sprouted up not only in Mumbai and New Delhi but also in small cities such as Pondicherry, Vadodara, and Vishakhapatnam. Every major city now has an openly gay nightlife, supporting a microeconomy of professional party organizers and clubs with names such as Boyzone and Desi Dykes.

The rapid spread of modern communications technology throughout India has propelled the country's gay movement.

The Internet and cell phones have helped LGBT Indians connect, and the anonymity of digital life has made it easier for still-closeted gays and lesbians to find partners. "The Internet has changed everything," said Ashok Row Kavi, a veteran gay rights activist. "You go on PlanetRomeo"—a popular gay dating website—"and there are around 90,000 men cruising the Internet at any given time in India. Of these, 9,000 are in Bombay alone."

ONE STEP BACKWARD, TWO STEPS FORWARD

This opening up has also had a subtle but profound effect on Indian corporate culture. According to an LGBT resource guide jointly published and distributed in India in 2012 by Goldman Sachs, Google, IBM, and the corporate social-responsibility organization Community Business, LGBT Indians make up about five to ten percent of India's corporate work force. Around 80 percent of those workers report having heard homophobic comments or jokes or other anti-gay language at their workplaces. But in the wake of the 2009 ruling, the Indian affiliates of U.S.-based companies such as Google, IBM, and Infosys instituted LGBT-friendly hiring and workplace policies or reaffirmed their commitments to existing ones.

"Since the Delhi High Court judgment in 2009, companies and employees are hungry to find ways to ensure they operate in an inclusive environment," said Bunty Bohra, CEO of Goldman Sachs India. "If your company is not gay-friendly, you may start losing employees, future clients, and revenue. It makes good business sense to be inclusive." This change in corporate culture, which reflects deeper social trends and market incentives and involves a major commitment of resources, is unlikely to be undone by the Supreme Court's decision.

That decision's most immediate impact will likely be on the fight against HIV/AIDS. The growing movement in India for awareness and prevention of the disease has played an important role in campaigning for LGBT rights—and vice versa. But with the Supreme Court's decision, much of the funding that LGBT advocacy groups had won from both nongovernmental organizations and state institutions might dry up. Kavi fears that the verdict will push gay men back into the shadows and out of the reach of organizations that encourage safer sex and health education, which themselves will struggle just to stay afloat. Such groups are crucial in stopping the spread of HIV/AIDS in India, where, according to Kavi, most gay men still do not use condoms and half the men who use gay dating websites are married—and sexually active with their wives.

There is little doubt that in the short term, the recriminalization of homosexual relations will stifle India's LGBT movement and keep many Indians from venturing any further out of the closet. But in the longer term, Indians on the sexual margins have reasons for hope. The country's current population includes 315 million people who are between the ages of ten and 24; by 2020, India will be the youngest nation in the world, with an average age of 29 (compared with 37 in China and the United States, 45 in parts of Europe, and 48 in Japan). Given the far greater acceptance of homosexuality and LGBT people among young Indians and the ongoing liberalization of Indian sexual mores, the ruling on Section 377 is more likely the death rattle of India's old sexual politics than a herald of new sexual repressiveness.

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ESSAYS

It's time to shift the focus from limiting the collection of data to controlling data at the most important point—the moment when it is used.

– Craig Mundie

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Privacy Pragmatism

Focus on Data Use, Not Data Collection

Craig Mundie

Ever since the Internet became a mass social phenomenon in the 1990s, people have worried about its effects on their privacy. From time to time, a major scandal has erupted, focusing attention on those anxieties; last year's revelations concerning the U.S. National Security Agency's surveillance of electronic communications are only the most recent example. In most cases, the subsequent debate has been about who should be able to collect and store personal data and how they should be able to go about it. When people hear or read about the issue, they tend to worry about who has access to information about their health, their finances, their relationships, and their political activities.

But those fears and the public conversations that articulate them have not kept up with the technological reality. Today, the widespread and perpetual collection and storage of personal data have become practically inevitable. Every day, people knowingly provide enormous amounts of data to a wide array of organizations, including government agencies, Internet service providers, telecommunications companies, and financial firms. Such organizations—and many other kinds, as well—also obtain massive quantities of data through "passive" collection, when people provide data in the act of doing something else: for example, by simply moving from one place to another while carrying a GPS-enabled cell phone. Indeed, there is hardly any part of one's life that does not emit some sort of "data exhaust" as a byproduct. And it has become virtually impossible for someone to know exactly how much of his data is out there or where it is stored. Meanwhile, ever more powerful processors and servers have made it possible to analyze

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all this data and to generate new insights and inferences about individual preferences and behavior.

This is the reality of the era of "big data," which has rendered obsolete the current approach to protecting individual privacy and civil liberties. Today's laws and regulations focus largely on controlling the collection and retention of personal data, an approach that is becoming impractical for individuals, while also potentially cutting off future uses of data that could benefit society. The time has come for a new approach: shifting the focus from limiting the collection and retention of data to controlling data at the most important point—the moment when it is used.

USER ILLUSION

In the middle of the twentieth century, consumers around the world enthusiastically adopted a disruptive new technology that streamlined commerce and made it possible for ordinary people to do things that, until then, only businesses and large organizations could do. That technology was the credit card. In return for a line of revolving credit and the convenience of cashless transactions, credit card users implicitly agreed to give financial institutions access to large amounts of data about their spending habits. Companies used that information to infer consumers' behavior and preferences and could even pinpoint users' whereabouts on any given day. As the rapid global adoption of credit cards demonstrated, consumers mostly thought the tradeoff was worth it; in general, they did not feel that credit card companies abused their information.

In order to ensure that companies used all this new data responsibly, the Organization for Economic Cooperation and Development produced a set of guidelines on the protection of privacy and the flow of data across borders. Those principles, established in 1980, created the general framework that corporations still rely on when it comes to protecting individual privacy. The guidelines directed companies on the proper way to collect and retain personal data, ensure its quality and security, and provide meaningful opportunities for individuals to consent to the collection and have access to the data collected about them. According to the OECD, the guidelines helped increase the proportion of member countries with privacy laws from one-third to nearly all 34 of them, while also influencing EU privacy laws.

Thirty-four years later, these well-intentioned principles have come to seem ill suited to the contemporary world. They predated the mainstream adoption of personal computers, the emergence of the Internet, and the proliferation of cell phones and tablet computers. They were developed when only science-fiction writers imagined that someday soon more than a billion people would carry pocket-sized computers that could track their locations down to the meter, every second of every day; nearly all communication and commerce would be mediated electronically; and retailers would use data and computer modeling to determine what a particular consumer wants even before he is aware of it.

Such changes have exposed the limitations of the late-twentieth-century approach to protecting personal data, which focused almost entirely on regulating the ways such information was collected. Today, there is simply so much data being collected, in so many ways, that it is practically impossible to give people a meaningful way to keep track of all the information about them that exists out there, much less to consent to its collection in the first place. Before they can run an application on their smartphones or sign up for a service on a website, consumers are routinely asked to agree to end-user license agreements (EULAs) that can run to dozens of pages of legalese. Although most EULAs are innocuous, some contain potentially unwelcome clauses buried deep within them. In one recent example, a Web application included a clause in its EULA that granted the software maker permission to use the user's spare computing power to generate Bitcoins, a form of digital currency, without any compensation for the user. Another example is a popular flashlight application called Brightest Flashlight Free, which collected its users' location data and then sold it to marketing companies—without revealing that it was doing so. (Last December, the U.S. Federal Trade Commission forced the application's maker to abandon this deceptive practice.)

"Big data" has rendered obsolete the current approach to protecting privacy and civil liberties.

In both cases, users technically had an opportunity to consent to these practices. But that consent was effectively meaningless, since it did not offer a clear understanding of how, when, and where their personal data might be used. The Bitcoin-mining application's dense,

5,700-word EULA was so vague that even a user who made the unusual choice to actually read it carefully might not have understood that it gave the application's maker the right to virtually hijack the computing capacity of the user's device. Although the flashlight application explicitly requested access to users' location data (a request most people reflexively approved), that was more of a ruse than an honest business practice, since the company hid the fact that it provided the data to others.

Other forms of data collection can be even more challenging to regulate. More and more collection happens passively, through sensors and on servers, with no meaningful way for individuals to be made aware of it, much less consent to it. Cell phones continually share location data with cellular networks. Tollbooths and traffic cameras photograph cars (and their occupants) and read license plates. Retailers can track individuals as they move around a store and use computer-backed cameras to determine the gender and approximate age of customers in order to more precisely target advertising. In a scenario reminiscent of the 2002 film *Minority Report*, stores might soon be able to use facial-recognition technology to photograph shoppers and then match those images with data from online social networks to identify them by name, offer them discounts based on their purchasing histories, and suggest gifts for their friends.

Using powerful new computing tools and huge data sets gathered from many different sources, corporations and organizations can now generate new personal data about individuals by drawing inferences and making predictions about their preferences and behaviors based on existing information. The same techniques also make it harder to keep personal information anonymous. Companies that have access to multiple sources of partial personal information will find it increasingly easy to stitch pieces of data together and figure out whom each piece belongs to, effectively removing the anonymity from almost any piece of data.

GOOD INTENTIONS, BAD EFFECTS

Many people understandably find this state of affairs troubling, since it seems to suggest that their privacy has already been compromised beyond repair. But the real issue is not necessarily that their privacy has been violated—just because the information is out there and could be abused does not mean that it has been. Rather, it is that people do

not know who possesses data related to them and have no way to know whether the information is being used in acceptable ways.

One common reaction is to demand stricter controls on who can collect personal information and how they can collect it by building user consent into the process at every stage. But if an individual were given the opportunity to evaluate and consent to every single act of data collection and creation that happens, he would be forced to click "yes" or "no" hundreds of times every day. Worse, he would still have no way to easily verify what happened to his data after he consented to its collection. And yet it would be very hard for most people to opt out altogether, since most people enjoy, or even rely on, services such as social networks that require personal data about their users in order to function or applications and services (such as e-mail software, productivity tools, or games) that they use for free in exchange for agreeing to receive targeted advertising.

Tightly restricting data collection and retention could rob society of a hugely valuable resource.

Officials, legislators, and regulators all over the world have yet to grasp this reality, and many well-meaning attempts to address public concerns about privacy reflect an outdated understanding of the contemporary data ecosystem. Consider, for instance, the EU's General Data Protection Regulation, which is expected to take effect in 2016. This new regulation requires individual consent for the collection of data and the disclosure of the intended use at the time of collection. It also creates a "right to be forgotten" (the requirement that all data on an individual be deleted when that individual withdraws consent or his data is no longer needed), ensures the availability of personal data in a form people can easily access and use, and imposes fines on companies or organizations that fail to comply with the rules.

Although well intentioned, this new regulation is flawed in its focus on the collection and retention of data. It will help unify laws and practices regarding privacy, but it does not adequately address the practical realities of data collection today. It requires valid consent for collecting data, but it does not consider sensitive information that is created by algorithms using data from completely public sources that can infer an individual's age, marital status, occupation, estimated income, and political leanings based on his posts to various social

networks. Nor will the new rules apply when data is collected passively, without a meaningful opportunity for consent. And besides the "right to be forgotten," the rules will not do much to address the crucial question of how data can and cannot be used.

Such efforts to restrict data collection can also produce unintended costs. Much of the information collected today has potential benefits for society, some of which are still unknown. The ability to analyze large amounts of aggregated personal data can help governments and organizations better address public health issues, learn more about how economies work, and prevent fraud and other crimes. Governments and international organizations should not prevent the collection and long-term retention of data that might have some as-yet-undiscovered beneficial use.

For instance, in 2011, researchers at the health-care giant Kaiser Permanente used the medical records of 3.2 million individuals to find a link between autism spectrum disorders in children and their mothers' use of antidepressant drugs. They determined that if a mother used antidepressants during pregnancy, her child's risk of developing such a disorder doubled. The researchers had access to those medical records only because they had been collected earlier for some other reason and then retained. The researchers were able to find a particularly valuable needle, so to speak, only because they had a very large haystack. They would almost certainly not have made the discovery if they had been able to conduct only a smaller, "opt-in" study that required people to actively consent to providing the particular information the researchers were looking for.

Further medical breakthroughs of this kind will become more likely with the emergence of wearable devices that track users' movements and vital signs. The declining cost of genome sequencing, the growing adoption of electronic medical records, and the expanding ability to store and analyze the resulting data sets will also lead to more vital discoveries. Crucially, many of the ways that personal data might be used have not even been imagined yet. Tightly restricting this information's collection and retention could rob individuals and society alike of a hugely valuable resource.

WRAPPER'S DELIGHT

When people are asked to give a practical example of how their privacy might be violated, they rarely talk about the information that

is being collected. Instead, they talk about what might be done with that information, and the consequences: identity theft or impersonation, personal embarrassment, or companies making uncomfortable and unwelcome inferences about their preferences or behavior. When it comes to privacy, the data rarely matters, but the use always does.

But how can governments, companies, and individuals focus more closely on data use? A good place to start would be to require that all personal data be annotated at its point of origin. All electronic personal data would have to be placed within a "wrapper" of metadata, or information that describes the data without necessarily revealing its content. That wrapper would describe the rules governing the use of the data it held. Any programs that wanted to use the data would have to get approval to "unwrap" it first. Regulators would also impose a mandatory auditing requirement on all applications that used personal data, allowing authorities to follow and observe applications that collected personal information to make sure that no one misused it and to penalize those who did. For example, imagine an application that sends users reminders—about errands they need to run, say, or appointments they have to keep—based on their location. Such an application would likely require ongoing access to the GPS data from users' cell phones and would thus have to negotiate and acquire permission to use that data in accordance with each user's preferences.

Such approaches are feasible because data and applications always work together. The raw materials of personal information—a row of numbers on a spreadsheet, say—remain inert until a program makes use of them. Without a computer program, there is no use—and without use, there is no misuse. If an application were required to tell potential users what it intended to do with their data, people might make more informed decisions about whether or not to use that application. And if an application were required to alert users whenever it changed the way it used their data and to respond to their preferences at any time, people could modify or withdraw their consent.

A progenitor of this approach emerged in the past decade as consumers began listening to music and watching movies online—and, in many cases, illegally downloading them. With profits threatened by such widespread piracy, the entertainment industry worked with technology firms to create digital rights management systems that encrypt content and add metadata to files, making it much harder for

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them to be illegally opened or distributed. For example, movies purchased from Apple's iTunes store can be played on only a limited number of computers, which users must authorize by linking them to their Apple accounts. Such mechanisms were given legal weight by legislation, including the 1998 Digital Millennium Copyright Act, which criminalized the circumvention of copyright-protection systems. Although there was some resistance to early forms of digital rights management that proved cumbersome and interfered with legitimate and reasonable consumer behavior, the systems gradually matured and gained acceptance.

Digital rights management has also worked well in other areas. The rights protections built into Microsoft's Office software uses encryption and metadata to allow users to specify who can and who cannot read, edit, print, or forward a file. This control gives individuals and organizations a simple and manageable way to protect confidential or sensitive information. It is not difficult to imagine a similar but more generalized scheme that would regulate the use of personal data.

Focusing on use would also help secure data that is already out there. Software that works with personal data has a shelf life: it is eventually upgraded or replaced, and regulators could require that programmers build new protections into the code whenever that happens. Regulators could also require all existing applications to officially register and bring their data usage into compliance.

IDENTITY CRISIS

Any uniform, society-wide effort to control the use of data would rely on the force of law and a variety of enforcement regimes. Requiring applications to wrap data and make it possible to audit the way they use it would represent a major change in the way thousands of companies do business. In addition to the likely political fights such a system would engender, there are a number of technical obstacles that any new legal regime would have to overcome. The first is the issue of identity. Most people's online identities are loosely connected to their e-mail addresses and social networking profiles, if at all. This works fine for digital rights management, in which a single entity owns and controls the assets in question (such as a digital copy of a film or a song). But personal data lives everywhere. A person's expressed preferences cannot be honored if they cannot be attached to a verifiable identity. So privacy protections focused on the use of personal data

would require governments to employ better systems for connecting legally recognized online identities to individual people.

The winds of online identity are already blowing in this direction. Facebook requires that people sign up for the service using their real names, and Twitter takes steps to verify that certain accounts, such as those connected to celebrities and public figures, actually represent the people they claim to represent. One intermediate step toward a more systemic creation of verified online identities would allow people to designate which of their online personas was the authoritative one and use that to specify their privacy preferences.

But even if governments could devise ways to more rigorously connect individuals with verifiable online identities, three additional kinds of validated "identities" would need to be created: for applications, for the computers that run them, and for each particular role that people play when they use an application on a computer. Only specific combinations of identities would be able to access any given piece of personal data. For example, a researcher working on an epidemiologic study might be allowed to use a specific application to work with a specific data set on his institution's computer system, but an actuary would not be permitted to use that application or that data on his computer to set prices for health insurance. Or a physician attending to a patient in the emergency room might have access to information for treatment that he would not have access to in another role or circumstance.

Privacy violations should be considered serious criminal offenses.

Lawmakers would have to put in place significant penalties to make sure people played by the new rules. The only effective deterrents would be punishments strong enough to give pause to any reasonable person. Given the value that can be extracted from personal data, a fine—even a significant one—could be perceived by a bad actor (whether an individual or a corporation) as merely part of the cost of doing business. So privacy violations would have to be considered serious criminal offenses, akin to fraud and embezzlement—not like mere "parking tickets," which would not deter rogue operators and companies.

If someone suspected that his personal data had been misused, he could contact the appropriate regulator, which would investigate and prosecute the abuse, treating it as a crime like any other. A suspect incident could include receiving a targeted advertisement informed

by something a person had not agreed to allow advertisers to know or noticing that one's health insurance premiums had gone up after posting about participating in extreme sports on a social network.

Moving from the current model to this new way of controlling privacy would require political will and popular support. It would also require people to constantly reevaluate what kinds of uses of their personal data they consider acceptable. Whether a particular use is appropriate depends on the context of the use and the real or perceived value that individuals and society get in return. People might gladly consent to the use of their social networking activity by researchers in a population-wide health study, but not necessarily by insurers who want to use information about their health, recreation, and eating habits to determine their coverage or premiums.

Another challenge would be figuring out practical ways for individuals to express their preferences about personal data, given the wide range of possible uses and the many different contexts in which such data comes into play. It would be impossible to write all the rules in advance or to craft a law that would cover every class of data and every potential use. Nor would it be sensible to ask people to take a few hours and write down how they might feel about any current or theoretical future use of their information.

One potential solution might be to allow people to delegate some choices about their preferences to organizations they trust. These organizations would serve as watchdogs, keeping track of applications and uses as they emerge and change and helping guide regulators' investigations and enforcement. If someone were concerned about the use of personal data by advertisers, for instance, he might choose to delegate the management of his preferences to an organization that specialized in keeping an eye on marketers' evolving techniques and behaviors. If this user's preferences changed or he was not satisfied with the organization's work, he would be able to withdraw his specific consent or delegate this work to a different organization.

A system of this sort would require a combination of innovative new national and international laws and regulations, since the infrastructure of the Internet does not stop at national borders. Here again, the example of digital rights management is instructive: the U.S. Digital Millennium Copyright Act put into law the provisions of two treaties signed by members of the World Intellectual Property Organization

in 1996 and created mechanisms for the federal government to oversee and enforce the law.

FOCUS ON USE; LIMIT ABUSE

The vast majority of uses of personal information that concern people take place in the private sector. But governments also collect, retain, and use more personal data than ever before, as the disclosures last year regarding the extent of the U.S. National Security Agency's electronic surveillance made abundantly clear. The success of a use-based model of privacy protection would depend on trustworthy institutions and legal systems that would place constitutional limits on governments' access to data and the surveillance of citizens. Assuming those conditions existed, a use-based privacy model would actually strengthen the rule of law and government accountability, by helping eliminate much of the ambiguity surrounding governments' exploitation of data by encouraging (and sometimes forcing) regulators and authorities to be more specific about what they do with the information they collect. The fact that such an approach is quite likely to develop, at least in the United States, is one of many good reasons why the U.S. government must do everything possible to live up to Americans' expectations of lawful behavior.

More broadly, shifting policymakers' and regulators' focus toward controlling the use of data, rather than just its collection, would empower citizens. Such an approach would allow people to take firmer control of the information they care about by extending individual agency beyond the simple act of consent and permitting people to adapt their preferences and even rescind their consent over time. This new paradigm would protect people against everything from unwanted communication, unfair discrimination, fraud, and identity theft. At the same time, by preserving more information, it would greatly benefit individuals and societies, as the ecosystem of data, computing capabilities, and innovative new software continues to expand.

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Failure to Launch

How Obama Fumbled HealthCare.gov

Jonathan Alter

President Barack Obama has often said that his proudest domestic achievement is the passage of the Patient Protection and Affordable Care Act (commonly known as the ACA or Obamacare). The sprawling law, pushed through Congress in 2010 in the face of fierce Republican resistance, made numerous important changes to the U.S. health-care system—a system so big that, on its own, it represents an economy about the size of France's.

Thanks to the ACA, which took effect on January 1 of this year, the U.S. government has finally joined most other industrialized nations in offering its citizens health security. The reform, by many estimates, will save tens of thousands of lives as Americans reap the benefits of such provisions as greatly expanded preventive medicine and a prohibition on insurance companies' discriminating against those with preexisting conditions. The era when millions of Americans were bankrupted by medical expenses will end. If the law works as planned, it will also contain health-care costs, reducing the U.S. budget deficit. And by freeing employees from the perpetual fear of losing their health insurance, the ACA should, in theory at least, make it easier for them to leave their jobs to start new businesses, boosting domestic and global growth.

Given such stakes, and the intense Republican opposition Obamacare still faces, the disastrous manner in which the White House allowed its signature program to be rolled out last fall presents a great mystery: Why didn't the administration pay more attention? For the debut of the plan and its website, HealthCare.gov, was nothing short of a fiasco. In early 2013, the Congressional Budget Office had estimated that once

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the ACA got going, seven million Americans would enroll in the new national health exchange in the first six months. Yet in the six weeks following the ACA's October 1 launch, only a few thousand managed to do so. More than a quarter of a million more, meanwhile, were prevented from even beginning to enroll by glitches and error messages on HealthCare.gov. On several occasions in October and November, the system crashed altogether. (The results have been much better on the websites of the 14 state exchanges that are up and running.) Americans accustomed to using the Internet fairly seamlessly in almost every aspect of their lives were brought face-to-face with glaring incompetence, and on an issue that couldn't have been more important to them: their health.

Making matters worse, many people who already had insurance felt that the president had lied to them about how the ACA would affect their existing coverage. Over the previous five years, Obama had repeatedly insisted that under his plan, "if you like your health-care plan, you can keep it." But this claim turned out not to be strictly accurate. True, many people with coverage on the day of the law's enactment in 2010 had their coverage grandfathered in. But more than a million individuals who bought new plans after that date found them at least temporarily canceled last fall when the government determined that they didn't meet the minimum standards of the new law. The president was forced to make a humiliating apology, telling NBC News on November 7, "I am sorry that they [those with canceled policies] are finding themselves in this situation based on assurances they got from me."

Americans were angry, and they showed it: support for both Obamacare and Obama himself plunged in most late-autumn polls. But more than just the future of the ACA and the fate of the Democrats in this November's midterm elections are now at stake. American liberalism is based on the faith that an active government can improve the lives of people—that the government possesses the core competencies necessary to implement an ambitious agenda. But if Obamacare isn't fixed soon, that faith could be seriously undermined, making it much harder for progressives to advance any social reform in the foreseeable future.

Figuring out how exactly things could go so wrong will take time; the Obama administration, which originally promised unprecedented transparency, has refused to answer questions about the botched rollout in any detail. That said, it is already possible to offer a few

System failure: Obama and Park, October 2013

preliminary explanations. Part of the problem, obviously, stemmed from the president's failure to communicate clearly and honestly. But much of it resulted from his flawed management style. Despite being advised to do so, Obama refused to compensate for his lack of management experience by hiring business leaders who had started or run large organizations with complex information technology (IT) systems. He also failed to take into account the normal bureaucratic imperative that keeps bad news from being transmitted up the chain of command. It's too early to know whether problems with the ACA will turn out to be bumps in the road or an enduring indictment of the Obama presidency. But they do offer some uninspiring insights into the culture of the administration and present an object lesson in how flaws in a president's operating style can have terrible consequences for public policy.

WHITE HOUSE / PETE SOUZA

A STIFF HEADWIND

Getting health-care reform passed and implemented was never going to be easy. Seven presidents before Obama had tried and failed. The idea of universal health insurance was first introduced in the United States by the Progressive Party, which nominated Theodore Roosevelt for president in 1912. Two decades later, President Franklin Roosevelt

seriously considered adding health coverage to his New Deal, but the idea was killed by opposition from doctors nationwide and from southern racists who didn't want blacks in white hospitals. In 1948, President Harry Truman's national health insurance plan was blocked by the American Medical Association, as was a less ambitious effort by John F. Kennedy later on. Lyndon Johnson did manage to win coverage for seniors and the poor in 1965 (Medicare and Medicaid), but Richard Nixon was stymied when he tried to extend that coverage a few years later. In 1994, President Bill Clinton, with the help of First Lady Hillary Clinton, proposed a large-scale reform and failed epically. And even George W. Bush offered a plan to offset the cost of insurance during his 2000 campaign before abandoning the attempt in favor of an expansion of Medicare to cover prescription drugs.

Much of the problem with the debut of HealthCare.gov stemmed from Obama's flawed management style.

What doomed all these efforts was resistance from entrenched interests and, in later years, a rightward shift in U.S. politics. In recent decades, many Americans covered by insurance—an overwhelming majority of voters—have been disinclined to see their tax dollars go to those who aren't. Unfortunately for progressives and the uninsured, Americans without insurance—some 48 million, by recent counts—tend not to vote.

In 2009, Obama sought to break this losing streak by pushing a more moderate plan than those offered by most of his predecessors. It included neither a single-payer approach nor a public option (hallmarks of earlier failed Democratic-sponsored reforms) and bore a striking resemblance to a plan put forward in the 1980s by Republican Senators Bob Dole and Howard Baker; in fact, the individual mandate in the new law, requiring that all adults buy insurance (with help if they cannot afford it), was an idea first developed by the Heritage Foundation, a conservative think tank. Democrats hoped that building on the existing employer-based system would make the ACA seem less threatening. But it also ensured that the result would be monstrously complex.

In retrospect, the enactment of the ACA was something of a political miracle. In deciding to push for its passage in 2009, Obama ignored the objections of Joseph Biden, his vice president; Rahm Emanuel, then

his chief of staff; and David Axelrod, then his senior adviser. All three believed that the middle of a global economic crisis was the wrong time to attempt what they called "a heavy lift." When I asked the president in late 2009 why he had chosen to go ahead anyway, he answered, "I remember telling Nancy Pelosi [then Speaker of the House] that moving forward on this could be so costly for me politically that it would affect my chances if I were to run for reelection." But he also said that he had told Pelosi that if they didn't move in 2009, "it was not going to get done." And he seems to have been right. Passing the bill required every bit of the new president's political capital, which he knew would be depleted in later years. And sure enough, after many months of squabbling, Congress adopted the ACA in early 2010 on a narrow party-line vote. But that November, unhappiness with the new law was at least one factor in the Republicans' gaining control of the House of Representatives.

In light of this history, one might reasonably have expected Obama to be especially attentive when it came to the execution of his pet program—or at least to have appointed people with enough stature and the right kind of experience to oversee it. Instead, a president who had come into office having run nothing larger than a Senate office staff of 30 or so employees failed to correct for this shortcoming on his resumé. He neglected to hire experienced managers or top-notch technology experts for the ACA in particular and his administration in general.

Obamacare's intellectual godfather, the Harvard economist David Cutler, saw the problem coming. "I do not believe the relevant members of the administration understand the president's vision or have the capability to carry it out," Cutler wrote in a May 2010 memo to Lawrence Summers, then the president's chief economic adviser. Cutler told Summers that the president especially needed officials with experience in health-care IT start-ups. Obama hired exactly one: Todd Park of Castlight Health, a health-care management company, who eventually became Obama's chief technology officer. For more than three years after the ACA's passage, Obama escaped the consequences of his failure to staff up properly for his signature program. But in the fall of 2013, they all came crashing down.

SHADING THE TRUTH

Obama was only the third person in a century to advance directly from the Senate to the presidency. Many American presidents have also

spent time as governors, where they learned how to deal with legislators, supervise large agencies, and oversee new initiatives. Some have also held administrative jobs in the federal bureaucracy. Before becoming president, both Roosevelts worked not just as governors but also as assistant secretaries of the navy. Johnson spent two years as the Texas director of the National Youth Administration, a large Depression-era federal agency. Such experience gave these presidents the reflexes to spot when a contractor tried to pull the wool over their eyes. It also gave them firsthand experience in how bureaucrats often shade or avoid the truth when reporting to their superiors.

Although he lacked such job training himself, Obama could still probably have managed the ACA's rollout well—if only he had properly compensated for his inexperience. But here Obama was hurt by his self-confidence and much-discussed reluctance to reach out to other politicians or business leaders. There was plenty of help available had Obama only asked for it: for example, his good friend Deval Patrick, the governor of Massachusetts, spent the last seven years successfully implementing a statewide health-care system, passed under his predecessor, Mitt Romney, that is quite similar to the ACA. Yet neither Obama nor his aides ever contacted Patrick or his people for advice.

Obama could still probably have managed the rollout well—if only he had compensated for his inexperience.

Instead, the president resisted efforts to bring experienced managers into his administration, as he had from the very start. It isn't that Obama dislikes businesspeople, as some critics have charged; his best friend, Martin Nesbitt, runs a Chicago-based parking company, and the president has plenty of other friends and supporters in the business community. But Obama does feel that business experience is rarely transferable to government, and on a personal level, he simply feels more comfortable with advisers whose backgrounds mirror his own. The president did consult with groups of business leaders throughout his first term. But he rarely found their suggestions helpful; they mostly just complained about taxes or other business-related challenges. Obama nonetheless tried to recruit a few of them, but most rejected his job offers, often because of the onerous vetting process required for all federal appointees.

So corporate America was largely excluded from the administration in the first term. In December 2008, shortly after Obama's first

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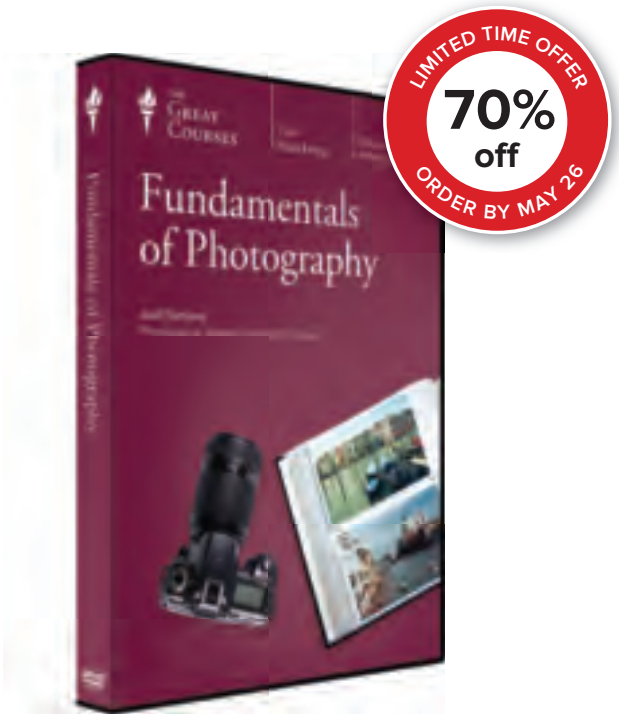

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election, a retired Wall Street CEO who had been a major campaign donor complained to the president-elect that his top half dozen economic advisers didn't include anyone who had ever met a payroll, much less managed a big corporation. They were all either academics or former Clinton administration officials.

Obama responded by telling the donor the same thing he said any time this issue arose: I have Valerie Jarrett, and she's a former CEO. That was technically true. But Jarrett, a confidante whom Obama describes as like an older sister, had been a chief executive (of a Chicago-based housing company) for only a year and a half—and had spent most of that time working on the 2008 campaign. (The company was mostly run by its founder.) Besides Jarrett and Park, the only White House official who had any real corporate management experience was Jeffrey Zients, a successful entrepreneur who was appointed chief performance officer in 2009 and who would later be brought in to fix HealthCare.gov. It took until year three of the administration before Obama even hired a corporate executive (John Bryson of Edison International) to run the Commerce Department.

Two other factors make Obama's refusal to hire experienced managers to handle the ACA especially perplexing. The first is that HealthCare.gov more closely resembled a business project than a government project. And the second is that Obama took a very different attitude when it came to another major piece of legislation in his first term. In 2009, Congress passed a $787 billion economic stimulus package, the largest-ever infusion of government money into the U.S. economy. Obama knew from reading about the New Deal that spending so much money so fast would offer a dangerous opportunity for waste and corruption; it's no coincidence that the word "boondoggle" dates to that era. The White House also knew that the news media and conservative critics would be looking hard for any sign of mismanagement.

So Obama assigned Biden the task of supervising the spending of the stimulus money, and Biden hired Earl Devaney—a tough former Secret Service agent and former inspector general of the Department of the Interior—to lead the newly created Recovery Accountability and Transparency Board, which gave frequent updates directly to the vice president. These moves paid off. While plenty of critics took issue with the size of the stimulus and the spending choices, no major stories of scandal or waste ever surfaced.

Yet no similar efforts were made when it came to the ACA. In fact, only a few White House officials even spoke the same tech language as the contractors who would build HealthCare.gov. The sole Silicon Valley executive hired by the White House in 2009 was Andrew McLaughlin, who was brought in from Google to serve as deputy chief technology officer. McLaughlin was appalled by the government's ancient technology and frustrated by the slow pace of change, and he ended up quitting in frustration in 2011.

The irony is that there were plenty more where McLaughlin came from: Obama initially enjoyed huge support in Silicon Valley and could have easily hired a dozen or more of his fans in the tech community. White House aides now admit that not doing so was a mistake, but they say that in the early days of the administration, with an economy in free fall and two wars to unwind, they just had too many other, more pressing priorities. Still, even that rationale doesn't explain why the mistake was never corrected. After all, in 2012, Obama's campaign team hired several brilliant young data scientists and software designers to help them reengineer U.S. politics. Yet not a single one was brought onto the White House staff once the race was over.

THE CMS MESS

When it came time to set up HealthCare.gov, rather than follow the successful precedent set by the economic stimulus and oversee the project from the White House, Obama delegated it to the bureaucracy. He dumped most of the responsibility on a powerful but little-known agency spread over several locations in Washington, D.C., and Maryland called the Centers for Medicare and Medicaid Services (CMS). CMS has long had a reputation as a cumbersome bureaucracy with weak controls over programs that affect more than 100 million Americans. (In 2007, I wrote a story for *Newsweek* about how CMS inexplicably refused to reimburse patients for a cancer treatment that had an indisputable record of success.) In September 2011, the agency hired a large Canadian company, CGI Federal, as the lead contractor on the ACA website. The company also had a mixed record. It had performed well in 2009 and 2010 helping design the website for Biden's recovery board, but it was fired by the Ontario government in 2012 for missing deadlines and otherwise mismanaging a $46.2 million medical IT project.

CMS also faced political problems. In November 2011, Republicans in Congress blocked the permanent appointment of Donald Berwick, an expert on health-care systems who had been serving as acting administrator of CMS since July 2010, because he had once said something favorable about the British national health-care system. Meanwhile, starting in early 2012, the White House quietly sent unofficial word through all federal agencies that because Republican critics would seize on anything controversial to distract the public from the Obama campaign's carefully crafted message, no new initiatives should be launched until after the election. This informal directive also had the effect of squelching bad news, preventing officials from acknowledging anything problematic or embarrassing, lest it be leaked. Obamacare, of course, was a particularly sensitive subject. The White House knew that the slightest problem with the program would be immediately exploited by the Republicans.

Whatever happens to the Affordable Care Act, the many mistakes made with the rollout have tarnished the president's reputation for competence.

Such caution may have been politically understandable—between 2011 and 2013, Republicans in Congress tried to repeal the ACA more than 30 times—but it doesn't explain why the problems with the website weren't flagged after the election; indeed, this question remains one of the enduring mysteries of the whole misadventure. The answer likely lies in an old-fashioned bureaucratic fear about delivering bad news to higher-ups. The White House now says that had it been told sooner that the website wasn't ready, it could have easily pushed back the October 1, 2013, launch date and used call centers and human "navigators" to help Americans enroll while the website went through beta testing.

White House officials have claimed in congressional testimony that they were kept in the dark about the extent of the website's problems until August 2013. But there were warning signs as early as late March, when a report prepared for the Department of Health and Human Services by the consulting firm McKinsey criticized the "insufficient time and scope of end-to-end testing." The report's description of "significant dependency on external parties/contractors" was code for "no one in the government has a handle on what CGI Federal and the other contractors are actually doing."

Around the same time, the CMS unit charged with implementing the website warned superiors in the agency that the system could not be properly tested by the time of the October launch, in part because of difficulties in simulating the heavy load the website would face when so many people logged on at once. But the warnings went unheeded, and it remains unclear if they were forwarded to the White House. CMS is housed inside the Department of Health and Human Services, and so at the very least, these red flags should have caught the attention of Secretary Kathleen Sebelius, a former governor of Kansas. But Sebelius, out of her depth, clearly didn't exercise rigorous oversight. While many details of her contacts with the White House—as well as with Marilyn Tavenner, a registered nurse and former hospital CEO who became acting administrator of CMS in December 2011—remain undisclosed, no evidence has yet surfaced that either woman ever advised the president to delay the rollout.

Full details of the fiasco won't be public for months, but at the very least, it seems clear that no one in an influential position urged delay because no one with technical knowledge had an overview of the entire system. On August 17, for instance, CGI Federal told CMS that its part of the system was only a little more than half finished. With less than six weeks to go before the launch, this should have rung alarm bells. Instead, at this point the bureaucratic bamboozling began in earnest. Each subcontractor, not wanting to jeopardize its job, reported that its bugs were fixable. Individually, this may have been true; taken together, the punch list of necessary fixes (which eventually exceeded 500) doomed the launch.

By the middle of October, two weeks after the launch of the site, the president realized he had a crisis on his hands and announced a "tech surge," bringing in experts from Google, Oracle, and Red Hat and placing them under Zients, the only one in Obama's circle with anything close to the right experience for such a project. But much of the damage had already been done.

INTENSE OPPOSITION

All major American social reforms—from Social Security in 1935 to welfare reform in 1996—have required subsequent tinkering to get them right. Social Security was originally a thoroughly racist piece of legislation: in order to win southern votes in Congress, Roosevelt

initially excluded all occupations (such as domestics and farm hands) likely to be held by African Americans. Similarly, welfare reform, the result of a compromise between Clinton and House Speaker Newt Gingrich, was especially burdensome at first for immigrants and food-stamp recipients. But both laws were changed in the years after their passage to make them more equitable.

The ACA needs legislative fixing, too, on issues from allowing more patient flexibility in choosing doctors to providing greater price transparency. But the program's botched launch will make such changes harder to accomplish. The missteps have strengthened already intense Republican opposition to Obamacare and weakened public support for it. Had the rollout gone well, Republicans might have felt pressure to try to fix the law. Instead, the administration now fears that opening up the ACA for improvement will only risk the passage of crippling amendments by its many opponents in Congress.

After two straight months of round-the-clock repairs, HealthCare.gov finally began to improve in December. Waiting times were cut, and enrollment accelerated. By year's end, about two million people had signed up for private plans (either online or by phone), roughly four million had found new coverage through the expansion of Medicaid, and another three million under the age of 26 had joined their parents' plans, as allowed under the new law. Recent polls have shown that as the website has improved, the ACA has regained some of its lost popularity, although neither the new law nor the president has found approval with more than half the public.

A real surge in public opinion will take time, for HealthCare.gov is still far from functioning as intended. The "back end"—the technology to connect Americans with insurers and health-care providers—remains under construction, a dangerous sign that many people who think they have enrolled may face more hassles going forward. Many outside IT experts believe that the website's basic software remains faulty and will continue to cause major problems, especially related to security, until the government junks it and starts over. That's unlikely to happen anytime soon. In the meantime, engineers will continue to patch the website while building a new, parallel system that might be phased in later.

As for political accountability, that may also take time; the White House felt that firing officials and contractors last fall, when they were the only ones with the knowledge needed to fix the site, would

have been too disruptive. In January, CGI Federal was fired, and at least a few heads are expected to roll after Congress concludes its ongoing inquiries and Denis McDonough, the White House chief of staff, completes an internal investigation. But personnel changes are unlikely before March 31, the deadline for obtaining coverage for 2014. When they do come, the president has indicated that he will turn to the business community for replacements. He has said privately that he wants a "do over" with corporate America in his second term.

If the website continues to function decently and the administration eventually meets its enrollment targets and fixes other problems with Obamacare, the early mishaps afflicting HealthCare.gov may come to be remembered as mere growing pains for a historic program. But whatever happens to the ACA, the many mistakes made with the rollout have tarnished the president's reputation for competence. Obama will always have to live with the fact that he "fumbled"—his word—the debut of his signature program and his best bet to define his legacy.

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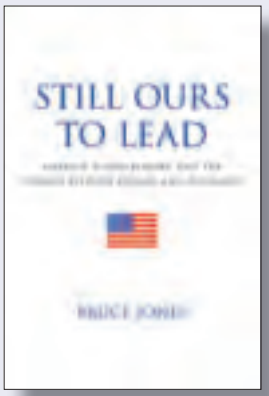

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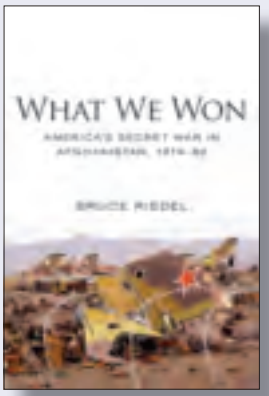

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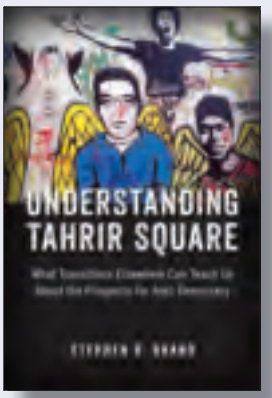

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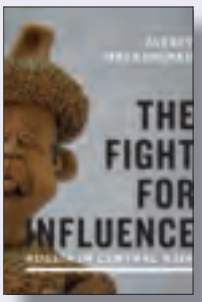

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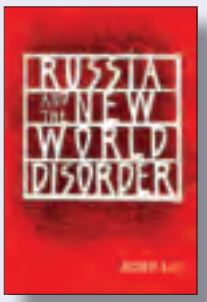

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The Key to Successful Tech Management

Learning to Metabolize Failure

Clay Shirky

Late last October, the management expert Jeffrey Zients was given a mandate to fix HealthCare.gov, the website at the forefront of U.S. President Barack Obama's health-care reform, after its disastrous launch. Refusing to engage in happy talk about how well things were going or how soon everything would be fixed, Zients established performance metrics for the site's responsiveness, insisted on improvements to the underlying hardware, postponed work on nonessential features, demanded rapid reporting of significant problems, and took management oversight away from the Centers for Medicare and Medicaid Services (CMS, a federal agency within the Department of Health and Human Services) and gave it instead to a single contractor reporting to him. The result was a newly productive work environment that helped the website progress from grave dysfunction in early October to passable effectiveness two months later.

Zients' efforts demonstrated the government's ability to tackle complex technological challenges and handle them both quickly and effectively. Unfortunately for the Obama administration, the transformation came too late to rescue its reputation for technical competence. Given that the people who hired Zients clearly understood what kind of management was required to create a working online insurance marketplace, why did they wait to put in place that sort of management until the project had become an object of public ridicule? And more important, is there any way to prevent other such debacles in the future? The answers to both questions lie in the generally tortured way that the government plans and oversees technology.

CLAY SHIRKY is Professor of New Media at New York University.

THE MANAGEMENT DILEMMA

On October 1, rolling out the public face of the Affordable Care Act (ACA), his signature domestic policy initiative, Obama said this:

> Just visit HealthCare.gov, and there you can compare insurance plans, side by side, the same way you'd shop for a plane ticket on Kayak or a TV on Amazon. You enter some basic information, you'll be presented with a list of quality, affordable plans that are available in your area, with clear descriptions of what each plan covers, and what it will cost. . . . Go on the website, HealthCare.gov, check it out for yourself. And then show it to your family and your friends and help them get covered.

Anyone taking this advice discovered how far the site actually was from working like Kayak or Amazon; almost none of the people trying to sign up were able to do so. On November 14, a chastened president tried to explain how things could have gone so wrong:

> We have a pretty good track record of working with folks on technology and IT [information technology] from our campaign where, both in 2008 and 2012, we did a pretty darn good job on that. So . . . the idea that somehow we didn't have access or [weren't] interested in people's ideas, I think isn't accurate. What is true is that . . . our IT systems, how we purchase technology in the federal government is cumbersome, complicated, and outdated. . . . On my campaign, I could simply say, who are the best folks out there; let's get them around a table, let's figure out what we're doing, and we're just going to continue to improve it and refine it and work on our goals. If you're doing it at the federal government level, you're going through 40 pages of specs and this and that and the other, and there are all kinds of laws involved, and it makes it more difficult. It's part of the reason why, chronically, federal IT programs are over budget, behind schedule.

Older citizens may have been willing to let Obama off the hook, since they may regard such difficulties as par for the course—the troubled launch of Medicare Part D in 2006 generated few long-term problems for President George W. Bush. And the poor routinely have to put up with atrocious government service. But younger and middle-class Americans—crucial components of both Obama's political base and the ACA's insurance market—are used to digital systems working properly. They view clunky technology as the product of incompetence or even contempt. And the legislation's bitter opponents were lying in wait, ready

to pounce on any problems that might arise. So the HealthCare.gov rollout ended up being not just a technical catastrophe but also a self-inflicted political one, an experience that may actually drive a change in the way such projects are planned and executed.

Assuming basic technical competence, the essential management challenge for all large technology projects is the same: how best to balance features, quality, and deadline. When a project cannot meet all three goals simultaneously—a situation HealthCare.gov was in by the beginning of 2013, as the administration's internal memos show—something has to give, and management's job is to decide what. In such cases, if you want certain features at a certain level of quality, you have to move the deadline. If you want overall quality by a certain deadline, you have to simplify, delay, or drop features. And if both the feature list and the deadline are fixed, quality will suffer, and you have to launch and fix after the fact. This is the worst of the three options—and the one CMS, the overmatched agency in charge, mistakenly chose.

The silver lining in the HealthCare.gov fiasco is that its high visibility may create an appetite for real improvement.

As the president noted, such snafus are hardly limited to HealthCare.gov, which was actually far from the worst government IT disaster in recent memory. That honor probably goes to the Federal Aviation Administration's Advanced Automation System, an attempt at modernizing air traffic control in the 1980s and early 1990s that has been characterized by one participant as "the greatest failure in the history of organized work." The Advanced Automation System was so famously troubled that what was then the General Accounting Office began placing any significant technical work attempted by the FAA on its "high risk" list, simply because of the reputation of the agency in charge. In the end, the FAA determined that $1.5 billion of the total $2.6 billion spent on hardware and software for the system had simply been wasted—more than twice the total cost of HealthCare.gov.

At least parts of the Advanced Automation System eventually launched, however—something that cannot be said about the FBI's Virtual Case File, a wholesale upgrade of the agency's antiquated Automated Case Support system begun in 2000. The original project was a modest, practical effort to add a Web interface to the existing Automated Case Support database. But in the aftermath of 9/11,

Congress expanded the objectives and moved up the deadlines (so as to "connect the dots" among various databases as soon as possible). Mandating competing imperatives of increased scope and reduced time was obviously a recipe for trouble, but the political urgency of doing something about counterterrorism overrode practical considerations. The expanded initiative was immediately plagued by "feature creep" and poor vendor oversight, the proposed upgrade failed outright, and by 2005, the entire $170 million project had to be written off. (It is sadly ironic that the need to be seen to be doing something often interferes with actually doing something.)

These are only two of many such examples one could choose from, all stemming from problems in at least one of three distinct arenas of government tech administration: hiring and procurement, planning, and management. The silver lining in the HealthCare.gov fiasco is that its high visibility, and the political pain it inflicted, may create an appetite for real improvement.

PEOPLE AND PLANNING

The U.S. government has perennial difficulties attracting and retaining technically skilled workers and getting competitive offerings for projects from outside firms (since the complexity of bidding for federal work often limits the number of vendors that can participate in the process). The likeliest short-term impact of the botched HealthCare.gov rollout will be efforts to remedy these problems.

One proposal being considered is the technology expert Clay Johnson's RFP-EZ project, an attempt to streamline the federal request-for-proposal process so that smaller vendors (with fewer lawyers) can more easily bid for federal work. Meanwhile, the Presidential Innovation Fellows program brings people with considerable technical and managerial insight into the White House for brief "tours of duty," and there is a program to embed government workers with outside tech companies in the works. Deeper changes being discussed include allowing government agencies to evaluate and hire job candidates directly (rather than going through the months-long process required by the centralized Office of Personnel Management) and having the General Services Administration assemble a department dedicated to working on large, public-facing websites.

These are all good ideas, and anyone who wants to see an improved return on the roughly $80 billion the federal government spends

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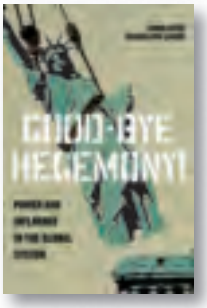

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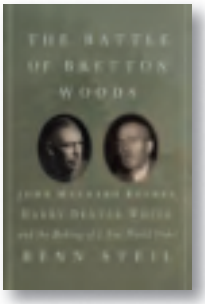

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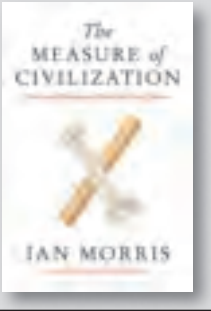

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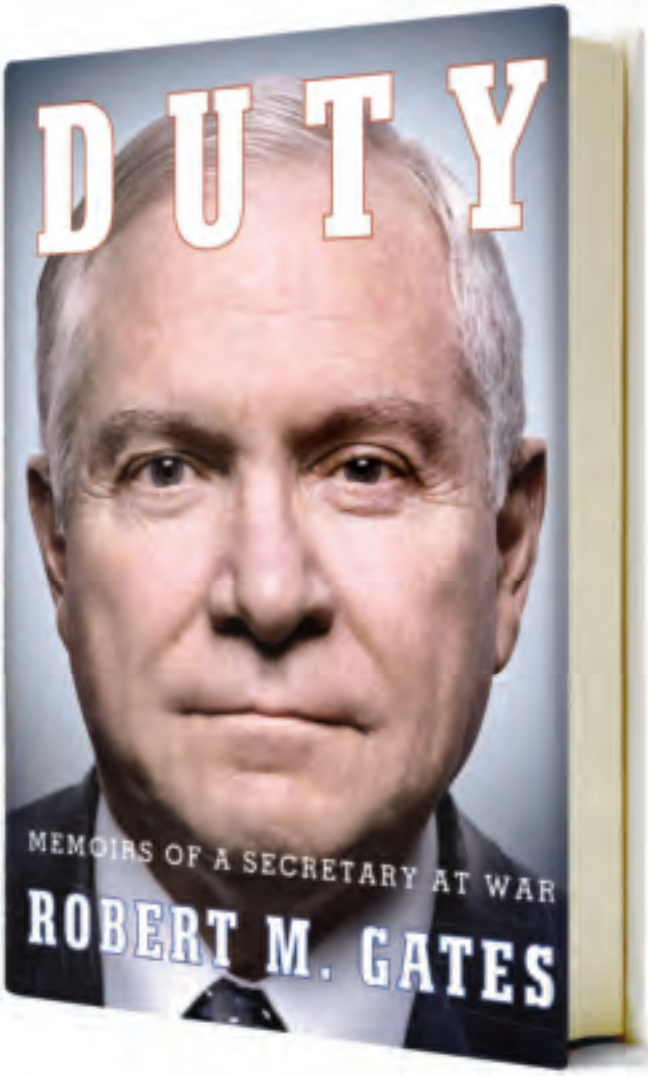

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DUTY

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MEMOIRS OF A SECRETARY AT WAR

annually on technology should hope they are implemented. But changes in staffing and procurement rules alone will not be enough to fix the problems. Talent is a necessary but not sufficient condition for success in tech projects; that talent also has to be deployed appropriately.

Massive, complicated undertakings are always fraught with uncertainty, and proper planning is crucial to keeping potential problems at bay. In some fields, it is possible to generate extremely detailed specifications and carefully thought-through timelines in advance, flagging known difficulties and making the project as predictable as possible. When it comes to tech projects that require the creation of novel infrastructure, however, this approach often creates more problems than it solves. The hardest challenge in creating new technology is not eliminating uncertainty in advance but adapting to it as the work uncovers it.

To understand why, it helps to visualize a tech project as two lines crossing, one representing flexibility and the other completion. On the first day of work, flexibility is at 100 percent and completion is at zero percent; on the last day, the percentages are reversed. With every decision that gets made and executed, flexibility is reduced and completion advances. The art of tech management is trading the right amounts of flexibility for the right amounts of progress at the right times. One might think that detailed advance planning would be extremely helpful in this regard, but in fact, what overly meticulous planning actually does is trade away flexibility long before it is necessary, making it harder, rather than easier, to handle unforeseen problems as they inevitably arise.

On a major new tech project, you can't really understand the challenges involved until you start trying to build it. Rigid adherence to detailed advance planning amounts to a commitment by everyone involved not to learn anything useful or surprising while doing the actual work. Worse, the illusion that an advance plan can proceed according to schedule can make it harder to catch and fixed errors as early as possible, so as to limit the damage they cause. The need to prevent errors from compounding before they are fixed puts a premium on breaking a project down into small, testable chunks, with progress and plans continuously reviewed and updated. Such a working method, often described as "agile development," is now standard in large swaths of the commercial tech industry.

The larger a tech project is and the more users it will have, the likelier it is that unexpected bugs will surface. And the longer term a

technological prediction is, the likelier that it is wrong. A technology plan that tells you what will be happening next week is plausible. One that tells you what will happen next year is far less so. One that tells you what will happen in five years is largely fiction. So thinking of a tech project as something that can be implemented according to a single, fixed plan, with a product that can be delivered in a package at some fixed date long down the road, can be a recipe for disaster.

Each step of a tech project's implementation thus serves three functions. The obvious function is bringing the project further toward completion. But two other functions are also essential: any step in the implementation tests the assumptions that went into the design, and it produces new information that can and should be used to inform planning for the rest of the project. The people who want to be able to procure technology the way they would procure pencils often ignore both of those informative functions.

You can't really understand the challenges involved with any major tech project until you start trying to build it.

Unfortunately, decades of nine- and ten-figure failures have not sufficed to teach the federal government and its contractors such basic lessons. One reason is that the notion that good advance planning leads to good outcomes has deep, intuitive appeal. The program that put a man on the moon, for example, is often cited as a model for how the government can engage in a long burst of technically excellent work, have that work progress in a straightforward way for years on end, and then see it culminate in a stunning success.

In fact, however, the moon landings succeeded because they followed a far more circuitous path. NASA worked on the project in careful iterations, conducting a huge number of tests along the way—many of which failed and forced changes in engineering. The tower of the rocket called Little Joe 1 ignited prematurely, taking the spacecraft with it. Little Joe 5 suffered the same problem. Mercury-Atlas 1 collapsed and exploded during launch. Mercury-Atlas 3 did not go into orbit, and its mission was aborted. The guidance system of Mercury-Scout 1 malfunctioned, and its mission, too, was aborted. And so on. And those were just the failures of unmanned spacecraft. In 1967, a capsule fire in Apollo 1 killed three astronauts, the worst disaster in NASA history up to that point. A congressional investigation into the

accident found "deficiencies existed in Command Module design, workmanship, and quality control." People were fired, processes were revamped, and later work took that failure into account.

NASA didn't figure out how to put a man on the moon in one long, early burst of brilliant planning; it did so by working in discrete, testable steps. Many of those steps were partial or total failures, which informed later work. In digital technology, such an incremental, experimental approach is called "test-driven development." It has become standard practice in the field, but it was not used for HealthCare.gov. Tests on that site were late and desultory, and even when they revealed problems, little was changed.

EMBRACING FAILURE

The toughest nut to crack is project management. Given that the administration didn't put competent management in place early on, it is no surprise that the HealthCare.gov launch failed. What is surprising is that as late as the launch day, people at the highest levels of government seem to have been deluded into thinking it would be successful. The president discussed this failure in November: "I was not informed directly that the website would not be working the way it was supposed to. Had I been informed, I wouldn't be going out saying, 'Boy, this is going to be great.' I'm accused of a lot of things, but I don't think I'm stupid enough to go around saying, 'This is going to be like shopping on Amazon or Travelocity,' a week before the website opens if I thought that it wasn't going to work." The president's staff, in other words, not only allowed Obama to embarrass himself by making unsupportable claims; they also helped him make the situation worse, by driving extra traffic and attention to a barely functioning site.

Although many Obama supporters dispute the comparison, the HealthCare.gov launch resembles the performance of the Federal Emergency Management Agency, or FEMA, in New Orleans during Hurricane Katrina in one key respect: the failures in oversight and communication were presided over by senior administration officials. The inability of these political appointees to know or admit that the launch was doomed indicates that the managerial failure was worse than the technical failure. (And indeed, as the progress under Zients demonstrated, the core problems involved not the competence of the programmers but the competence of their bosses.)

Managers cannot manage when they don't understand what is happening and are not willing to hear bad news and make unpleasant choices. There has been much speculation about just who hid the truth about the website's problems, but reading the communications trail from the month before the site launched, the answer seems to be almost everyone. Because the government has not regarded the development of new technology as a primary function, technical managers tend to answer to nontechnical managers at every level of the bureaucracy, which in this case obscured the technical bad news without there being any one person who decided to do so.

The technical leadership on HealthCare.gov did not answer to the chief information officer of CMS, the chief information officer of CMS did not answer to the chief information officer of the Department of Health and Human Services, and the chief information officer of Health and Human Services did not answer to the chief information officer of the federal government. Instead, each reported to a nontechnical bureaucrat or political appointee, and during the long game of telephone, key details of the story kept getting stripped out or distorted. (When you are trying to describe the performance of a database under various sorts of load, you need both speaker and listener to understand database engineering.)

Who hid the truth about the website's problems? The answer seems to be almost everyone.

Given this sort of organizational chart, it hardly required outright deception or malicious withholding of information to keep accurate information from moving up the chain of command in a timely fashion. Without improvements to transparency and communication, all the procurement reform and agile development in the world will have only a small impact on improving future government IT projects.

The biggest challenge in raising the level of federal management of technical work will be changing managers' incentive structure. Creating financial and career penalties for failure seems like the obvious approach, but this would actually make things worse. All major technological work involves trying new things, trying new things always involves failures, and those failures can often be extremely useful learning opportunities. So creating penalties for failure would actually create penalties for learning and would ensure that workers never tried anything new or interesting.

Instead of failure, what should be penalized are opacity and information hoarding, which are far greater sins. The way to deal with failure is to break it up into small, rapidly metabolizable doses, none of which would be fatal to the project as a whole. But in order for that to happen, managers need to know about problems in great detail and in real time—something that the government's work environment rarely encourages. As one observer of the government's technical culture put it to me, "There are two ways to answer the question, 'How is it going?' One way is to offer an honest assessment of the overall project. The other is to say, 'Everyone is doing what they said they would do.' Everyone in government wants to offer the latter answer and pretend it's the former." Until that changes, government tech failures will be routine.

BEYOND CRISIS MANAGEMENT

The most depressing aspect of the post-launch turnaround of HealthCare.gov is that the management methods Zients used—establishing clear chains of responsibility; demanding rapid, honest reporting of problems; and being willing to make difficult but necessary choices about cutting or delaying features—were highly unlikely to have been adopted by the government until after the project had already visibly and publicly failed. At that point, having chosen not to learn early, in private, the administration ended up learning late, in public.

In October, the site was up but not really running. Only a tiny fraction of potential users could try the service, and those users generated concrete errors. Those errors, in turn, were handed to a team whose job was to fix things. Improvements were incremental, put in place over a period of months. Bug reports were attacked in order of importance, rather than time of discovery. Features were prioritized, and some were dropped. The result has been what is known in the tech world as a phased rollout—just one conducted in the most visible and politically damaging way conceivable.

Substitute David Petraeus and the Iraq war for Zients and HealthCare.gov, and the story is the same, and other examples are easy to find. So the real question is not how to fix a website, even a big, complicated one. It is whether Washington will ever allow good management to become part of its standard operating procedures, rather than something that it turns to only when its regular routines fail badly enough to produce a crisis.

As Objects Go Online

The Promise (and Pitfalls) of the Internet of Things

Neil Gershenfeld and JP Vasseur

Since 1969, when the first bit of data was transmitted over what would come to be known as the Internet, that global network has evolved from linking mainframe computers to connecting personal computers and now mobile devices. By 2010, the number of computers on the Internet had surpassed the number of people on earth.

Yet that impressive growth is about to be overshadowed as the things around us start going online as well, part of what is called "the Internet of Things." Thanks to advances in circuits and software, it is now possible to make a Web server that fits on (or in) a fingertip for $1. When embedded in everyday objects, these small computers can send and receive information via the Internet so that a coffeemaker can turn on when a person gets out of bed and turn off when a cup is loaded into a dishwasher, a stoplight can communicate with roads to route cars around traffic, a building can operate more efficiently by knowing where people are and what they're doing, and even the health of the whole planet can be monitored in real time by aggregating the data from all such devices.

Linking the digital and physical worlds in these ways will have profound implications for both. But this future won't be realized unless the Internet of Things learns from the history of the Internet. The open standards and decentralized design of the Internet won out over competing proprietary systems and centralized control by offering fewer obstacles to innovation and growth. This battle has resurfaced with the proliferation of conflicting visions of how devices should communicate. The challenge is primarily organizational, rather then technological, a contest between command-and-control technology

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JP VASSEUR is a Cisco Fellow and Chief Architect of the Internet of Things at Cisco Systems.

and distributed solutions. The Internet of Things demands the latter, and openness will eventually triumph.

THE CONNECTED LIFE

The Internet of Things is not just science fiction; it has already arrived. Some of the things currently networked together send data over the public Internet, and some communicate over secure private networks, but all share common protocols that allow them to interoperate to help solve profound problems.

Take energy inefficiency. Buildings account for three-quarters of all electricity use in the United States, and of that, about one-third is wasted. Lights stay on when there is natural light available, and air is cooled even when the weather outside is more comfortable or a room is unoccupied. Sometimes fans move air in the wrong direction or heating and cooling systems are operated simultaneously. This enormous amount of waste persists because the behavior of thermostats and light bulbs are set when buildings are constructed; the wiring is fixed and the controllers are inaccessible. Only when the infrastructure itself becomes intelligent, with networked sensors and actuators, can the efficiency of a building be improved over the course of its lifetime.

Health care is another area of huge promise. The mismanagement of medication, for example, costs the health-care system billions of dollars per year. Shelves and pill bottles connected to the Internet can alert a forgetful patient when to take a pill, a pharmacist to make a refill, and a doctor when a dose is missed. Floors can call for help if a senior citizen has fallen, helping the elderly live independently. Wearable sensors could monitor one's activity throughout the day and serve as personal coaches, improving health and saving costs.

Countless futuristic "smart houses" have yet to generate much interest in living in them. But the Internet of Things succeeds to the extent that it is invisible. A refrigerator could communicate with a grocery store to reorder food, with a bathroom scale to monitor a diet, with a power utility to lower electricity consumption during peak demand, and with its manufacturer when maintenance is needed. Switches and lights in a house could adapt to how spaces are used and to the time of day. Thermostats with access to calendars, beds, and cars could plan heating and cooling based on the location of the house's occupants. Utilities today provide power and plumbing; these new services would provide safety, comfort, and convenience.

In cities, the Internet of Things will collect a wealth of new data. Understanding the flow of vehicles, utilities, and people is essential to maximizing the productivity of each, but traditionally, this has been measured poorly, if at all. If every street lamp, fire hydrant, bus, and crosswalk were connected to the Internet, then a city could generate real-time readouts of what's working and what's not. Rather than keeping this information internally, city hall could share open-source data sets with developers, as some cities are already doing.

Weather, agricultural inputs, and pollution levels all change with more local variation than can be captured by point measurements and remote sensing. But when the cost of an Internet connection falls far enough, these phenomena can all be measured precisely. Networking nature can help conserve animate, as well as inanimate, resources; an emerging "interspecies Internet" is linking elephants, dolphins, great apes, and other animals for the purposes of enrichment, research, and preservation.

The ultimate realization of the Internet of Things will be to transmit actual things through the Internet. Users can already send descriptions of objects that can be made with personal digital fabrication tools, such as 3-D printers and laser cutters. As data turn into things and things into data, long manufacturing supply chains can be replaced by a process of shipping data over the Internet to local production facilities that would make objects on demand, where and when they were needed.

BACK TO THE FUTURE

To understand how the Internet of Things works, it is helpful to understand how the Internet itself works, and why. The first secret of the Internet's success is its architecture. At the time the Internet was being developed, in the 1960s and 1970s, telephones were wired to central office switchboards. That setup was analogous to a city in which every road goes through one traffic circle; it makes it easy to give directions but causes traffic jams at the central hub. To avoid such problems, the Internet's developers created a distributed network, analogous to the web of streets that vehicles navigate in a real city. This design lets data bypass traffic jams and lets managers add capacity where needed.

The second key insight in the Internet's development was the importance of breaking data down into individual chunks that could be reassembled after their online journey. "Packet switching," as this process is called, is like a railway system in which each railcar travels independently. Cars with different destinations share the same tracks, instead

of having to wait for one long train to pass, and those going to the same place do not all have to take the same route. As long as each car has an address and each junction indicates where the tracks lead, the cars can be combined on arrival. By transmitting data in this way, packet switching has made the Internet more reliable, robust, and efficient.

The third crucial decision was to make it possible for data to flow over different types of networks, so that a message can travel through the wires in a building, into a fiber-optic cable that carries it across a city, and then to a satellite that sends it to another continent. To allow that, computer scientists developed the Internet Protocol, or IP, which standardized the way that packets of data were addressed. The equivalent development in railroads was the introduction of a standard track gauge, which allowed trains to cross international borders. The IP standard allows many different types of data to travel over a common protocol.

The fourth crucial choice was to have the functions of the Internet reside at the ends of the network, rather than at the intermediate nodes, which are reserved for routing traffic. Known as the "end-to-end principle," this design allows new applications to be invented and added without having to upgrade the whole network. The capabilities of a traditional telephone were only as advanced as the central office switch it was connected to, and those changed infrequently. But the layered architecture of the Internet avoids this problem. Online messaging, audio and video streaming, e-commerce, search engines, and social media were all developed on top of a system designed decades earlier, and new applications can be created from these components.

These principles may sound intuitive, but until recently, they were not shared by the systems that linked things other than computers. Instead, each industry, from heating and cooling to consumer electronics, created its own networking standards, which specified not only how their devices communicated with one another but also what they could communicate. This closed model may work within a fixed domain, but unlike the model used for the Internet, it limits future possibilities to what its creators originally anticipated. Moreover, each of these standards has struggled with the same problems the Internet has already solved: how to assign network names to devices, how to route messages between networks, how to manage the flow of traffic, and how to secure communications.

Although it might seem logical now to use the Internet to link things rather than reinvent the networking wheel for each industry, that has not been the norm so far. One reason is that manufacturers have wanted to

establish proprietary control. The Internet does not have tollbooths, but if a vendor can control the communications standards used by the devices in a given industry, it can charge companies to use them.

Compounding this problem was the belief that special-purpose solutions would perform better than the general-purpose Internet. In reality, these alternatives were less well developed and lacked the Internet's economies of scale and reliability. Their designers overvalued optimal functionality at the expense of interoperability. For any given purpose, the networking standards of the Internet are not ideal, but for almost anything, they are good enough. Not only do proprietary networks entail the high cost of maintaining multiple, incompatible standards; they have also been less secure. Decades of attacks on the Internet have led a large community of researchers and vendors to continually refine its defenses, which can now be applied to securing communications among things.

Finally, there was the problem of cost. The Internet relied at first on large computers that cost hundreds of thousands of dollars and then on $1,000 personal computers. The economics of the Internet were so far removed from the economics of light bulbs and doorknobs that developers never thought it would be commercially viable to put such objects online; the market for $1,000 light switches is limited. And so, for many decades, objects remained offline.

BIG THINGS IN SMALL PACKAGES

But no longer do economic or technological barriers stand in the way of the Internet of Things. The unsung hero that has made this possible is the microcontroller, which consists of a simple processor packaged with a small amount of memory and peripheral parts. Microcontrollers measure just millimeters across, cost just pennies to manufacture, and use just milliwatts of electricity, so that they can run for years on a battery or a small solar cell. Unlike a personal computer, which now boasts billions of bytes of memory, a microcontroller may contain only thousands of bytes. That's not enough to run today's desktop programs, but it matches the capabilities of the computers used to develop the Internet.

Around 1995, we and our colleagues based at MIT began using these parts to simplify Internet connections. That project grew into a collaboration with a group of the Internet's original architects, starting with the computer scientist Danny Cohen, to extend the Internet into things. Since "Internet2" had already been used to refer to the project for a higher-speed Internet, we chose to call this slower and simpler Internet "Internet 0."

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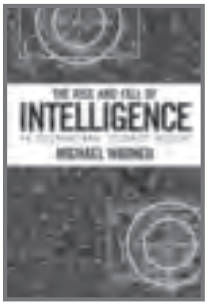

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The goal of Internet 0 was to bring IP to the smallest devices. By networking a smart light bulb and a smart light switch directly, we could enable these devices to turn themselves on and off rather than their having to communicate with a controller connected to the Internet. That way, new applications could be developed to communicate with the light and the switch, and without being limited by the capabilities of a controller.

Giving objects access to the Internet simplifies hard problems. Consider the Electronic Product Code (the successor to the familiar bar code), which retailers are starting to use in radio-frequency identification tags on their products. With great effort, the developers of the EPC have attempted to enumerate all possible products and track them centrally. Instead, the information in these tags could be replaced with packets of Internet data, so that objects could contain instructions that varied with the context: at the checkout counter in a store, a tag on a medicine bottle could communicate with a merchandise database; in a hospital, it could link to a patient's records.

Along with simplifying Internet connections, the Internet 0 project also simplified the networks that things link to. The quest for ever-faster networks has led to very different standards for each medium used to transmit data, with each requiring its own special precautions. But Morse code looks the same whether it is transmitted using flags or flashing lights, and in the same way, Internet 0 packages data in a way that is independent of the medium. Like IP, that's not optimal, but it trades speed for cheapness and simplicity. That makes sense, because high speed is not essential: light bulbs, after all, don't watch broadband movies.

Another innovation allowing the Internet to reach things is the ongoing transition from the previous version of IP to a new one. When the designers of the original standard, called IPv4, launched it in 1981, they used 32 bits (each either a zero or a one) to store each IP address, the unique identifiers assigned to every device connected to the Internet—allowing for over four billion IP addresses in total. That seemed like an enormous number at the time, but it is less than one address for every person on the planet. IPv4 has run out of addresses, and it is now being replaced with a new version, IPv6. The new standard uses 128-bit IP addresses, creating more possible identifiers than there are stars in the universe. With IPv6, everything can now get its own unique address.

But IPv6 still needs to cope with the unique requirements of the Internet of Things. Along with having limitations involving memory, speed, and power, devices can appear and disappear on the network

intermittently, either to save energy or because they are on the move. And in big enough numbers, even simple sensors can quickly overwhelm existing network infrastructure; a city might contain millions of power meters and billions of electrical outlets. So in collaboration with our colleagues, we are developing extensions of the Internet protocols to handle these demands.

THE INEVITABLE INTERNET

Although the Internet of Things is now technologically possible, its adoption is limited by a new version of an old conflict. During the 1980s, the Internet competed with a network called BITNET, a centralized system that linked mainframe computers. Buying a mainframe was expensive, and so BITNET's growth was limited; connecting personal computers to the Internet made more sense. The Internet won out, and by the early 1990s, BITNET had fallen out of use. Today, a similar battle is emerging between the Internet of Things and what could be called the Bitnet of Things. The key distinction is where information resides: in a smart device with its own IP address or in a dumb device wired to a proprietary controller with an Internet connection. Confusingly, the latter setup is itself frequently characterized as part of the Internet of Things. As with the Internet and BITNET, the difference between the two models is far from semantic. Extending IP to the ends of a network enables innovation at its edges; linking devices to the Internet indirectly erects barriers to their use.

The same conflicting meanings appear in use of the term "smart grid," which refers to networking everything that generates, controls, and consumes electricity. Smart grids promise to reduce the need for power plants by intelligently managing loads during peak demand, varying pricing dynamically to provide incentives for energy efficiency, and feeding power back into the grid from many small renewable sources. In the not-so-smart, utility-centric approach, these functions would all be centrally controlled. In the competing, Internet-centric approach, they would not, and its dispersed character would allow for a marketplace for developers to design power-saving applications.

Putting the power grid online raises obvious cybersecurity concerns, but centralized control would only magnify these problems. The history of the Internet has shown that security through obscurity doesn't work. Systems that have kept their inner workings a secret in the name of security have consistently proved more vulnerable than those that have allowed themselves to be examined—and challenged—by outsiders.

The open protocols and programs used to protect Internet communications are the result of ongoing development and testing by a large expert community.

Another historical lesson is that people, not technology, are the most common weakness when it comes to security. No matter how secure a system is, someone who has access to it can always be corrupted, wittingly or otherwise. Centralized control introduces a point of vulnerability that is not present in a distributed system.

The flip side of security is privacy; eavesdropping takes on an entirely new meaning when actual eaves can do it. But privacy can be protected on the Internet of Things. Today, privacy on the rest of the Internet is safeguarded through cryptography, and it works: recent mass thefts of personal information have happened because firms failed to encrypt their customers' data, not because the hackers broke through strong protections. By extending cryptography down to the level of individual devices, the owners of those devices would gain a new kind of control over their personal information. Rather than maintaining secrecy as an absolute good, it could be priced based on the value of sharing. Users could set up a firewall to keep private the Internet traffic coming from the things in their homes—or they could share that data with, for example, a utility that gave a discount for their operating their dishwasher only during off-peak hours or a health insurance provider that offered lower rates in return for their making healthier lifestyle choices.

The size and speed of the Internet have grown by nine orders of magnitude since the time it was invented. This expansion vastly exceeds what its developers anticipated, but that the Internet could get so far is a testament to their insight and vision. The uses the Internet has been put to that have driven this growth are even more surprising; they were not part of any original plan. But they are the result of an open architecture that left room for the unexpected. Likewise, today's vision for the Internet of Things is sure to be eclipsed by the reality of how it is actually used. But the history of the Internet provides principles to guide this development in ways that are scalable, robust, secure, and encouraging of innovation.

The Internet's defining attribute is its interoperability; information can cross geographic and technological boundaries. With the Internet of Things, it can now leap out of the desktop and data center and merge with the rest of the world. As the technology becomes more finely integrated into daily life, it will become, paradoxically, less visible. The future of the Internet is to literally disappear into the woodwork.

The Next Drone Wars

Preparing for Proliferation

Sarah Kreps and Micah Zenko

During World War II, a top commander in what was then the U.S. Army Air Forces, General Henry "Hap" Arnold, developed a new way to attack U-boat stations and other heavily fortified German positions: he turned old B-17 and B-24 bombers into remotely piloted aircraft and loaded them with explosives. "If you can get mechanical machines to do this," Arnold wrote in a memo to his staff, "you are saving lives at the outset." The missions had a poor track record, but that did not deter Arnold from declaring in 1945 that "the next war may be fought by airplanes with no men in them at all."

Nearly seven decades later, Arnold's prophecy is slowly being realized: armed drones are starting to rule the skies. So far, the United States has had a relative monopoly over the use of such drones, but it cannot count on maintaining that for much longer. Other states are quickly catching up. And although these new weapons will not transform the international system as fundamentally as did the proliferation of nuclear weapons and ballistic missiles, they could still be used in ways that are highly destabilizing and deadly.

Countries will not be deterred from launching drone attacks simply because an adversary has drones in its arsenal, too. If anything, the inherent advantages of drones—most of all, not placing pilots or ground forces at risk of being killed or captured—have lowered the threshold for the use of force. Spurred by the United States' example, other countries are likely to threaten or conduct drone strikes in ways that are harmful to U.S. interests, whether by provoking regional adversaries or targeting domestic enemies.

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Fortunately for the United States, it still has the ability to shape how and whether the use of drones will spread and whether these threatening scenarios will come to pass. Countries adopt new military capabilities based on how other states have—or have not—already used them and on their perceived effectiveness. Therefore, as other countries develop their own drone technology, they could follow Washington's lead.

John Brennan, director of the CIA and chief architect of the Obama administration's drone policy, acknowledged as much in a speech in April 2012: "If we want other nations to use these technologies responsibly, we must use them responsibly." Yet so far, the Obama

administration has ignored its own advice, failing to develop a comprehensive strategy to limit the proliferation of armed drones and promote their responsible use. The longer the United States delays, the less influence it will have to shape the rules of the game. Without U.S. leadership, it will be extremely difficult to get an international coalition to agree on a credible arrangement governing the use of armed drones.

Such an arrangement would not necessarily require new treaties or international laws; rather, it would necessitate a more broadly accepted understanding of which existing laws apply and when and a faithful and transparent adherence to them. It would also require updating the multilateral regime that was originally designed to prevent the proliferation of nuclear weapons and their delivery systems. Taken together, these measures would help minimize the spread of the most capable and lethal drones to countries that are the most conflict-prone and increase the likelihood that emerging drone powers would adopt policies that reduce the prospects for violent confrontations.

MOVING TARGET

In a speech last November, Thomas Lawson, Canada's chief of the defense staff, equated missiles fired from a drone with those fired from a piloted aircraft, because they both reach their target as intended. This view—that drones represent not a paradigm shift but just a different way for states to do what they have done for decades—has become widespread. As Norton Schwartz, then chief of staff of the U.S. Air Force, said in May 2012, "If it is [a legitimate target], then I would argue that the manner in which you engage that target, whether it be close combat or remotely, is not a terribly relevant question." But that view ignores how drones create a particular moral hazard by keeping pilots away from danger. Because the costs of launching deadly strikes with drones are lower than with piloted aircraft, civilian officials are more willing to authorize them.

Compare the relative caution with which the Clinton administration approached al Qaeda with the steady spike in the use of drones against the group since 9/11. In the 1990s, the U.S. military presented the White House with a number of plans to kill Osama bin Laden, including using long-range bombers, AC-130 gunships, U.S. special operations forces, and non-Taliban tribal groups. But the Clinton administration reasoned that they all posed too many risks to U.S.

personnel, noncombatants, and diplomatic relations with neighboring states. Without the availability of armed drone technology, in August 1998, Washington resorted to two very limited strikes, firing some 70 cruise missiles at a training camp in Afghanistan and some 13 cruise missiles at a pharmaceutical factory in Sudan (none of which killed any al Qaeda leaders).

Presidents George W. Bush and Barack Obama, by contrast, have shown far less restraint in their use of violent force against suspected members of al Qaeda and other groups, sending armed drones to launch strikes in Afghanistan, Iraq, Libya, Pakistan, the Philippines, Somalia, and Yemen. Beyond reducing the risk to pilots, drones offer other attractive benefits. Predator and Reaper drones can now hover over a target for up to 14 hours without refueling. Since armed drones attach missiles to a surveillance platform, they offer an unmatched responsiveness when time-sensitive targets appear. Moreover, drones can detect when noncombatants enter the blast radius, enabling drone-fired missiles to be diverted at the last moment to avoid civilian casualties. The general public has also recognized these benefits: a Gallup poll conducted last March found that roughly two-thirds of Americans approved of drone strikes on suspected terrorists abroad, unless the target was a U.S. citizen.

RISE OF THE MACHINES

Understanding just how many countries currently maintain their own drones is difficult, since these programs are invariably shrouded in secrecy and misinformation. Some countries hide the existence of their drones in order to maintain a surprise capability; others, hoping to raise their prestige, boast about drones that are not yet operational. To date, only the United States, Israel, and the United Kingdom are believed to have used armed drones.

The U.S. drone program has the greatest reach. Since 2008, the United States has conducted more than 1,000 drone strikes in Afghanistan. From 2008 to 2012, the United States conducted 48 drone strikes in Iraq; in 2011, it launched at least 145 drone strikes in Libya. The use of armed drones in more traditional conflicts has been far less controversial, even if it is more prevalent, than their use off the battlefield. Nonetheless, Washington has conducted almost 400 drones strikes in Pakistan, over 100 in Yemen, around 18 in Somalia, and at least one (in 2006) in the Philippines.

Israel and the United Kingdom, meanwhile, have also deployed armed drones, although in far smaller numbers. As of July 2013, the British military had launched 299 drone strikes in Afghanistan. Israeli drones conducted an estimated 42 strike missions in the 2008–9 Gaza conflict, according to a joint investigation by Israeli and Palestinian human rights organizations, and Israeli drones were also used to target suspected terrorists in the Sinai Peninsula in August 2013, with the consent of the Egyptian government.

Although the number of drone-equipped states is currently small, it will grow as other countries play catch-up. In 2004, only 41 states had drones of any kind, armed or unarmed. But by 2011, that number had reached 76, according to the last reliable public estimate by the U.S. Government Accountability Office. According to a 2005 report by the Teal Group, an aerospace and defense industry consulting firm, it was projected that the United States would account for 90 percent of all drone expenditures worldwide over the coming decade; according to 2013 projections, that figure stood at 64 percent. For now, in addition to Israel and the United Kingdom, China and Iran appear to be the only other countries with operationally deployed armed drones (based on the evidence of public demonstrations, such as military parades and air shows). China has been showing the media various drones for half a decade, and it now spends so much on drones that its drone budget will equal the United States' by 2020. Iran has revealed a drone that it claims has a range of 2,000 kilometers, which would cover much of the Middle East.

In 2004, only 41 states had drones of any kind. By 2011, that number had reached 76.

Still other countries are catching up. India's government has reported that it will soon equip its existing drones with precision-guided munitions and hopes to mass-produce others to conduct cross-border attacks on suspected terrorists. Pakistan, not to be outdone by its rival, has declared that it will develop armed drones on its own or with China's help in order to target the Taliban and al Qaeda in its lawless tribal areas. Turkey currently has about 24 drones in use or development, including what Ankara hopes will be an armed drone equivalent of a Reaper (last year it was thwarted in its efforts to buy armed drones from the United States). Meanwhile, Australia, Japan, and Singapore have developed unarmed surveillance drones that could be used for

more military purposes—some of them in highly volatile regions, such as in the area of the disputed islands known as the Senkaku in Japan and the Diaoyu in China.

LIMITED ENGAGEMENT

Given the intrinsic advantages of armed drones over conventional airpower, it is surprising that more countries have not acquired or used them already. But a closer look at the costs of drone warfare makes it clear why. First, using drones is still risky. They might lower the threshold for the use of force, but they do not eliminate it altogether. One reason some countries that have armed drones, such as China and Iran, have not yet used them is that they are not involved in major international conflicts that would justify their deployment. If either China or Iran considered starting a militarized dispute, however, the availability of drones could push its leaders to escalate.

Drone technology is also more complex than it may appear. There is a qualitative difference between the rudimentary unmanned aircraft used as far back as World War II—and even the unarmed Predators that flew in the Balkans in the mid-1990s—and the armed drones that the United States deploys over Afghanistan, Pakistan, and elsewhere today. These advanced drones require far more than a pilot at a base in the Horn of Africa or the Nevada desert to make them effective. They need actionable intelligence, sophisticated communications, access to satellite bandwidth, and complex systems engineering—all assets presently beyond the reach of most states.

It is no coincidence that the countries that possess advanced drones have also already mastered other complex military technologies, such as nuclear weapons and satellite communications. But even some states that have developed such technologies are having difficulties with drones. Russia, for example, has seen its drone efforts derailed by sharp reductions in aerospace funding and a long-declining aerospace industry. France and Italy have also been unable to pursue their own programs and have had to settle for an unarmed variant of the U.S.-made Reaper, which France has been using for reconnaissance missions in Mali.

A third explanation for the slow spread of drones is diplomatic. Conducting drone strikes in foreign countries, as the United States does, requires bilateral relations that are good enough to get the host nations to grant basing and overflight rights. Drone strikes in Somalia

and Yemen require the use of airfields in Djibouti, Ethiopia, Saudi Arabia, and the Seychelles, which the United States has secured with aid (both overt and covert) and security commitments. Few other countries have such reliable access to foreign bases. And the oceans do not offer an alternative. The United States should be able to conduct drone strikes from its ships within five years, but it will take other countries decades to have that capability.

Domestic opposition to the development or use of drones creates additional problems in other states, even some with the technological capacity to build and field them. Officials in Washington take relatively little flak for supporting the U.S. targeted-killing program, but the politics of drones are considerably different in other countries. In Germany, for example, politicians who advocate drones have faced harsh criticism from a public worried about compromising Germany's long-standing defense-only national security policies. Developing lethal drone capabilities, many German critics contend, could increase the prospects of military interventions more generally.

Defense budgets are a final factor. The worldwide civilian and military drone market, which researchers predict will reach $8.4 billion by 2018, accounts for only a fraction of global defense spending, which estimates say will hit $1.9 trillion by the end of 2017. But drones' costs are still prohibitive at a time when austerity dominates military spending decisions in most countries. Unless they discover unforeseen threats that require the use of armed drones, most states will not reallocate precious defense dollars to unmanned systems anytime soon.

HOSTILE ACTS

These obstacles will likely keep the number of drone powers low, but even a few more states fielding a few armed drones could seriously threaten international security. Drones have already been used in ways that go beyond their originally intended applications. For example, the U.S. Customs and Border Protection at first deployed drones to watch the Canadian and Mexican borders, but it has since repurposed them so that other agencies could use them for surveillance missions, and they have, for nearly 700. And drones themselves have created new and unforeseen missions: actual human forces must protect and recover downed drones, for example. It would therefore be myopic and misguided to assume that other states will use drones in the future only in the way the United States has.

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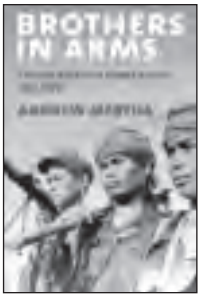

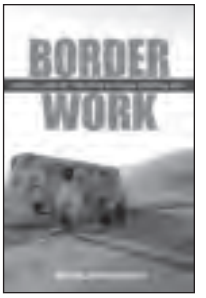

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The mere possession of drones will not make traditional interstate warfare, which is already relatively rare these days, more likely. Having armed drones, given their limitations, is unlikely to convince states to go to war, attempt to capture or control foreign territory, or try to remove a foreign leader from power. But armed drones could still increase the possibility of more limited military conflicts, especially in disputed areas where the slightest provocation could lead to strife.

In such settings, drones could encourage countries to act in ways that they might not if they had only manned aircraft. China already flies drones over the Senkaku/Diaoyu Islands, which has prompted the Japanese Defense Ministry to develop drone-specific rules of engagement. Japanese officials say they would be less hesitant to shoot down Chinese drones than they would manned Chinese aircraft. A similar dynamic can be seen in practice in the Persian Gulf, where Iran has fired on U.S. drones while carefully avoiding attacking manned American planes. In November 2012, for example, an Iranian fighter jet fired on a Predator drone that it claimed had entered Iran's airspace (the U.S. military contended that the drone was over international waters). Martin Dempsey, chairman of the Joint Chiefs of Staff, called Iran's behavior "clearly a hostile act against our assets" necessitating "a measured response," which included using additional, manned U.S. military assets to protect the drones and the information they collect.

For too long, using drones has seemed to be an easy way to satisfy the desire for absolute security.

The fact that drones heighten the potential for miscalculation and military escalation is especially worrisome in maritime disputes. The CIA has identified 430 bilateral maritime boundaries, most of which are not defined by formal agreements between states. In the East China and South China seas, nationalist sentiments and the discovery of untapped oil and gas reserves have already made armed conflict over disputed borders among the littoral states more likely. And that prospect would only increase if these countries deployed drones in the area, which they would likely do more aggressively than if they were deploying piloted aircraft.

Even the spread of unarmed surveillance drones could increase the chances of more lethal attacks by other types of weapons. Beginning in February 2013, U.S. drones flying out of Niger provided targeting

intelligence in the form of raw video feeds to manned French aircraft hunting suspected Islamist militant groups in Mali. This intelligence led to 60 airstrikes by French planes in one week alone in March 2013.

UNMANNED ACCOUNTABILITY

Given drones' allure, proliferation, and security implications, the key question is what Washington and other governments can do to mitigate the worst consequences of drones' growing popularity. The answer is a combination of unilateral and multilateral actions.

As the only country to have used drones extensively, the United States must take the lead in regulating their use and export. So far, the United States has kept its exports of armed drones to a minimum (much to the chagrin of the defense industry), sending them only to the United Kingdom. Washington should maintain such restraint.

It should also revisit its own targeted-killing policies, lest other countries follow the United States' example. The U.S. government has articulated its drone policy to the public only in an ad hoc manner. Behind closed doors, the White House reportedly oversees targeting decisions in a regular review process that includes the Pentagon, the State Department, and other agencies, but it ignores bigger strategic questions about the impact that unilateral measures on the part of the United States to restrain its own drone use could have on other states. A separate, independent review panel should be formed to answer these questions, and an unclassified version of the findings should be made available to the public. It could be modeled on the Guantanamo Review Task Force, which was charged with determining which detainees could be released or prosecuted and brought together the Departments of Justice, Defense, State, and Homeland Security; the director of national intelligence; and the Joint Chiefs of Staff. Or it could be modeled on the panel set up by the White House last summer to review the National Security Agency's surveillance operations. Those two panels are good precedents for how to deal with the U.S. drone program since they brought together both outside experts and experts from across various government agencies to review sensitive U.S. national security policies—and they recommended meaningful reforms.

Congress, which has deferred to the executive branch on drone policy, should take a more active role by holding extensive hearings on drones' unique use in counterterrorism and other strikes. These hearings

should continue to scrutinize the Authorization for the Use of Military Force, which the Obama administration has cited as its legal justification for drone strikes on suspected terrorists, including the U.S. citizen Anwar al-Awlaki in Yemen. But they should also focus on how drones are used in disputed areas and across borders and against publicly undefined targets, such as militants and criminals—the most common and the most dangerous scenarios.

The United States should also come clean about how it has used armed drones, which could prompt Israel and the United Kingdom to do the same. The United States and the United Kingdom have released some overall strike data, but little regarding civilian casualties, with the British military claiming it cannot collect such data "because of the immense difficulty and risks that would be involved." Last summer, the Obama administration responded to a Freedom of Information Act request by declaring that there is "no information that can be provided at the unclassified level." Israel has been even more reticent, refusing to acknowledge that it has conducted any drone strikes. More transparency could correct some misconceptions about drones, such as that the United States violates sovereign airspace and does not take precautions to mitigate civilian harm. Greater openness would generate public confidence in the legitimacy of drone use and could shape how other states conducted and justified their own lethal missions.

REINING IN THE ROBOTS

The United States, however, cannot go it alone; if the regulation of the proliferation and use of armed drones is going to work, it must be a multilateral effort. Some drone exports are currently covered by the Missile Technology Control Regime (MTCR), created in 1987 to regulate nuclear-capable missiles and related technologies. The voluntary arrangement does cover armed drones but mentions them only as an afterthought. The regime's guidelines lump them in with cruise missiles. And they deal only with armed and unarmed unmanned systems with ranges of at least 300 kilometers and payloads of over 500 kilograms. Those limits are arbitrary and outdated; the defense contractor General Atomics has developed a version of the Predator for export designed precisely to get around them.

The MTCR also has enforcement and membership problems. Its 34 participating states are free to interpret and implement its provisions at their own discretion. But more important, China, India, Iran,

Israel, and Pakistan, which either have or aspire to develop drones, are not even members. Some nonmember states, such as Israel, which is nominally a "unilateral adherent" to the regime, act as they please and are dominating the drone export market. According to the consulting firm Frost & Sullivan, between 2005 and 2012, Israel exported $4.6 billion worth of drone systems to countries in Asia, Europe, and Latin America.

Washington should take the lead in creating better and more appropriate international regulations, building on proven initiatives. A new and enhanced drone regime would be drone-specific, covering all exports and uses of armed-capable drones, including those that fall outside the purview of the MTCR. Moreover, its membership would go beyond that of the MTCR, which is largely limited to industrialized countries, and include all states that have or could soon acquire armed drones. Although surveillance drones make strikes by other weapons platforms more likely, given their wide availability on the commercial market, it is unrealistic to try to further limit their spread by including them in this new drone regime.

To win international support to either update the MTCR or create such a new regime, Washington will have to be more forthcoming about its own use of drones. It could offer more transparency in order to garner the consensus vote that is required to modify the MTCR or to guarantee broad, credible participation in a new control regime. This kind of bargaining strategy might mirror the way nuclear-armed states have compelled nonnuclear weapons states to agree to nonproliferation. Commitments by the United States and Russia to make aggressive progress on their own disarmament after the fall of the Soviet Union convinced nonnuclear weapons states to agree in 1995 to an indefinite extension of the Nuclear Nonproliferation Treaty. Of course, even if the United States revealed some elements of its own closely guarded drone program, including that it uses drones in such places as Yemen, countries such as China might not agree to join a new regime. But given that the Obama administration has shown little inclination to stop using drones in areas in which the United States is not engaged in traditional combat, greater disclosure is the only concession it could realistically offer.

Governments concerned about the proliferation of armed drones could also pressure manufacturers, which naturally seek low barriers to export, to form their own monitoring agency. A potential regulating

organization should look more like the World Association of Nuclear Operators, which focuses on responsible use and transparency within the nuclear industry, than the Association for Unmanned Vehicle Systems International, which predominantly engages in public relations for the drone industry.

A NEW HOPE

Until now, the United States has ignored the many holes in its own policy on the possession and use of drones and in the international regime that seeks to limit drone exports because filling them would require restricting its own behavior. Obama and members of Congress, determined to prevent a terrorist attack on their watch, have overlooked the fact that tying one's own hands now when it comes to drone use can pay security dividends down the road.

The Obama administration must abandon its post-9/11 mindset, which is fixated on thwarting terrorism at all costs. For too long, using drones has seemed to be an easy way to satisfy the desire for absolute security. But with drones' dangers and disadvantages becoming more obvious all the time, Washington must recognize that its reliance on drones is far more complicated than previously assumed—and must act to make sure that the consequences of that reliance do not spin out of control.

When ballistic missiles proliferated in the 1980s and 1990s, the United States recognized that their unprecedented ability to swiftly deliver enormous destruction represented a new and unique threat. So Washington took concerted efforts to control their proliferation and use through export regulations, bilateral discussions, multilateral and indirect talks, and prohibitions to prevent missile transfers. Armed drones today may not be quite as destabilizing as ballistic missiles seemed then, but their dangers will grow as more countries acquire the ability to use them. Not taking measures now to mitigate their spread will only undermine the United States' long-term interests.

Networking Nature

How Technology Is Transforming Conservation

Jon Hoekstra

Conservation is for the first time beginning to operate at the pace and on the scale necessary to keep up with, and even get ahead of, the planet's most intractable environmental challenges. New technologies have given conservationists abilities that would have seemed like super powers just a few years ago. We can now monitor entire ecosystems—think of the Amazon rainforest—in nearly real time, using remote sensors to map their three-dimensional structures; satellite communications to follow elusive creatures, such as the jaguar and the puma; and smartphones to report illegal logging.

Such innovations are revolutionizing conservation in two key ways: first, by revealing the state of the world in unprecedented detail and, second, by making available more data to more people in more places. Like most technologies, these carry serious, although manageable, risks: in the hands of poachers, location-tracking devices could prove devastating to the endangered animals they hunt. Yet on balance, technological innovation gives new hope for averting the planet's environmental collapse and reversing its accelerating rates of habitat loss, animal extinction, and climate change.

CELL PHONES FOR ELEPHANTS

In 2009, I visited the Lewa Wildlife Conservancy, in northern Kenya. A cattle ranch turned rhinoceros and elephant preserve, Lewa has become a model for African conservation, demonstrating how the tourism that wildlife attracts can benefit neighboring communities, providing them with employment and business opportunities. When I arrived at camp, I was surprised—and a little dismayed—to discover

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Wired in the wild: an elephant with a tracking collar, Mozambique, November 2007

CORBIS / JON HRUSA

that my iPhone displayed five full service bars. So much for a remote wilderness experience, I thought. But those bars make Lewa's groundbreaking work possible.

More than a decade earlier, Iain Douglas-Hamilton, who founded the organization Save the Elephants, had pioneered the use of GPS and satellite communications to study the movements of elephants. At Lewa, Douglas-Hamilton outfitted elephants with tracking collars that connect to the Safaricom mobile network as easily as my cell phone did. These connections allow Lewa's researchers to effectively call the tracking collars of the conservancy's elephants and download their location data on demand, all the while plotting their migration between Lewa and the forests flanking Mount Kenya.

Today, Lewa uses the collars for more than research, piloting a program to reduce human-elephant conflict that results when elephants raid crops and to provide safer passage for elephants when they move through agricultural and other settled areas. Using accumulated data on elephant migration routes, the conservancy identified and protected ideal migration corridors. It even constructed a highway underpass to reduce the risk of elephants colliding with cars. Lewa also straps tracking collars on problem elephants with a history of raiding crops.

If one of the elephants approaches a farm or village, its collar sends a text message to wildlife rangers, who can then quickly locate the animal and move it away in order to prevent any damage. True to their reputation for intelligence, the elephants quickly learn to mind such virtual fences and keep clear of farms.

The Lewa project shows how a relatively simple, low-cost tracking device can transform wildlife conservation. Using data from such devices, conservationists can shape protected areas around predictable migratory patterns—avoiding needless, often fatal confrontations between endangered species and human civilization. For example, Magellanic penguins that forage along the coast of Argentina have long been vulnerable to running into oil when they swim through shipping lanes. Once covered in oil, most penguins struggle to maintain their body temperature and die of hypothermia, and the survivors suffer from health and reproductive problems. In the mid-1990s, P. Dee Boersma, one of the world's foremost authorities on penguin conservation, discovered that Argentina's oil pollution was killing as many as 40,000 penguins each year. She used GPS tracking devices, at a time when the technology was on the cutting edge and costly, to document where the birds were foraging. She then worked with Argentinian authorities to move the shipping lanes further offshore, dramatically reducing a mortality rate that could have easily led to the penguins' extinction.

Tracking collars such as those used on Lewa's elephants or the Magellanic penguins can cost as much as $5,000 each. But Eric Dinerstein, a leading scientist at World Wildlife Fund, has collaborated with engineers at a cell-phone company to make a GPS tracking device that can be manufactured for less than $300. The use of stronger and smaller components has also made it possible to tag and track a wider variety of species, from jaguars in dense jungle to albatross soaring over the open ocean.

COUNTING BY TREES

The tropical forests of the Amazon and the Congo are among the last of the planet's vast wildernesses. They are menageries of innumerable species. And they act as the planet's lungs, inhaling carbon dioxide—an overabundance of which causes climate change—and exhaling oxygen. For this reason, scientists know that forest conservation is an immediate and effective strategy for slowing climate change. Estimates suggest that

the cutting and burning of tropical forests accounts for around ten percent of the carbon emissions that are heating the climate.

In 2005, the UN Framework Convention on Climate Change created REDD+, a program to compensate developing countries that reduce their overall carbon emissions through forest conservation. The system recognizes only huge-scale conservation achievements that can be measured and verified—often ten million acres or more. Hundreds of millions of donor dollars are now earmarked for countries that can estimate the avoided carbon emissions across vast areas with high levels of mathematical rigor. But such schemes have consistently run into one big technical stumbling block: it has been difficult to precisely measure, report, and verify the emissions-reduction benefits of variable stretches of forest. Early, labor-intensive methods of measuring a forest's capacity to store carbon relied on satellite imagery to measure the overall area and ground surveys to size up individual trees in sample plots. The process was costly, and the accuracy of the estimates varied.

Since the mid-1970s, people have been consuming more resources than the planet's natural capital can replenish.

Scientists are now using remote sensors, laser-imaging technologies, and advanced statistical algorithms to see both the forest and the trees at the same time and in extraordinary detail—right down to the chemical signatures of individual trees. As their costs decline and their precision increases, these forest-scanning methods could unlock billions of dollars for innovative conservation programs that can prove their carbon, social, biodiversity, and even financial values.

Greg Asner, an ecologist at Stanford University and the Carnegie Institution for Science, is the leading pioneer of such forest-surveillance systems. His most recent project builds on a technology called "light detection and ranging" (LIDAR). Mounted on a small airplane, the system beams powerful lasers through tree canopies to the forest floor, which bounce back carrying highly detailed data about the structure of the forest. Asner's plane also carries a separate set of hyperspectral sensors that can recognize a range of seemingly invisible characteristics, including a tree's photosynthetic pigments, its basic structural compounds, and even the water content of its leaves. Researchers can use this data not only to estimate carbon storage capacities but also to analyze forest diversity and assess tree health. With a single airplane, these paired

technologies can scan over 120,000 acres, or as many as 50 million trees, in a single day. And the equipment is so sophisticated that it can distinguish among 200 different tree species. Scientists are already integrating information gathered by the LIDAR system with national forest inventories in Nepal, Panama, Thailand, and dozens of other countries to establish their forests' base lines of carbon storage. Diplomats at the United Nations and the World Bank recently agreed on the key rules for estimating the carbon storage capacity of individual forests, anticipating a coming wave of climate-mitigation finance.

Researchers are also making use of high-resolution satellite imagery. In 2012, the biologist Michelle LaRue reported the findings of her satellite-based census of emperor penguins in Antarctica. Using high-resolution images collected by the QuickBird satellite, LaRue was able to count individual birds over huge areas of ice. Her study, the first of its kind, discovered seven previously unknown colonies and estimated the global population of emperor penguins at nearly 600,000 individuals—nearly 50 percent greater than previous estimates compiled from various ground-based observations of accessible penguin colonies. More accurate population assessments such as these will enable conservationists to verify whether conservation efforts are succeeding and target scarce resources toward the species in the greatest danger.

In a similar vein, the geologist John Amos, who founded the activist organization SkyTruth, now uses satellite imagery and digital mapping to document the environmental impact of mining, oil and gas development, and illegal fishing. He compiles series of satellite images of a single area to create animated visualizations of changes to the landscape over time. His findings have helped quantify the damage done by mountaintop removal, mining, and fracking. Amos' analysis of satellite imagery of the Deepwater Horizon oil spill in 2010 accurately estimated that the spill was far larger than official reports initially claimed. And advanced imaging technologies are now enabling SkyTruth to detect and document illegal fishing activity in remote waters, which will aid enforcement efforts.

CAPITAL INVESTMENTS

Humanity's survival depends on the planet's stores of natural resources: its fish, water, wood, minerals, and arable land. But the replenishment of these goods depends on the world's natural capital: its forests,

grasslands, topsoil, lakes, rivers, and oceans. Increases in agricultural productivity and the expansion of critical infrastructure have improved the lives of billions of people but have left this natural capital dangerously depleted. As the overall demand for goods and services has continued to grow, human consumption of natural resources has become unsustainable. Since the mid-1970s, people have been consuming more resources than the world's natural capital can replenish and producing more pollution than it can absorb. In 2010, the nonprofit organization the Global Footprint Network calculated that humanity now requires roughly 1.5 earths to sustain its current level of consumption each year. Put another way, humanity now uses up a year's supply of the earth's natural resources by mid-August. After that, it is drawing down against the future capacity of natural capital.

We can now monitor entire ecosystems—think of the Amazon rainforest—in nearly real time.

The Natural Capital Project, a joint venture of World Wildlife Fund, Stanford University, the Nature Conservancy, and the University of Minnesota, has generated the technology needed to manage natural capital and predict how changes in land management, infrastructure, and resource use will affect levels of water, timber, and fish, as well as natural defenses against floods and erosion. The project's flagship technology is an open-source software package called Invest, which uses relatively simple data inputs to produce maps, trend lines, and balance sheets that measure natural capital. These analyses can inform land-use, development, and conservation decisions by making the potential tradeoffs of various options clearer. Invest calculates and visualizes how development choices will affect natural capital and, with it, the flows of goods and services to people from the environment.

Today, the Chinese government is using Invest to establish a national network of "ecosystem function conservation areas" that will balance the potential environmental toll of development with targeted conservation projects. China plans to use the software to restrict development in designated areas that will cover about 25 percent of the country. Invest is enabling Beijing to identify which areas can provide the biggest returns in natural capital—helping it avoid erosion, conserve water resources, prevent desertification, and protect biodiversity.

In 2011, World Wildlife Fund and the Indonesian government used the software to quantify the impact of different land-use and development scenarios on the forest ecosystems of Sumatra. Their studies compared the costs and benefits of alternative development plans by taking into account the carbon storage potential of local forests, the habitat for tigers, and the fresh water supply. Following this study, the Millennium Challenge Corporation recommended that INVEST be used to guide $332 million in environmental investments under a $600 million U.S.-Indonesian compact.

The private sector is using similar software, with many companies recognizing that their long-term profitability hinges on a sustainable supply of water, agricultural commodities, and other renewable resources that form the bases of their supply chains. For example, Coca-Cola and World Wildlife Fund recently renewed a strategic partnership that includes goals for incorporating natural-capital considerations into how Coca-Cola uses water and sources the commodities in its products. A number of considerations informed these goals, including data collected to better understand how Coca-Cola uses water throughout its supply chain and manufacturing processes. To date, Coca-Cola has improved its systemwide water efficiency by more than 21 percent, in addition to setting a goal to sustainably source key agricultural ingredients, such as cane sugar, corn syrup, and palm oil, by 2020. One of the company's first major steps toward sustainable sourcing was its work in helping create Bonsucro, which sets global standards for sustainable sugar-cane production. In 2011, a sugar mill in São Paulo, Brazil, became the first to achieve Bonsucro certification, and Coca-Cola was the first buyer of the mill's certified sugar.

FILLING HOLES

Biotechnology may have the most far-reaching and controversial implications for conservation. De-extinction—the notion that extinct species could be reconstituted from remnants of their DNA—has garnered significant media attention in recent years, as genetic sequencing and cloning technologies have made such a lofty goal appear ever more plausible. To paraphrase the author Stewart Brand, whose Revive & Restore initiative is working to bring back the passenger pigeon, extinction punches holes in the fabric of nature; de-extinction creates the opportunity to fill those holes, restoring biodiversity and making ecosystems more resilient.

Two of the most talked-about candidates for revival are the thylacine, a marsupial tiger that was hunted to extinction in Tasmania in the 1930s, and the North American passenger pigeon, which was once the world's most abundant species but disappeared due to excessive hunting and the clearing of its forest habitat. Scientists have already brought back an odd species of mouth-brooding frog in Australia that swallows its own eggs and regurgitates its offspring when they hatch. Now, scientists could reconstitute many more species by replacing the DNA of closely related creatures with DNA from extinct species.

But reconstituting some extinct species is only the beginning. Synthetic biology is an emerging discipline that applies the tenets of engineering to modify, redesign, and even construct bacteria for specific purposes. Biologists are using advanced techniques in genetic sequencing and bioengineering to rewrite genetic code, manipulate the fundamental building blocks of biological functions, and assemble them within microbes that behave like tiny machines. Sophisticated equipment that was once available only to professional researchers in well-funded laboratories is now accessible to entrepreneurs in garage start-ups and to do-it-yourself hobbyists in community laboratories. This accessibility is rapidly accelerating the pace of innovation and expanding the scope of potential applications.

Extinction punches holes in the fabric of nature; de-extinction creates the opportunity to fill them.

Synthetic biology could radically expand the possibilities for conservation. Consider, for example, the problem of desertification and land degradation. Every year, about 30 million acres of land succumb to desertification, rendering that land less productive for farming and threatening biodiversity. Around the world, as many as 5.4 billion acres of land—an area larger than the size of South America—have been degraded by land clearing, soil erosion, or unsustainable farming practices. Rehabilitating that land could help farmers meet rising food demands and could restore natural habitats. But it takes far longer to naturally revive soils and regrow natural vegetation than it takes to destroy them—and the planet cannot afford to wait.

Synthetic biologists are already seeking a faster solution. As part of the 2011 International Genetically Engineered Machine Competition, Christopher Schoene, a doctoral candidate in biochemistry at Imperial

College London, came up with a way to use synthetic biology to accelerate the rehabilitation of damaged lands. Working with a small group of fellow students, Schoene designed a project to engineer microbes that could find plant roots and stimulate their growth to improve their absorption of water and essential nutrients. If such advances progress past the proof-of-concept stage, they could slow or counteract land degradation, since roots hold soil in place.

Of course, many important questions about the risks of such technologies have yet to be answered. Engineered microbes could have many negative impacts on natural organisms outside the laboratory. They could evolve such that their intended functions diminish or adapt in ways that pose unintended consequences. Nevertheless, the fundamental technologies are coming into place. Synthetic biology, as it advances, could be used to supercharge nature, helping it bounce back faster and stay stronger in the face of human pressures.

RISKY BUSINESS

Excitement about the possibilities of technology must be tempered by a recognition of their risks. For example, an explosion of wildlife crime in Africa is resulting in the slaughter of hundreds of rhinoceros for their horns and thousands of elephants for their tusks. Technology is helping conservationists defend against the poachers through improved monitoring and surveillance. But the information that conservationists are using for good could present a significant risk if it fell into criminal hands. Data security thus becomes as important as physical security in the bush.

Biotechnology applications could have any number of unintended consequences. Efforts to revive extinct species are controversial because they could create a moral hazard, making extinction risks seem less urgent. Some critics of biotechnology warn of a *Jurassic Park* scenario, in which a genetically engineered organism escapes from the lab and wreaks ecological havoc in the natural world. Such a fear is not unjustified given the economic and ecological damage invasive species have caused when introduced in places where they have few competitors or predators. Costly examples include the zebra mussel, which clogs water intakes in the Great Lakes, and the chestnut blight that nearly wiped out the American chestnut tree at the turn of the century. Synthetically engineered genes could also spread from modified plants or bacteria to other species, resulting in unexpected consequences:

such a gene transfer is one of the primary mechanisms behind the rapid spread of antibiotic resistance among bacteria. Current evidence suggests that so-called horizontal gene transfers among genetically modified organisms are infrequent. Nonetheless, bioengineers will need to adopt safety measures to manage and diminish such risks. And scientists need to deepen their understanding of the ecology of engineered organisms and how they interact with other species in the environment.

Some of the most promising applications of technology to conservation may also be limited by a lack of basic infrastructure. Although I enjoyed excellent cell-phone connectivity in northern Kenya, many of the world's most important natural areas remain wild and off the grid. That means technologies that rely on connections to telecommunications and power networks won't work there—at least until those networks expand. The proliferation of more affordable satellite uplinks, microcell towers, and solar power has the potential to help overcome such limitations.

At the end of the day, however, technology is merely a tool—one that can help but also do harm. To maximize its potential benefits, conservationists and technologists will need to come together to determine how technology should and should not be used. But as rising populations and surging consumer demand stress the planet's ability to sustain vital resources, humanity needs all the help it can get. Technology may not be a panacea for the world's many environmental ills, but it could still help tip the balance toward a sustainable future.

(Mis)leading Indicators

Why Our Economic Numbers Distort Reality

Zachary Karabell

Economic numbers have come to define our world. Individuals, organizations, and governments assess how they are doing based on what these numbers tell them. Economists and analysts loosely refer to statistics measuring GDP, unemployment, inflation, and trade deficits as "leading indicators" and subscribe to the belief that these figures accurately reflect reality and provide unique insights into the health of an economy. Taken together, leading indicators create a data map that people use to navigate their lives. That map, however, is showing signs of age. Understanding where the map came from should help explain why it has become less reliable than ever before.

None of today's leading indicators existed a century ago. They were invented to measure the economies of the industrial nation-states of the mid-twentieth century. In their time, they did so brilliantly. The twenty-first century, however, is proving more challenging to measure. Industrial nation-states have given way to developed economies rich in services and to emerging industrial economies exporting goods made by multinational companies. The statistics of the twentieth century were not designed for such a reality, and despite the assiduous efforts of statisticians, they cannot keep up.

These shifts have created a temptation to find new formulas, better indicators, and new statistics. And that search, like the quest for new technologies, is certainly worthwhile. But the belief that a few simple numbers or basic averages can capture today's multifaceted national and global economic systems is a myth that should be abandoned. Rather than seeking new simple numbers to replace old simple numbers,

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economists need to tap into the power of the information age to figure out which questions need to be answered and to embrace new ways of answering them.

GROSSED OUT

The king of contemporary economic indicators is, of course, gross domestic product (GDP). Given how central that statistic has become to economics, it is striking to discover just how recently it was invented. It also turns out that its creators understood what it covered (and what it did not) far better than most people do today.

GDP measures the goods and services produced by a single country. Governments adopt policies designed to maximize GDP by boosting their countries' output. Indeed, GDP has effectively become a proxy for national success or failure. It has the power to decide elections, overthrow governments, and launch popular movements. A GDP that is growing in sync with expectations can enhance a country's reputation and thus its strength and power. A GDP that is contracting or failing to meet expectations, on the other hand, can lead to disaster. Yet a hundred years ago, the concept of GDP did not exist; history unfolded without it. The United States, for example, managed to win its independence, fight a civil war, and conquer a continent without any measure of national income.

GDP's origins lie in the 1930s, when economists and policymakers in the United States and the United Kingdom struggled to understand and respond to the Great Depression. The onset of World War II solidified the metric's standing, as the Allies tried to keep tabs on the war's effect on their economies. It is not terribly surprising that economists and policymakers came to favor a statistical technique that helped the United States survive a depression and win a war. But not even the economists who invented this metric imagined that GDP would become so central to every state in the world within a few short decades.

In the United States, much of the credit for developing the concept of GDP goes to the Russian American economist Simon Kuznets, who would later win the Nobel Prize for his work in crafting national accounts, comprehensive recordings of a country's income, spending, finances, and assets. Kuznets' work provided the foundation on which economists and statisticians later built gross national product (GNP) and its successor, GDP, which by the end of the twentieth century had become the more widely cited figure. (The differences between the

two metrics are not huge. GDP includes all production within a country regardless of the national origins of the individuals or companies generating it. GNP, on the other hand, includes the production of any citizen or domestic company regardless of where it is located.)

Kuznets was an early proponent of economics as a science grounded in formulas and rigorous testing. He was joined and supported in that effort on the other side of the Atlantic by the British economist John Maynard Keynes. Although there had been sporadic efforts to measure national income since the seventeenth century, nobody had used rigorous methods to formalize its measurement until Kuznets and his colleagues at the National Bureau of Economic Research, a nonprofit organization in Cambridge, Massachusetts, began to do so in the late 1920s and 1930s. They were prompted by policymakers who needed to figure out what was actually happening during the economic crisis and whether any New Deal policies were doing any good. Without any baseline sense of what the country was producing, it was impossible to know whether any of the government's innovative and controversial New Deal measures were actually helping boost output or employment.

GDP ignores a huge realm of economic activity.

In trying to establish such a baseline, Kuznets and others made several fateful decisions. The most crucial was to leave out domestic work—cooking, cleaning, child rearing, and so on—because it was hard to assign market values to it. As a consequence, GNP and GDP ended up ignoring a huge realm of economic activity. But what they did measure conveniently supported the theories promulgated by Keynes and others: namely, that governments should spend more in times of duress in order to stimulate demand.

World War II gave proponents of the new metrics another opportunity to demonstrate their value. Both U.S. and British officials needed to know how much domestic production could be given over to the war effort without imperiling the availability of basic goods. GNP provided a way to calculate precisely how much the government could spend and how much it could increase taxes to pay for defense without triggering dangerous inflation or eroding the domestic economy. Understandably, the Allies' ultimate victory in the war overshadowed Kuznets' nearly simultaneous conquest of the economy. But in terms of how people came to view the present and the future, and how they defined power and success, the invention of these key economic indicators was almost as important.

In the years after the war—as Washington's ideological battle with communism heated up and as the Cold War pushed direct military conflict to the sidelines—economists and policymakers wove indicators such as GDP into every nook and cranny of economic life and popular culture. This process occurred not just in the United States and the United Kingdom but also in the world at large, thanks to the globalizing impulses of the United Nations and the proselytizing nature of U.S. capitalism.

Yet from the outset, national accounts, GNP, and GDP were limited in what they measured. They were designed to assess prosperity, but with the understanding that multiple aspects of life were being left out or not fully valued. These metrics not only omitted domestic work and hobbies; GDP and its predecessors were also overly reductive because they counted all production and consumption as a net positive, regardless of its nature.

Thus, as Alan Greenspan, an early champion of the new indicators in the postwar period, observed in the 1990s, when he was chair of the U.S. Federal Reserve, if residents of the southern United States buy lots of air conditioners to offset the crushing heat of summer, that will show up as a positive for GDP (assuming those air conditioners are made in the United States, which was the case until late in the twentieth century). So, too, will the money that people spend on electricity bills. Vermont, with less arduous heat, likely sees fewer such purchases and therefore will show a lower GDP than Alabama, at least insofar as air conditioners are concerned. But such numbers say nothing about the relative prosperity of the two states or about the overall quality of life in either place.

GDP distorts in other ways, as well. If a steel mill produces pollution that then requires a cleanup, both the initial output (the steel) and the cost of addressing its byproduct (the cleanup) add to GDP. So, too, would the cost of health care for any workers or residents injured or sickened by the pollution. Conversely, if a company replaces its conventional light bulbs with long-lasting LED bulbs and, as a result, spends less on lighting and electricity, the efficiency gains would detract from GDP. Yet few would argue that the pollution example represents a positive development or that the lighting example constitutes a negative one.

Kuznets and his cohort, for their part, understood these limitations well. As Kuznets wrote in 1934, "The valuable capacity of the human

mind to simplify a complex situation … becomes dangerous when not controlled in terms of definitely stated criteria." He warned that numbers and statistics were particularly susceptible to the illusion of "precision and simplicity" and that officials and others could easily misuse them. But as GDP became a touchstone of public policy, such subtleties were lost on subsequent generations of policymakers.

INFLATED EXPECTATIONS

Something similar happened with the inflation statistic. The U.S. Bureau of Labor Statistics first set out to devise a measure of prices in 1917 in order to learn what it cost an American family to meet its basic needs. In the 1920s, that effort morphed into a larger pursuit to measure how much those prices increased over time. In these years, the bureau drew on the research of two men in particular: the Yale economist Irving Fisher and the head of the National Bureau of Economic Research, Wesley Mitchell. Both men were fascinated by price movements and worked on methodologies to systematically measure changes in prices. That meant more than just sending surveyors across the country to record the cost of a specified basket of goods, as the government had done in 1917: it meant figuring out how prices shaped consumption and how new goods pushed out old ones. Without that, the consumer price index (CPI) used to measure inflation today might still include horsewhips and the IBM Selectric typewriter.

Until the 1970s, ordinary people were generally not particularly interested in or aware of inflationary measurements—with the exception of union members, whose leaders demanded that wage increases be pegged to inflation. But the so-called Great Inflation of the 1970s, when official inflation levels exceeded ten percent, saw the index propelled to the center of public debate. Although no one questioned that inflation was high in those years—everyone could see prices going up—many wondered about its true extent and causes. And the Bureau of Labor Statistics muddied the waters further by publicly wondering whether the CPI was actually overstating inflation. That directly contradicted the experiences of ordinary Americans, who were feeling the pinch and were certain that official statistics were understating prices. Nevertheless, in 1977, insisting that the traditional methods of measurement were making things seem worse than they really were, government statisticians introduced the "core CPI," which measures inflation without taking into account goods such as gasoline

Beyond the curve: Simon Kuznets, October 1971

AP PHOTO / FRANK C. CURTIN

and food, whose prices change frequently. Of course, for most people, those are the goods that matter most. Yet the core CPI became the preferred gauge for policymakers precisely because it removed goods with volatile prices, which could easily skew perceptions.

In the 1990s, the question of whether official estimates overstated the inflation rate emerged once again. Greenspan suggested that if the true rate were calculated, it would be as much as 1.5 percent lower than the official figure, which would lead to a lowering of government spending by tens of billions of dollars, since much of it, especially cost-of-living increases for Social Security payments, was pegged to inflation. In response, Congress authorized a commission to investigate the problem. The commission concluded that, indeed, official inflation numbers were overstating the real rate.

But rather than settle the controversy, the constant tinkering and rethinking only stoked it. Official keepers of economic numbers have always turned a critical eye on their own methods and looked for ways to improve them, but by inventing a new way to assess inflation, they created a credibility gap. Partly as a result, few Americans trust official inflation figures because they believe the numbers purposely understate the rise in prices. Their skepticism is shared by many experts: in the early years of the last decade, economists such as Austan Goolsbee, who would later become a top White House economic adviser, and

influential investors such as William Gross of the multitrillion-dollar investment firm PIMCO cast doubt on the accuracy of official inflation statistics. In 2004, Gross alleged that such figures were essentially a government "con job."

MAKERS OR TAKERS?

And then there is trade. As divided as Americans have been on almost all issues in recent years, most can agree on at least one thing: China represents a threat to the United States. Americans are deeply concerned about the huge amount of U.S. debt (more than $1 trillion) held by the Chinese government and about the U.S. trade deficit with China, which grows almost every year and currently stands at around $300 billion. Companies such as Apple have added dramatically to that deficit by outsourcing their production overseas.

The trade deficit with China began widening after 2001, when Beijing joined the World Trade Organization (WTO). At first, the deficit was seen as a byproduct of China's rapid emergence as a low-cost manufacturer and a burgeoning economic power. In short order, however, the deficit became a symbol of U.S. economic decline and a symptom of dangerous global imbalances. Some pundits began warning that deepening trade deficits could lead to the eventual collapse of the U.S. economy.

The truth, however, is much less ominous. If trade numbers more accurately accounted for how products are made, it is possible that the United States would not have any trade deficit at all with China. The problem, in short, is that trade figures are currently calculated based on the assumption that each product has a single country of origin and that the declared value of that product goes to that country. Thus, every time an iPhone or an iPad rolls off the factory floors of Foxconn (Apple's main contractor in China) and travels to the port of Long Beach, California, it is counted as an import from China, since that is where it undergoes its final "substantial transformation," which is the criterion the WTO uses to determine which goods to assign to which countries. Every iPhone that Apple sells in the United States adds roughly $200 to the U.S.-Chinese trade deficit, according to the calculations of three economists who looked at the issue in 2010. That means that by 2013, Apple's U.S. iPhone sales alone were adding $6–$8 billion to the trade deficit with China every year, if not more.

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STRENGTHENING TRANSATLANTIC COOPERATION

A more reasonable standard, of course, would recognize that iPhones and iPads do not have a single country of origin. More than a dozen companies from at least five countries supply parts for them. Infineon Technologies, in Germany, makes the wireless chip; Toshiba, in Japan, manufactures the touchscreen; and Broadcom, in the United States, makes the Bluetooth chips that let the devices connect to wireless headsets or keyboards.

Analysts differ over how much of the final price of an iPhone or an iPad should be assigned to what country, but no one disputes that the largest slice should go not to China but to the United States. That is where the design and marketing of such devices take place—at Apple's headquarters in Cupertino, California. And the real value of an iPhone, of course, along with thousands of other high-tech products, lies not in its physical hardware but in its invention and the work of the individuals who conceived, designed, patented, packaged, and branded the device. That intellectual property, along with the marketing, is the largest source of the iPhone's value.

As little as $10 of the value of every iPhone or iPad actually ends up in the Chinese economy.

Taking these facts into account would leave China, the supposed country of origin, with a paltry piece of the pie. Analysts estimate that as little as $10 of the value of every iPhone or iPad actually ends up in the Chinese economy, in the form of income paid directly to Foxconn or other contractors.

These issues are no secret to economists immersed in the world of trade and statistics. There is, however, a big difference between identifying this problem and doing something about it. The Organization for Economic Cooperation and Development and the WTO have begun to develop a database to measure what they call "trade in value added." Using an early version of the new database, economists have found that the real trade deficit between the United States and China may be as much as 25 percent smaller than current calculations. Although such estimates do a better job of capturing the supply chain and including services as part of the mix, they are still very rough, for the simple reason that no one has the resources, people, or systems in place to accurately attach the value of every component of every single manufactured product in the world—let alone the relevant services—to one country or another.

Shifting to a more accurate set of indicators would be no small task. It was complicated enough to get the 159 member countries of the WTO to agree to the current measures of the value of exports and imports. Therefore, a wide gap remains between what goes on in the real world and the picture that trade figures present. In the meantime, Americans continue to fret that China's rise as a low-cost manufacturing power has undermined the U.S. economy, lowered wages, and otherwise worsened the struggles of the U.S. working class. Such fears are not unfounded: there is no question that U.S. workers, especially in manufacturing, have seen their wages fall and unemployment rise. But the fact that trade numbers miscalculate the size of the imbalance between China and the United States suggests that the causes of the negative changes to the U.S. economy have also been wrongly identified. There is thus no reason to believe that if Beijing simply revalued its currency or Washington took a harder stance against Chinese imports and against China's filching of intellectual property, the domestic U.S. economy would improve. If China is not the primary cause of U.S. economic decline, then punishing China will not help matters.

ONE SIZE DOES NOT FIT ALL

Not one of today's leading economic indicators was designed to carry the weight it now does. These measurements were not invented to serve as absolute markers of national success or failure or to indicate whether some governments were visionary and others destructive. But the transformation of these numbers from statistics used by bureaucrats and managers into markers of national success happened so quickly over the course of a few decades that no one quite noticed what was happening. These numbers were invented to give policymakers tools to derive the best policies to remedy the most egregious economic problems of their time. In the 1930s, the results appeared creative and innovative by default, since there was no existing legacy of governments attempting to ameliorate systemic economic ills using data and statistics. Indicators such as GDP helped policymakers navigate the many policy experiments called for by desperate times. But today, leading indicators are not used that way. Instead, national statistics often deter policy innovations in the United States rather than facilitate them.

It would be rhetorically satisfying to unveil a new framework and a new set of statistics that would better serve present needs. All

indicators, however, are simple numbers—which is precisely the problem. Any one number will have shortcomings, even if those shortcomings are different for different numbers. GDP does not account for happiness, contentment, or domestic work. It also does not—and cannot—account for nonmarket leisure activities. It cannot encompass activities that exist beyond the reach of the state, such as the so-called invisible economy of cash transactions, cash remittances from immigrant workers delivered by wire, and the informal trade of services, all of which certainly adds up to many trillions of dollars globally. But if economists simply replaced GDP with another number, it, too, would leave something out. No one statistic will suffice. All indicators suffer from the same flaw: they try in vain to distill complicated, ever-changing economic systems into a single, simple figure.

If economists simply replaced GDP with another number, it, too, would leave something out.

To be useful, a new generation of indicators would have to answer particular, well-defined questions. But they cannot look like new versions of the old numbers. They cannot be one-size-fits-all generalizations. Instead of a few big averages, officials and ordinary people need a multiplicity of numbers that seek to answer a multitude of questions. In the era of "big data," such an ambition is well within reach, thanks to powerful computing tools that can quickly process quantities of information that would have been unimaginable decades ago. In short, we do not need better leading indicators. We need bespoke indicators, tailored to the specific needs of governments, businesses, communities, and individuals—and we have the technology to provide them.

"Bespoke" is a word rarely used today. It comes from a time when people of means would go to a tailor and have clothes made to fit them—and them alone. Unlike for a custom suit, however, the cost of bespoke indicators would be minimal. Anyone with a computer can be his or her own tailor and create bespoke data maps. And in a world that is ill served by one-size-fits-all economic statistics, crafting bespoke indicators is not a luxury; it is a necessity.

The search for the right numbers should begin with one question: What do you need to know in order to do whatever you need to do? GDP figures in the United States, Europe, and China should matter

much less to companies such as Caterpillar or General Electric or Google than the specific dynamics of the markets in which they operate. Government spending on infrastructure in Brazil and China should matter more to Caterpillar than GDP. And global spending on online advertising should be a more crucial metric for Google; after all, even if inflation and GDP growth rates were flat and employment numbers weak, companies might still spend more money advertising online this year than they did last year.

Because there are as yet no global indicators of inflation, employment, wages, or anything else, any company with a global reach needs to develop its own metrics to answer its own questions. Otherwise, it will find itself increasingly at sea, making the wrong decisions and not even realizing why. Small businesses and individuals are even less well served by the leading indicators of the twentieth century. Using the national unemployment rate or national housing numbers to decide whether or not now is a good time to start a business or buy a home is a mistake. For someone thinking of opening a clothing boutique or a restaurant, the national CPI reveals little and could badly mislead. Such entrepreneurs should pay attention, instead, to the dynamics of the local market and the trends in their industries. Gleaning that information would have been difficult 30 years ago; today, accessing it takes mere hours on a computer.

As for governments, they invented the primary indicators, and they remain the only institutions that have good reason to continue using them. The major macrostatistics can still usefully measure economic systems, and economists should keep trying to refine them to catch changes in those systems. However, governments also need to recognize the limitations of their cherished leading indicators.

Global trends in labor and the cost of goods are more important than ever, but national indicators do not accurately capture them. So policymakers should be careful not to undertake initiatives that assume that a national economy is some sort of closed loop. Governments need to do a better job addressing the specific trends that are sometimes obscured by indicators that rely on averages. For instance, treating unemployment as a national problem is almost always a mistake. Employment trends vary dramatically by race, geography, gender, and level of education. But none of that is reflected in the all-encompassing unemployment rate, and hence policies informed by only that number are bound to fall short.

Governments should make their own productive use of big data and tailor their policies more precisely. Economic policies should take into account whether output is weak in one part of the country but robust elsewhere and if prices are rising in one region but falling in another. The politics of such decision-making might be difficult, but now the data make it possible.

How societies solve certain problems; how governments determine their policies or multinationals decide on their strategies; how entrepreneurs run effective businesses; how individuals buy homes, pay for college, or retire—none of those decisions should be based on the leading indicators of the last century. Old attachments to those indicators, and to the myth that there is something called "the economy" that affects all people equally, poses a major obstacle to progress.

The indicators invented in the twentieth century were among the most important innovations of their time. But in a world where anyone with a smartphone can access more data than a team of statisticians could in 1950, governments, businesses, and individuals must embrace the power to design their own bespoke indicators. The questions need to be specific, and the answers must take into account the limits of any data. But the result would be a welcome liberation from abstract and misleading notions about the economy.

America's Energy Edge

The Geopolitical Consequences of the Shale Revolution

Robert D. Blackwill and Meghan L. O'Sullivan

Only five years ago, the world's supply of oil appeared to be peaking, and as conventional gas production declined in the United States, it seemed that the country would become dependent on costly natural gas imports. But in the years since, those predictions have proved spectacularly wrong. Global energy production has begun to shift away from traditional suppliers in Eurasia and the Middle East, as producers tap unconventional gas and oil resources around the world, from the waters of Australia, Brazil, Africa, and the Mediterranean to the oil sands of Alberta. The greatest revolution, however, has taken place in the United States, where producers have taken advantage of two newly viable technologies to unlock resources once deemed commercially infeasible: horizontal drilling, which allows wells to penetrate bands of shale deep underground, and hydraulic fracturing, or fracking, which uses the injection of high-pressure fluid to release gas and oil from rock formations.

The resulting uptick in energy production has been dramatic. Between 2007 and 2012, U.S. shale gas production rose by over 50 percent each year, and its share of total U.S. gas production jumped from five percent to 39 percent. Terminals once intended to bring foreign liquefied natural gas (LNG) to U.S. consumers are being reconfigured to export U.S. LNG abroad. Between 2007 and 2012, fracking also generated an 18-fold increase in U.S. production of what is known as

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light tight oil, high-quality petroleum found in shale or sandstone that can be released by fracking. This boom has succeeded in reversing the long decline in U.S. crude oil production, which grew by 50 percent between 2008 and 2013. Thanks to these developments, the United States is now poised to become an energy superpower. Last year, it surpassed Russia as the world's leading energy producer, and by next year, according to projections by the International Energy Agency, it will overtake Saudi Arabia as the top producer of crude oil.

Much has been written lately about the discovery of new oil and gas deposits around the world, but other countries will not find it easy to replicate the United States' success. The fracking revolution required

more than just favorable geology; it also took financiers with a tolerance for risk, a property-rights regime that let landowners claim underground resources, a network of service providers and delivery infrastructure, and an industry structure characterized by thousands of entrepreneurs rather than a single national oil company. Although many countries possess the right rock, none, with the exception of Canada, boasts an industrial environment as favorable as that of the United States.

The American energy revolution does not just have commercial implications; it also has wide-reaching geopolitical consequences. Global energy trade maps are already being redrawn as U.S. imports continue to decline and exporters find new markets. Most West African oil, for example, now flows to Asia rather than to the United States. And as U.S. production continues to increase, it will put downward pressure on global oil and gas prices, thereby diminishing the geopolitical leverage that some energy suppliers have wielded for decades. Most energy-producing states that lack diversified economies, such as Russia and the Gulf monarchies, will lose out, whereas energy consumers, such as China, India, and other Asian states, stand to gain.

The biggest benefits, however, will accrue to the United States. Ever since 1971, when U.S. oil production peaked, energy has been construed as a strategic liability for the country, with its ever-growing thirst for reasonably priced fossil fuels sometimes necessitating incongruous alliances and complex obligations abroad. But that logic has been upended, and the newly unlocked energy is set to boost the U.S. economy and grant Washington newfound leverage around the world.

THE PRICE IS RIGHT

Although it is always difficult to predict the future of global energy markets, the main effect the North American energy revolution will have is already becoming clear: the global supply of energy will continue to increase and diversify. Gas markets have been the first to feel the impact. In the past, the price of gas has varied greatly across the three largely distinct markets of North America, Europe, and Asia. In 2012, for example, U.S. gas prices stood at $3 per million BTU, whereas Germans paid $11 and Japanese paid $17.

But as the United States prepares to generate and export greater quantities of LNG, those markets will become increasingly integrated. Already, investors have sought government approval for more than 20 LNG export projects in the United States. However many end up

being built, the exports flowing from them will add to major increases in the flow of LNG that are already occurring elsewhere. Australia is soon set to surpass Qatar as the largest global supplier of LNG; by 2020, the United States and Canada together could export close to Qatar's current LNG capacity. Although the integration of North American, European, and Asian gas markets will require years of infrastructure investment and the result, even then, will not be as unified as the global oil market, the increased liquidity should help put downward pressure on gas prices in Europe and Asia in the decade ahead.

The most dramatic possible geopolitical consequence of the North American energy boom is that the increase in U.S. and Canadian oil production could disrupt the global price of oil—which could fall by 20 percent or more. Today, the price of oil is determined largely by the Organization of the Petroleum Exporting Countries, which regulates production levels among its member states. When there are unexpected production disruptions, OPEC countries (primarily Saudi Arabia) try to stabilize prices by ramping up their production, which reduces the global amount of spare production capacity. When spare capacity falls below two million barrels per day, the market gets jittery, and oil prices tend to spike upward. When the market sees spare capacity rise above roughly six million barrels a day, prices tend to fall. For the past five years or so, OPEC's members have attempted to balance the need to fill their public coffers with the need to supply enough oil to keep the global economy humming, and they have managed to keep the price of oil at around $90 to $110 per barrel.

If oil prices fall and stay low, every government that relies on hydrocarbon revenues will find itself under stress.

As additional North American oil floods the market, OPEC's ability to control prices will be challenged. According to projections from the U.S. Energy Information Administration, between 2012 and 2020, the United States is expected to produce more than three million barrels of new petroleum and other liquid fuels each day, mainly from light tight oil. These new volumes, plus new supplies coming on line from Iraq and elsewhere, could cause a glut in supply, which would push prices down—especially as global oil demand shrinks due to improved efficiency or slower economic growth. In that event, OPEC could have a hard time maintaining discipline among its members,

few of which are willing to curb their oil production in the face of burgeoning social demands and political uncertainty. Persistently lower prices would create shortfalls in the revenues they need to fund their expenditures.

WINNERS AND LOSERS

If oil prices fall and stay low, every government in the world that relies on hydrocarbon revenues will find itself under stress. Countries feeling the pinch will include Indonesia and Vietnam in Asia; Kazakhstan and Russia in Eurasia; Colombia, Mexico, and Venezuela in Latin America; Angola and Nigeria in Africa; and Iran, Iraq, and Saudi Arabia in the Middle East. These countries' abilities to endure such fiscal setbacks vary and would depend in part on how long low prices lasted. Even with a more moderate drop in prices, the increased volume and diversity of the oil supply would benefit energy consumers worldwide. Countries that like to use their energy supplies for foreign policy purposes—usually in ways that run counter to U.S. interests—will see their influence shrink.

Of all the governments likely to be hit hard, Moscow has the most to lose. Although Russia possesses large reserves of shale oil that it could eventually develop, the global supply shift will weaken the country in the short term. The influx of North American gas to the market will not entirely free the rest of Europe from Russia's influence, since Russia will remain the continent's largest energy supplier. But additional suppliers will give European customers leverage they can use to negotiate better terms with Russian producers, as they managed to do in 2010 and 2011. Europe will gain most from the change if it further integrates its natural gas market and builds more LNG terminals to import gas; such moves could help it ward off crises like those that occurred when Russia cut off gas supplies to Ukraine in 2006 and 2009. The development of Europe's own considerable shale resources would help even more.

A sustained drop in the price of oil, meanwhile, could destabilize Russia's political system. Even with the current price near $100 per barrel, the Kremlin has scaled back its official expectations of annual economic growth over the coming decade to around 1.8 percent and begun to make budget cuts. If prices fall further, Russia could exhaust its stabilization fund, which would force it to make draconian budget reductions. Russian President Vladimir Putin's influence could diminish,

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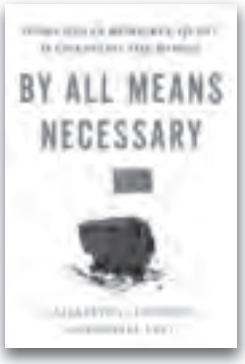

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creating new openings for his political opponents at home and making Moscow look weak abroad.

Although the West might welcome the thought of Russia under such strain, a weaker Russia will not necessarily mean a less challenging Russia. Moscow is already trying to compensate for losses in Europe by making stronger inroads into Asia and the global LNG market, and it will have every reason to actively counter Europe's efforts to develop its own resources. Indeed, Russia's state-run media, the state-owned gas company Gazprom, and even Putin himself have warned of the environmental dangers of fracking in Europe—which is, as *The Guardian* has put it, "an odd phenomenon in a country that usually keeps ecological concerns at the bottom of its agenda." To discourage European investment in the infrastructure needed to import LNG, Russia may also preemptively offer its European customers more favorable gas deals, as it did for Ukraine at the end of 2013. More dramatically, should low energy prices undermine Putin and empower more nationalist forces in the country, Russia could seek to secure its regional influence in more direct ways—even through the projection of military power.

Energy producers in the Middle East, meanwhile, will lose influence, too. As the longtime regulator of OPEC's spare capacity and a regional leader, Saudi Arabia merits special attention. The country is already facing growing fiscal constraints. It responded to the Arab Spring by boosting public spending at home and offering generous economic and security assistance to other Sunni regimes in the region. As a result, since 2008, the kingdom's fiscal breakeven oil price (the level needed to ensure its budget balances) jumped over $40 per barrel to nearly $90 in 2014, according to the International Monetary Fund. At the same time, more pressure is coming from the country's extremely young population, which is demanding better education, health care, infrastructure, and jobs. And as its enormous domestic energy demand continues to grow, the country will begin consuming more energy than it exports by around 2020, should current trajectories hold. Riyadh is already trying hard to diversify its economy. But a prolonged decline in the price of oil would test the regime's ability to maintain the public services on which its legitimacy rests. Other Middle Eastern countries—including Algeria, Bahrain, Iraq, Libya, and Yemen—are already living beyond the limits of their fiscal breakeven prices.

Iran, already staggering under the weight of economic sanctions and years of economic mismanagement, could face even more severe challenges. The country ranks fourth in the world in oil and gas production, and it depends on its energy supplies to project regional influence. But of all OPEC's members, it has the highest fiscal break-even price: over $150 per barrel. Although it is possible that lower prices might further diminish the legitimacy of the regime and thereby pave the way for more moderate leaders, the fate of the recent revolutions in the Middle East, as well as Iran's own ethnic, religious, and other cleavages, caution against such optimism.

The net implications for Mexico are less clear. Given its declining oil production and heavy reliance on oil revenues for its budget, the country could well suffer if the price of oil drops. The recent push for energy reforms could allow Mexico to increase production enough to outweigh the effects of lower global prices. Doing so, however, would require the government to follow up on the reform law passed in December. It would have to implement legislation more conducive to private investment in Mexico's energy sector—including its own shale resources—and accelerate its reform of Pemex, the state-owned oil company.

Unlike energy producers, consumers should welcome the energy revolution. Increased North American production has already helped buffer markets by providing much-needed additional production during recent disruptions of exports from Libya, Nigeria, and South Sudan. Lower energy prices will be a particular boon for China and India, which are already major importers and which, according to the International Energy Agency, will see their demand for oil imports grow by 40 percent (for China) and 55 percent (for India) from 2012 to 2035. As the two countries import more energy from the Middle East and Africa, they will take ever-greater interest in these regions.

China also stands to benefit in another way: its relations with Russia could improve markedly. For decades, history and ideology have kept these two countries from finding common cause, despite the obvious benefits that would accrue from a closer partnership between the world's largest energy producer and its largest consumer, which happen to share a 2,600-mile border. But as more and more North American energy comes on line, energy demand in the developed world remains flat, and demand continues to increase in the developing economies of Asia, Russia will increasingly seek to secure markets in the East.

Moscow and Beijing could well move closer together on long-stalled energy deals and pipelines and collaborate more on energy issues in Central Asia. Once clinched, such arrangements could form the basis for a more extensive geopolitical relationship—one in which China would have the upper hand.

As for India and other Asian economies, the benefits will also go beyond the purely economic. A surge in the quantity of gas and oil transported through the South China Sea will provide common cause to all countries seeking to combat piracy and other risks to the free flow of energy shipments, giving China greater incentives to cooperate on security matters. At the same time, U.S. allies in East Asia, such as Japan, the Philippines, and South Korea, will have the opportunity to increase their energy imports directly from the United States and Canada. Their ability to rely on North American partners, shipping oil and LNG via shorter, more direct sea routes, should also give these countries greater peace of mind.

THE U.S. ADVANTAGE

The biggest beneficiary of the North American energy boom, of course, will be the United States. The most immediate effect will be the continued creation of new jobs and wealth in the energy sector. But beyond that, since U.S. gas is among the cheapest in the world, U.S. industries that rely primarily on gas for feedstock, such as petrochemicals and steel, will continue to see their competitive advantages grow. The energy boom is also providing an economic fillip by fueling investments in U.S. infrastructure, construction, and services. The McKinsey Global Institute estimates that by 2020, unconventional oil and gas production could boost the United States' annual GDP by between two and four percent, or roughly $380–$690 billion, and create up to 1.7 million new permanent jobs. Furthermore, since energy imports account for roughly half of the more than $720 billion U.S. trade deficit, declining energy imports are already leading to a more favorable U.S. trade balance.

A diminished reliance on energy imports should not be confused with full energy independence. But the U.S. energy windfall should help put to rest declinist thinking about the United States. Moreover, the end of U.S. dependence on overseas energy supplies—and on the producer countries with which Washington has often had prickly relations—will grant the United States a greater degree of freedom in

pursuing its grand strategy. But the United States will remain firmly linked to globalized energy markets. Any dramatic disruption of the global oil supply, for instance, would still affect the price at the pump in the United States and derail growth. Washington will therefore maintain an interest in preserving the stability of international markets. Nowhere is that truer than in the Middle East, where vital U.S. interests—in preventing terrorism, countering nuclear proliferation, and promoting regional security to protect allies such as Israel and ensure the flow of energy—will endure. So will the need to police the global commons, such as the major sea-lanes through which trade in energy and other goods flows.

The biggest beneficiary of the North American energy boom, of course, will be the United States.

These truths remain poorly understood, however. U.S. policymakers need to start explaining to both domestic and foreign audiences that although the energy landscape is changing, U.S. national interests are not. Newfound oil and gas will not cause Washington to disengage from the world. To be sure, the United States will remain, by almost any measure, the most powerful country on the planet. Yet it will never be able to insulate itself from shocks to the global economy, and so it will remain deeply involved overseas. This message requires particular emphasis in the Middle East, given Washington's exit from Afghanistan and Iraq and its announced pivot toward Asia.

U.S. policymakers will also need to make sure they protect the sources of the country's energy wealth. Even though private-sector players have driven nearly all the advances that unleashed the boom, their success has depended on a supportive legal and regulatory environment. Leaders at both the state and the federal levels will have to strike the right balance between, on the one hand, addressing legitimate concerns over the environmental and other risks associated with fracking and, on the other hand, securing the economic benefits of production.

Likewise, leaders in the U.S. energy sector should work with public authorities to establish standards of transparency, environmental protection, and safety that can help build public confidence and address the risks of developing shale resources. And the country as a whole will have to update and expand its energy infrastructure to fully harness developments in unconventional oil and gas—a transformation

that will require substantial investments in building and modifying pipelines, railroads, barges, and export terminals.

OIL AND GAS DIPLOMACY

In addition to bolstering the U.S. economy, the energy boom promises to sharpen the instruments of U.S. statecraft. When it comes to levying economic sanctions, a diversified energy supply confers distinct advantages. It would have been nearly impossible to put in place the unprecedented restrictions on Iran's oil exports, for example, absent the increase in North American supply. Unlike the sanctions against Iran, Iraq, Libya, and Sudan in the recent past, which were imposed during global oil gluts, the current sanctions on Iran were put in place when the oil market was tight and prices were high. Getting the support of other countries reluctant to impose such strict measures on Tehran required Washington to make a credible case that removing Iranian oil from the international market would not cause a price spike. The sanctions that Congress passed in December 2011 conditioned the imposition of certain strictures on the administration's determination that there was enough oil in the global market to ask other countries to reduce their imports.

While this provision gave the White House an effective waiver, it never used it, thanks to steadily increasing U.S. production of light tight oil, which compensated for the more than one million barrels a day of Iranian oil that the sanctions forced off the market. That U.S. oil allowed Washington to assuage other governments' fears of a price spike and thereby win international support for rigid and exacting sanctions. These measures did major damage to the Iranian economy and helped push Tehran to the negotiating table. Absent new U.S. supplies, the sanctions would likely never have been approved.

The energy revival is also providing U.S. trade negotiators with newfound leverage as other countries compete for access to U.S. LNG. Washington is currently negotiating two major multilateral trade deals: the Transatlantic Trade and Investment Partnership (with the 28 countries of the EU) and the Trans-Pacific Partnership (with 11 countries in the Asia-Pacific and the Americas). When it comes to LNG exports, U.S. law grants automatic approval to applications for terminals intended to ship gas to countries that have signed free-trade agreements with Washington. Applications for LNG terminals designed to send gas elsewhere, by contrast, must go through a review process

that determines whether such trade is in the U.S. national interest. For the many countries in Asia and Europe that want to add U.S. natural gas imports to their energy mix, achieving this special trade status holds extra value. In fact, this incentive proved crucial in convincing Japan—hungry for gas in the wake of the Fukushima disaster, which took its entire nuclear power infrastructure offline—to join the talks for the Trans-Pacific Partnership.

The shift in global energy also gives Washington a new way of reinforcing its alliances. Many countries now hope to follow the United States' lead and start tapping their own unconventional gas and oil resources, and the U.S. government has started to integrate the country's energy experience into its diplomacy. Two State Department projects—the Unconventional Gas Technical Engagement Program and the Energy Governance and Capacity Initiative—are bringing technical expertise from across the government to help other countries (so far, small developing ones) build up their own oil and gas industries.

The spread of shale technology across the globe will be good news for the climate.

The government should expand on these initial efforts and link them to its broader alliance strategy by supporting such countries as Poland and Ukraine as they work to capitalize on their domestic shale reserves. New production in these and other countries would not only lessen the risk of conflict over scarce resources but also help states produce and consume more climate-friendly energy without sacrificing the economic growth they need. Washington should work to help them understand the particular policies that allowed the boom to occur on U.S. soil and, where welcome, offer advice on how to create similar environments.

The United States should also begin using its new energy resources to prevent allies from being bullied by less friendly suppliers. As it reviews applications for LNG export licenses and assesses their national security implications, the Department of Energy should consider whether the proposed projects support U.S. allies—a move that could encourage U.S. energy companies to export to such countries, helping those countries resist pressure from Russia or elsewhere. The U.S. government and its partners should also support regular forums that bring together private-sector energy experts and investors to help

other countries develop their own shale resources. Although such expanded public-private dialogues would not result in increased production right away—even in the most favorable environments, development takes years—they would nonetheless serve as a public symbol of American solidarity.

In a similar vein, the U.S. government should use its own expertise on unconventional energy to engage directly with foreign governments—especially Beijing. The United States shares many diverse interests with China. Both countries are massive energy consumers. Both desire a stable and growing global economy, which depends on the reliable flow of reasonably priced energy. Both want to minimize climate change. And both want to diversify their energy supplies.

Such an overlap of interests between the world's top two energy consumers creates ample room for collaboration. In December, the United States and China reaffirmed their shared interest in "secure and well-supplied energy markets" and discussed cooperating to develop China's energy resources, including shale gas. Chinese companies are already investing billions in shale developments at home and in the United States. But Washington and Beijing should accelerate progress on this front by broadening the U.S.-China Strategic and Economic Dialogue to include light tight oil and by committing real resources to the joint development of techniques for exporting shale oil and gas in an efficient and environmentally responsible manner. If U.S.-Chinese relations improve, the two sides could work together with other energy consumers to enhance global energy security—for example, by extending antipiracy operations around the Horn of Africa.

Finally, the shale gas revolution can enhance U.S. leadership on climate change. Natural gas emits up to 40 percent less carbon than coal, and the United States is now meeting its climate goals not thanks to bold decision-making in Washington but simply because the economics of gas have proved so much more favorable than those of coal. The resulting downward trend in U.S. carbon emissions has given Washington greater credibility in climate talks than it once had; the U.S. government should use it to assume a more forceful stance toward countries that have resisted reining in their emissions.

The spread of shale technology across the globe will be good news for the climate in other ways. Some environmentalists fear that the widespread replacement of coal with gas, while reducing emissions in the short term, will lessen the pressure for more far-reaching reforms.

But even though shifting from coal to gas would not solve the problem of greenhouse gas emissions, it could buy enough time for the next generation of technological and policy innovations to take hold, and these innovations could cut emissions even more dramatically.

ENERGY AND INFLUENCE

The North American energy revolution is here, it is big, and it will only increase in importance as the United States comes close to becoming a net energy exporter, which is set to happen around 2020. The resulting shift in global energy supplies will benefit consuming countries and erode the power of traditional producers. These developments could also undercut OPEC's traditional role as the manager of global energy prices, perhaps to the extent that energy prices plummet. Such a disturbance could, in turn, cascade through all countries that depend on hydrocarbons for their public finances. Even without such a dramatic drop in prices, the global flow of energy will continue to be transformed—and, with it, economic and geopolitical relationships.

The United States, meanwhile, will be uniquely positioned to profit from the shift and seize new opportunities. The energy boom will add fuel to the country's economic revitalization, and the reduction of its dependence on energy imports will give it some measure of greater diplomatic freedom and influence. The energy boom will not solve all the challenges facing U.S. policymakers: Washington still must manage the aftermath of more than a decade of war in Afghanistan and Iraq, its own fiscal profligacy, hyperpartisanship along the Potomac, the erosion of trust among many allies in the wake of revelations about U.S. surveillance, and the rise of China. That said, the huge boom in U.S. oil and gas production, combined with the country's other enduring sources of military, economic, and cultural strength, should enhance U.S. global leadership in the years to come—but only if Washington protects the sources of this newfound strength at home and takes advantage of new opportunities to protect its enduring interests abroad.

Among the Believers

What Jalal Al-e Ahmad Thought Iranian Islamism Could Learn From Zionism

Bernard Avishai; Jalal Al-e Ahmad

In the early 1960s, Jalal Al-e Ahmad was one of Iran's leading literary celebrities, a writer whose works deeply impressed the dissident clerics who would go on to found and lead the Islamic Republic. Born to a devout family in Tehran in 1923, a boy in the bazaar, Al-e Ahmad had drifted away from the faith and eventually earned a degree in Persian literature. He flirted with the communist Tudeh Party of Iran in the 1940s but broke with it for being too pro-Soviet; then, he helped found (and later left) a workers' party that supported Mohammad Mosaddeq, who was elected prime minister of Iran in 1951. After the 1953 coup that toppled Mosaddeq, Al-e Ahmad succumbed to pressure from the shah's regime and renounced politics entirely, publishing a letter "repenting" for his prior participation. He returned to his roots and seemed to find his vocation, becoming famous throughout Iran as a novelist, essayist, and underground polemicist, especially for his 1962 book *Gharbzadegi*, or "West-struck-ness" (published in English as *Occidentosis* or sometimes *Westoxification*).

Gharbzadegi presented the West's technology and individualism—which he saw as little distinguished from its consumer capitalism—as a kind of disease. This sickness, Al-e Ahmad argued, was being spread in Iran by the shah and his old colonial sponsors as they industrialized the country. The disease was all the more insidious for the way it fed on common ambitions—for enrichment, knowledge, and equality—in order to undermine traditional Islamic ways of life based on humility

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Israel's faithful: praying in Jerusalem, September 2004

REUTERS / GIL COHEN-MAGEN

and family cohesion. For Al-e Ahmad, authenticity lay in the village, in rug weaving, in the mosque. "We have been unable to preserve our own historiocultural character in the face of the machine and its fateful onslaught," he wrote.

Among his admirers were Iran's revolutionary clerics, such as Ayatollah Ruhollah Khomeini and his disciple Ali Khamenei (Iran's current supreme leader). Al-e Ahmad was skeptical of the clerics' hierarchy and rigidity, but he thought their preeminence in Iranian society was natural and was pleased that they took *Gharbzadegi* seriously. He shared with them a view of Shiite Islam as carrying the moral prestige of perpetual insurgency: virtue in the face of corrupt materialism, steadfastness against imperial power. Iran could and should import machines, they agreed—piety should not block technology. But as for the freedom of inquiry that produced the technology, that was a different question: if it inevitably brought agnosticism, sexual nonconformity, and greed, then Iran would be better off refusing that part of the bargain.

As Al-e Ahmad's literary reputation grew, so did his eminence and the censors' attention. He made extensive visits to the Soviet Union, Western Europe, and elsewhere, which he chronicled in detail, and even spent the summer of 1965 at Harvard, meeting Henry Kissinger, among other luminaries. He died at age 45 in 1969, most likely from

… and Iran's: a woman prays in Tehran, February 2007

AP PHOTO / VAHID SALEMI

a heart attack, in his family village in the Iranian province of Gilan. (His brother, Shams Al-e Ahmad, speculated that he had really been assassinated by the SAVAK, the shah's secret police.)

A NOT-SO-DISTANT MIRROR

One of Al-e Ahmad's foreign trips, chronicled in an article and later a book, was to the then-young country of Israel in 1963. Samuel Thrope, a Persian scholar now at the Hebrew University, has published a new translation of Al-e Ahmad's account of this long-forgotten journey, an excerpt of which follows, below. It makes for fascinating reading, not least because it is strikingly positive. The travelogue conjures up a long-lost era of calmness and curiosity between Iranians and Israelis, as well as the naive yet potent Third World ideology so common in developing countries at the time. But it is important for what it says, not just for what it represents. It suggests how the Iranian and Israeli leaders who feel such intense mutual hostility today actually mirror one another in certain ways, particularly in their foundational attitudes toward religious authority, political and economic populism, and the West. That a writer such as Al-e Ahmad, guru to the ayatollahs, liked Israel now seems touching. What he liked about Israel seems cautionary.

Al-e Ahmad titled his original essay "Journey to the Land of Israel"; Thrope has repackaged it as *The Israeli Republic*, to evoke "the Islamic Republic." The Iranian visitor was particularly struck by the kibbutzim he visited. He liked their agricultural communitarianism, their pronounced patriotism, their purified retreat from urban ennui—and with tractors, to boot.

In his introductory commentary, Thrope plays up the improbability for all it is worth: "An Iranian who loved Zionism! A Muslim who loved Israel! Encountering these early chapters of *The Israeli Republic* for the first time, it is difficult not to think in exclamation points." But what is more interesting, as Thrope suggests, is how, given the divine socialism Al-e Ahmad hungered for, he was primed to hear Israel's theocratic melody as well as its socialist notes.

Al-e Ahmad saw Israel as a *velayat*, or "guardianship state"—the sort of polity Khomeini would establish in Iran a decade and a half later. He visited Yad Vashem, the Holocaust memorial, and left in tears, concluding that the new country was an appropriate response to the Jews' tortured history and a useful model for his own oppressed people:

> Israel is the best of all exemplars of how to deal with the West, how with the spiritual force of martyrdom we can milk its industry, demand and take reparations from it and invest its capital in national development, all for the price of a few short days of political dependence, so that we can solidify our new enterprise.

Public education, Hebrew-language instruction, collectivist industry—all these, he felt, would create a new kind of insurrectionary melting pot. Reading Al-e Ahmad, one remembers what few young people can fathom today: how vital, even cool, Labor Zionism seemed back then.

But *velayat* also had militant religious connotations:

> [David] Ben-Gurion is no less than Enoch, and Moshe Dayan no less than Joab: these new guardians, each one with his own prophecies or—at least—clear vision, built a guardianship state in the land of Palestine and called to it all the Children of Israel, of whom two million live in New York and the other eight million in the rest of the world.

Al-e Ahmad grasped that for Labor Zionists, *avodah*, "labor," was holy in the Tolstoyan sense; he would not have been surprised to learn that *avodah* means "worship" in the liturgical sense as well. Ben-Gurion,

Israel's first prime minister, would have shrugged off such comparisons. He saw Zionism primarily through the tradition of Western proletarian movements, and he and his colleagues spurned rabbinical authority in personal life. Still, he often layered onto his statements a kind of rhetorical messianism ("return" and "ingathering" had double meanings), and he routinely substituted the Hebrew Bible for works of history and archaeology. The Torah provided Labor Zionists with place names and figures of speech. Once the state was founded, and the country was inundated with a million refugees from Arab countries, Israel's leaders increasingly took *halakha* (religious law) for granted not only as a source of artistic and literary inspiration among free-thinking European Hebraists but as a force for incipient national solidarity.

JEWISH STATE, OR HEBREW REPUBLIC?

There were legal consequences to these ambiguities. The young state's Law of Return and its Population Registry required a legal definition of "Jew." But what was that? And who should preside over immigration, the Israeli state apparatus, or the Jewish Agency for Israel, a diaspora organization? As the contradictions piled up in the 1950s, Labor movement leaders and the state's appointed judiciary surrendered to the rabbinical notion that to be recognized as Jewish, one had to have been born of a Jewish mother or converted by an Orthodox rabbi. The designation was not merely honorific. Almost all land available for development, including almost all of that confiscated from Arab refugees, was owned and managed either by the Jewish National Fund or by a state body that, like the JNF, openly discriminated against non-Jews.

Rabbinical courts were given control over marriage, divorce, and burial, as they had been under the British mandate. Civil marriage between Jews and non-Jews was not possible—and still is not. A separate, state-funded religious educational bureaucracy was handed over to religious, and particularly ultra-Orthodox, parties. (Today, more than half of Jewish children in Jerusalem, and a quarter in Israel as a whole, attend the schools this bureaucracy set up.) Ben-Gurion had the parliamentary votes to enact a truly liberal constitution in 1949 but chose to ally with the small religious parties rather than share power with genuine rivals. The original Labor Zionist idea that "Jewish" might be a novel, inclusive national category—might refer to anyone

who spoke Hebrew and lived in the Jewish national home—was effectively abandoned.

Al-e Ahmad repudiated Israel after the 1967 war. But it was in the wake of that war, ironically, that his view of Israel as a *velayat* would be realized most vividly. Labor leaders now spoke without embarrassment about the miraculous unification of Jerusalem. They sentimentalized the cultural results of deals cut earlier with the Orthodox rabbinate—deals that confirmed Orthodox precepts in ways that would soon lead to the rise of the Likud Party and the eclipse of Labor's more secular and liberal norms. When Prime Minister Benjamin Netanyahu insists today that Israel be recognized as "a Jewish state," Palestinian negotiators may well wonder if he means Jewish in the way that France is French, or a Hebrew republic—or a Jewish *velayat* such as the one Al-e Ahmad anticipated.

The admiration Al-e Ahmad showed for the Israel he saw in 1963 is one reflection of the confident piety one saw at the founding of the Islamic Republic: the human face of the revolution, some of whose cadres—such as Iran's current president, Hassan Rouhani—the West now hopes might preside over a sort of perestroika. But for Israeli liberals, ironically, Al-e Ahmad's is an embrace they would rather have done without. It is admiration for a compromised democracy that might have been otherwise.

After all, if Al-e Ahmad was right that Israel was a guardianship state, who would be its ideal guardians? Clearly, the Scripture-loving hawks committed to pure collectives and a command economy, to the martyr's version of Jewish history and authentic Jewish rites and law—activists carrying a forlorn hatred for the materialistic, corrupt, and treacherous West and promoting themselves as a vanguard on the Promised Land for world Jewry. In other words, the old Gush Emunim and other zealous West Bank settlers. (One of their number, still unrepentant, assassinated a Labor prime minister.)

So the Israeli forces Al-e Ahmad applauded found their culmination in fanatical rabbis who hate the ayatollahs and are hated in return—radically new Zionists who, as the novelist V. S. Naipaul once wrote of an Iranian cleric, slide down their theology to the confusion of their certainties. Al-e Ahmad's little chronicle is instructive. It is not instructive in the way he intended.

BERNARD AVISHAI

The Israeli Republic

An excerpt from a new translation of Jalal Al-e Ahmad's account of his 1963 trip to Israel

There are two reasons I call Israel a guardianship state. First of all, Jewish rule in the land of Palestine is a guardianship state and not another kind of government. It is the rule of the Children of Israel's new guardians in the Promised Land, not the rule of the inhabitants of Palestine over Palestine. The first contradiction arising from the existence of Israel is this: that a people, a tribe, a religious community, or the surviving remnants of the twelve tribes—whatever designation you prefer—throughout history, traditions, and myths suffered homelessness and exile, and nurtured many dreams in their hearts until they finally settled, in a way, in answer to such hopes and in a land neither especially promising nor "promised." It was thanks, in fact, either to the force of time, the necessities of politics, the clear vision of their guardians, or the dictates of economics and unfettered capitalism; I will address each of these in turn.

Now, although one does not dare compare Israel's leaders with Abraham, David, Solomon, or Moses—peace be upon them—in any case, today's prominent politicians can be called, if not prophets, then, certainly, guardians. . . . [This] is a true miracle, not some sailor's yarn. Ben-Gurion is no less than Enoch, and Moshe Dayan no less than Joab: these new guardians, each one with his own prophecies or—at least—clear vision, built a guardianship state in the land of Palestine and called to it all the Children of Israel, of whom two million live in New York and the other eight million in the rest of the world. And the most important aspect of the miracle is this: the guardianship state of Israel, with its two million and some inhabitants in that long and narrow land, like it or not, now governs and acts in the name of all the 12 million Jews scattered around the world.

If only one example will suffice, we can call to mind the Eichmann trial. Israeli agents captured him in South America, brought him to Israel, tried him, executed him, and even scattered his ashes at sea—and all this in the name of six million Jews who were slaughtered in the crematoria of a Europe leprous with fascism, before the establishment

of Israel, and on the basis of the policies of a regime whose name, customs, and laws the Germans themselves are ashamed to mention.

This I call a miracle: an event opposed to norm and custom, against international law and the precedent of governments that, even if they sought fit to fanatically assassinate Trotsky in Mexico with the blow of a terrorist's hammer, at least finished the job on the spot.

If only on account of that example, we cannot but consider Israel a guardianship state, and its leaders guardians: those who march onward in the name of something loftier than human rights declarations. You could say that the spirit of Yahweh is upon them and those prophecies . . . for as long as Moses had not murdered and had not fled to the wilderness, he did not have the brand of prophecy on his breast.

This is the first reason I call Israel a guardianship state.

POWER AND DANGER

Secondly, I do so in this sense: the present territory of Israel in no way resembles a country, if by country we refer to the commonly held conception, in other words, something on the order of a continent; the guardianship state of Israel is a small span of earth, approximately the size of the province of Saveh in Iran, less than 8,000 square miles. And how inhospitable! If Moses, peace be upon him, knew to what a rocky place he was leading his people, if he could fathom what a shallow joke the river Jordan is compared to the Nile, he would never have called it the Promised Land and would not have brought the people for all those years through suffering and hardship.

But in the modern world, numbered among tiny, so-called reputable countries such as Switzerland and Denmark, Iceland and Qatar, Kuwait and the Principality of Monaco, for us who are a part of the East, this same narrow territory of Israel lies in our arm's reach, like a fist on the table of the Fertile Crescent; it is a source of power and also—on that very account—a source of danger.

Its power or danger depends on your perspective on the world. If your viewpoint is that of the Arab politicians, Israel is a source of danger, preventing the unification of the Islamic Caliphate of which, after the downfall of the Ottoman Empire, so many people have dreamed. But if you look with the eyes of an Easterner like me, devoid of fanaticism and hyperbole and resentment, worrying for the future of an East of which one end is Tel Aviv and the other Tokyo, and

knowing that this same East is the grounds of the future events and the hope of a world tired of the West and Westoxification—in the eyes of this Easterner, Israel, with all its faults and all the contradictions concealed in it, is a base of power, a first step, the herald of a future not too far off.

In these two senses I call Israel a guardianship state [and] I will attempt to retell what I came to know of it, not for publicity, nor as payback for free lunches that I have eaten there; not for the purpose of providing advice to Iran on its two-faced policy regarding Israel, nor to vex the Arabs. . . . Rather, my goal is only that you come to know the disposition, the words, and the "yes, buts" of a penman from this corner of the world—and a Persian speaker—faced with the reality of the Children of Israel's new country in this corner of the East.

But for transparency's sake . . . I will say that leaving aside tradition and myth and the years of promises and threats, leaving aside what happened before Israel's establishment as a state—all of which is historians' work—from my perspective as an Easterner, the current government of Israel, on the one hand, is the sure bridgehead of Western capitalism, which reappeared in the East in a different form and in other garb following World War II. I have grounds for debate with this aspect of Israel. And, on the other hand, Israel is a coarsely realized indemnity for the fascists' sins in Dachau, Buchenwald, and the other death camps during the war. Pay close attention: that is the West's sin and I, an Easterner, am paying the price. Western man exported the capital for this indemnity, whereas I in the East provided the land: I lack no opinions on this issue as well. To put it plainly, Israel is the curtain Christianity drew between itself and the world of Islam in order to prevent me from seeing the real danger; this is exactly what drives the Arabs to distraction.

In the eyes of this Easterner, Israel, with all its faults, is a base of power, a first step, the herald of a future not too far off.

I also have grounds for debate with the Arabs. It is true that the Palestinian refugees, like a ball chasing the Arab politicians' bat, have with time become accustomed to parasitism. But pay close attention: for more than 10 years these same Palestinian refugees have been paying the penance for someone else's sin in that hellish cauldron. From the bones of the Ottoman Empire this last piece—this Palestine—that

was set aside as a sweet morsel sits like a mace on the table spread between the Persian Gulf and the River Nile. Or is it perhaps like a scarecrow, keeping anyone from extending a hand or foot beyond his own plate?

I will even go a little further: if one day the country of Israel vanishes, who will Arab leaders blame for being the only barrier to Arab unification? Is it not, rather, that the very existence of Israel, and the fear that it has instilled in the Arab heart, is the cause of the modest unity and internal concord of the border guards on this side of the world?

LEARN FROM ISRAEL

Another point is this: in the Jewish spectacle of martyrdom, the memorialization of the war's murdered and gone, I see the other side of the coin of fascism and a dependence on the racism which replaced it. But I also say this: if you must be a base, learn from Israel and the high price it has charged! If you are forced to marry one of your distant neighbors, then follow their example! And if your lot is to play the game of democracy, and that too in a land which, as long as there was God, was crushed under the boots of the pharaohs of earth and heaven . . . again, learn from Israel. In any case, for me as an Easterner, Israel is the best of all exemplars of how to deal with the West, how with the spiritual force of martyrdom we can milk its industry, demand and take reparations from it and invest its capital in national development, all for the price of a few short days of political dependence, so that we can solidify our new enterprise.

And this is the last point: the Persian-speaking Easterner in particular considers the Jews in a historical perspective. During the ancient reigns of Darius and Xerxes, it was I who sat Esther on the throne, appointed Mordechai to the chancellery, and ordered the rebuilding of the Temple. And although now and then, in the markets and alleys of Ray and Nishapur [in Iran], at a governor's instigation or for a commander's profit, I have leapt into Jew-killing, nevertheless the tomb of Daniel the Prophet in Susa still performs miracles, and the graves of Mordechai and Esther in Hamadan are no less holy than the shrine of a saint of pure lineage from the Prophet. But leave off laying those obligations and the load of foolish self-satisfaction on the shoulder of God's people. It is enough for me that this very Daniel the Prophet was once my chancellor and I don't care who was his king.

JALAL AL-E AHMAD

Moscow and the Mosque

Co-opting Muslims in Putin's Russia

Robert D. Crews

If Russians were holding their breath in the run-up to the 2014 Winter Olympics, it was with good reason. A Black Sea spa town long favored by Kremlin apparatchiks, Sochi occupies a perilous position on Russia's southern frontier, just 50 miles west of the North Caucasus Federal District, a cauldron of ethnic strife, nationalist separatism, and state repression since the collapse of the Soviet Union. In the last two years alone, violence in this vast mountainous region, including car bombings, assassinations, and clashes between Muslim fighters and Russian security forces, has killed or injured more than 1,500 people.

Islamist militants in the North Caucasus have been making more frequent appeals to Russia's other Muslims to rise up and join their cause. Last summer, Doku Umarov, an underground commander who claims control over a phantom Caucasus emirate, called on mujahideen in Tatarstan and Bashkortostan—two faraway autonomous republics about 400 miles and 700 miles east of Moscow, respectively—to "spoil" Russian President Vladimir Putin's plans to stage the Olympics in Sochi atop "the bones of our ancestors."

But Umarov's attempts to provoke a Muslim uprising across Russia against Putin's government have accomplished little. The Caucasus remains an outlier among Russia's Muslim-majority territories, which, rather than radical redoubts, are stable, well-integrated, and relatively prosperous regions. Most Muslims in the bulk of the Russian Federation hardly ever express sympathy for their brethren in the restive North Caucasus, and historically, they have shown more interest in accommodating the state than resisting it.

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The key question today, however, is how the Kremlin will continue to manage its varied Muslim population and whether it can maintain the allegiances of such a diverse group. The Putin government has worked especially hard to co-opt Muslims for its own political goals, both foreign and domestic. Finding an end to the war in the North Caucasus is one piece of the puzzle. In other regions, stability will depend more on whether Moscow keeps trying to control how Russia's Muslim citizens interpret Islamic tradition by mandating which religious authorities and practices are sufficiently patriotic and compatible with the state.

Muslims in Russia have increasingly embraced different and competing religious orientations. Government interference in the debates among disparate Muslim communities runs the risk of alienating those who opt for ways of being Muslim that, although perfectly peaceful, conflict with official understandings of Islam. Putting a straitjacket on Islamic interpretation, even if done with the support of one camp of Muslim authorities over another, will not resolve the many policy challenges related to Islam that Russia faces. Instead, the Kremlin will have to accommodate greater pluralism in an ever-changing Islamic landscape.

CONTESTING THE CENSUS

Russia's Muslims defy easy categorization. Even their demographic profile is the subject of intense dispute. Today, the government, journalists, and civil rights organizations estimate the total population to be some 20 million, or 14 percent of Russia's overall population of 143 million. That figure would make Russian Muslims not just the second-largest religious group in the country but also the largest Muslim population in all of Europe. Yet the most recent census, in 2010, which asked only for "nationality," not religious affiliation, suggested that the country has closer to 13 million Muslims, or roughly nine percent of the population.

This smaller figure is the product of only counting members of ethnic groups that have historically identified with Islam, such as the Azeris, the Bashkirs, the Chechens, the Kazakhs, and the Tatars, and listing them all as Muslims. Many Muslim leaders claim that the lower count represents an effort to undermine their political clout, since it fails to reflect Russians' actual religious affiliations. Despite the official census numbers, even Russian politicians close to Putin, and others from the ethnic republics, regularly invoke the higher figure of 20 million. They do so to make Russia's claim on membership in the Islamic world look more credible and to pander to their bases in order to secure Muslim electoral support.

Russia's federal system, inherited from the Soviets, compounds the uncertainty by giving local ethnicities an incentive to overcount their numbers. Take Tatarstan. In the early Soviet period, Lenin and Stalin (an ethnic Georgian) created it and other similar republics as a concession to ethnic nationalism and to rebuff ethnic Russian domination. Today, elites there and elsewhere cling to power by claiming to represent the interests of their self-described nations. But in Tatarstan and other republics, it has always been hard to maintain indigenous majorities, given the large Russian populations and constant emigration; Tatars today officially make up only 53 percent of a population of 3.8 million. Muslim activists and local elites have been accused of pressuring pollsters to manipulate the census and increase the count of Muslim groups.

A similar tussle takes place in Moscow, which is officially home to 300,000 Muslims of varied ethnicities, out of a total population of between 12 million and 17 million people. Yet the census tells only part of the story. Another two million Muslims live there without registration papers, and some observers claim that two million more Muslim migrants work in the city. Most of these Muslims have come to Moscow to escape woeful economic conditions in their home countries, such as Azerbaijan, Tajikistan, and Uzbekistan. But their temporary and often undocumented status makes them vulnerable to police harassment, exploitation, and racist violence—all factors that undermine the government's attempts to project tolerance.

The distorted census figures, police intimidation, and bigotry lump all of Russia's Muslims together into a single group, even though they are in fact a varied lot spread across the country. In places such as Tatarstan, Muslims make up the elites, but in Moscow, most occupy the lowest ranks of the labor force. Although the Russian federal system gives Russian Muslims considerable political influence, government policies, including well-documented cases of police harassment and raids of homes and businesses, marginalize Muslim immigrants, who remain invisible to census takers yet appear highly visible to Muscovites anxious about Muslim immigration.

BEYOND CHECHNYA

This anxiety is fed by Moscow's long confrontation with Chechen separatists, a conflict that, as it has spread throughout the North Caucasus as a wider Islamist-led insurgency, has fused radicalism and Islam in the minds of the Russian public. As the Volgograd bombings

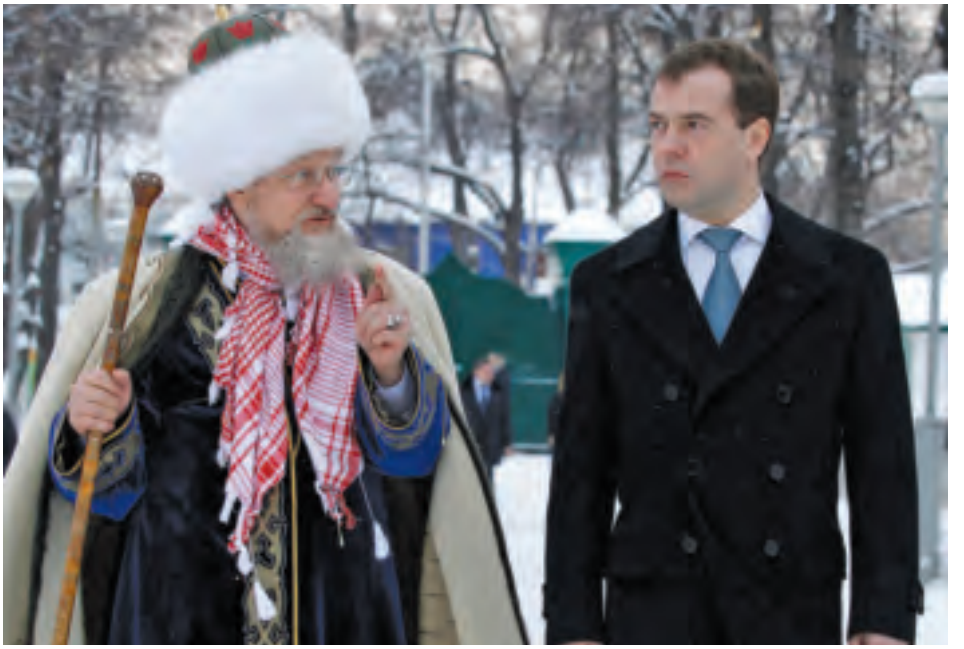
last December showed, militants from the North Caucasus have taken their fight against the government to Russian territory beyond their home region. Yet the government has also capitalized on this fear.

Russia's security agencies fabricate militants where none exist and accuse local Muslims of extremist ties on the basis of evidence that often hardly goes beyond one's style of beard or dress. Frequently aided by Muslim clerics close to the state, officials like to blame violence on "Wahhabis," Muslims who have ostensibly adopted Saudi Arabia's controversial version of Islam. But the government, the media, and the courts tend to apply the label liberally. They call nonconformists Wahhabis to reinforce the authority of state-backed Muslim clerics, who oppose religious styles that the government deems alien to Russian Islam. Such stigmatized groups include Tablighi Jamaat, the world's largest Muslim proselytizing organization, which has an underground presence in various Russian cities today, and Hizb ut-Tahrir, a pan-Islamic organization that seeks to create a transnational caliphate.

At times, the security agencies have contributed to the extremist threat in more direct ways. Both Putin during his first term as president and his predecessor, Boris Yeltsin, used the wars that began in Chechnya in the late 1990s to boost their popularity and to justify an array of authoritarian security measures. As a result of their manipulations, many Russians suspect, with good reason, that the Federal Security Service had a hand in a number of major terrorist attacks that rocked Russia a decade ago, including a series of apartment bombings across the country in 1999 and the Dubrovka Theater crisis in 2002 (in which 40 Chechen militants and some 130 hostages were killed).

Moscow likes to portray violence in the North Caucasus as linked to Islamic insurgencies outside Russia. After the Kremlin launched the second war in Chechnya, in 1999, some Muslim fighters did start to wage a campaign to create a pan-Islamic emirate on Russian soil. But such utopian schemers were responsible for only some of the region's overall instability. For the most part, armed groups in the Caucasus were engaging in highly localized struggles for power, in which religion was only one of several motivating forces. Often, so-called extremist fighters have been more interested in criminal profit or revenge against government brutality than in Islamist causes.

The truth is, despite the government's hype and provocations, most Russian Muslims remain firmly attached to their country and its institutions. Elements of transnational Islam may be growing in appeal—



Moscow's mufti: Talgat Tadzhuddin and Dmitry Medvedev, February 2011

REUTERS / RIA NOVOSTI

Russian Muslims can now shop for the latest international Islamic fashions at specialized stores and attend the annual Moscow Halal Expo—but that does not betray a fundamental shift in loyalty or outlook.

And most Russian Muslims remain indifferent to the blandishments of foreign missionaries. Like other communities in Russia, Muslims have used the freedoms they have won since the demise of communism and atheism to rediscover their religion. But they have mostly rejected offers made by Turkish missionaries, the Saudi government, or other foreigners to replace the Communist Party of the Soviet era with new religious tutors from abroad (notwithstanding Russian Salafists, a deeply conservative cohort that has intellectual ties to Saudi Arabia and that advocates living lives strictly modeled on those of the early companions of the Prophet Muhammad). Outside the North Caucasus republic of Dagestan, which has the closest ties to Arab educational institutions, Russian Muslims have focused on establishing their own religious schools. And in this effort, at least, Muslims have enjoyed the firm support of the state, which has accorded Islam the privileged status of a "traditional" Russian faith. Although formally a secular state, Russia favors the Orthodox Church, but officials also pledge to protect Islam, Buddhism, and even Judaism from foreign influence. In practice, this means lending support to those religious authorities

who are willing to work closely with the state to promote patriotism among the faithful.

CATHERINE THE GREAT'S EXAMPLE

The state's backing of a version of Islam it finds palatable was on display last October, when Russian officials and Islamic scholars in Ufa, the capital of the republic of Bashkortostan, celebrated the 225th anniversary of the Central Ecclesiastical Administration of the Muslims of Russia, an institution created under Catherine the Great to bring Islam under the direction of the state. During Catherine's rule (1762–96), Russian Muslims gained official recognition for their clerics and mosques. Her government even endorsed Islamic laws in relation to marriage, the family, and public morality. Mullahs and mosque community members frequently turned to the tsarist police to denounce neighbors who committed adultery or failed to attend prayers. Islam became a pillar of a conservative imperial order.

In exchange, Islamic authorities were expected to teach their followers that being a good Muslim meant being loyal to the state—then as now, official tolerance came with strings attached. As in the past, today many Muslim clerics also preach against social ills, although now they include alcohol and narcotics. A number of them also focus on foreign policy, echoing the Kremlin's vision of an alliance among Muslim countries and of Russia as a counterweight to a hegemonic United States.

At the ceremony in Ufa, Putin declared Islam to be "a striking element of the Russian cultural code, an inalienable, organic part of Russian history" and praised the institution for having helped make Muslims "true patriots of our country." But he warned that "certain political forces" were seeking "to use Islam or, more precisely, its radical currents" to weaken the state. Russian Muslims, Putin added, "have always been united in serving society and their state, defending it from external enemies as well as from any manifestations of extremism." He called on the assembled clerics to be "louder" in forging unity and harmony within Russia and in the Muslim world at large, to help integrate migrant laborers, and to strengthen Islamic institutions with a distinctively Russian Muslim theology so as to marginalize "informal leaders" whose spurious teachings threaten the country.

Putin's remarks underscored how Muslims and Russian officialdom have always been engaged in a dialogue about how to police Islam, albeit

Which way is Moscow? Prayers at a mosque in Derbent, Russia, September 2007

REUTERS / THOMAS PETER

one in which the state has ultimately had the final say. And sure enough, Talgat Tadzhuddin, the 65-year-old leader of the Central Ecclesiastical Administration, responded enthusiastically to Putin's instructions. Reiterating Putin's reference to Muslims' historic service in defense of the state, the senior mufti noted that his institution was doing everything possible to preserve "traditional Islam" by blocking "the propaganda of totalitarian sects and radical currents in our communities."

PUTIN'S GAMBLE

Although such exchanges represent an attempt by Putin to maintain the state's tradition of control, they also highlight a dilemma for him, since Russian Muslims do not speak with one voice. Tadzhuddin may have stressed cooperation, but he has a rival: Ravil Gainutdin, the 54-year-old head of the Council of Muftis of Russia, a body of clerics that has competed with the Central Ecclesiastical Administration to act as Russia's authoritative representative of Islam. Gainutdin did not relish Tadzhuddin's time in the spotlight with Putin and only made a fleeting appearance at the ceremonies in Ufa. The two Muslim leaders have been battling for years over control of Russia's Muslim institutions, including numerous regional clerical bodies and schools, in a struggle for prestige, financial resources, and access to state patronage.

Tadzhuddin interpreted the anniversary celebration as an endorsement of his call to unite some 80 regional Islamic organizations in the country under his authority. Gainutdin, for his part, faults Tadzhuddin for supporting a local court's decision to ban a new translation of the Koran, a ruling that has outraged many Muslim campaigners for civil rights. The danger for Putin is that tapping Tadzhuddin as the official voice of Russian Islam may not only compromise Tadzhuddin's standing in the eyes of his followers. It could also endanger the Kremlin's friendly relationship with Gainutdin's organization and lend weight to those Muslim critics who see persecution as being on the rise. In Tadzhuddin, Putin may be betting on a lame horse.

Such power struggles are playing out throughout Russia today, with mosque leaders challenging one another for supremacy, hurling charges of extremism and heresy, and appealing to state censors and the police to intervene. In a recent case, Seidzhagfar Lutfullin, an imam from Tatarstan who organized a boycott of an Elton John concert in the republic's capital city late last year, raised the alarm that two of his opponents were disseminating "extremist" views associated with Hizb ut-Tahrir. They were promptly convicted and sentenced to jail.

Such polemic labels mask more subtle and profound debates about what it means to be a Muslim in Russia today. For the past two decades, the quest for an authentic Islam in a post-Soviet world has yielded multiple answers—and deep disagreements. Many Tatars, for example, have embraced the view that they practice an Islam that is a kind of ethnic inheritance, complete with religious leaders whose authority should be reinforced by the government. They see this interpretation as inseparable from their distinctive Tatar identity. But this school of thought quickly brands those who question its precepts as Wahhabis or extremists.

More secular Tatar intellectuals look west to argue that Islam calls for reform along the lines of what is practiced in Europe. Islam, they say, should be compatible with contemporary notions of progress and women's rights. In their view, Muslims should have broad leeway in deciding which Islamic legal norms have outlived their time.

But both the Tatars' ethnic and government-sanctioned conceptions of Islam and their more secular, cosmopolitan beliefs are anathema to Russia's Salafists, who renounce such mainstream interpretations. Largely apolitical and distributed in small pockets throughout the country, the Salafists stand out the most among Russia's Muslims, not

only with their distinctive beards and dress but also because they pose such a bold intellectual challenge to the status quo.

Despite the recent rise of the Salafists, who have drawn inspiration from Saudi Arabian and other sources, it would be misguided to see them as the future of Russian Islam. In Bashkortostan and Tatarstan, Moscow and St. Petersburg, and elsewhere across Russia, all kinds of Sunni and Shiite groups are mixing in new ways, often through immigration from former Soviet republics to the south. For example, even though Salafists reject Sufis (who hold a more mystical interpretation of Islam) and their veneration of saints and shrines, the two groups still meet on the job at construction sites and markets and in Moscow's overflowing mosques. And both groups pray alongside the sycophants of the state-backed Islamic hierarchies and alongside those who call for civil society, not the state, to organize Muslim affairs.

Muslims and Russian officialdom have always been engaged in a dialogue about how to police Islam.

For all the emerging pluralism, dissent, and rediscovery of Islam in Russia, it would be a mistake to either exaggerate the scale of this religious revival or equate it with militancy. A 2010 poll by the respected Russian Public Opinion Research Center found Muslims to be generally less enthusiastic about religious holidays, literature, and rites than Orthodox Christians are. In Tatarstan, a 2012 survey revealed that only six percent of Muslims there identified themselves as "deeply religious," with another 17 percent admitting to being "doubtful," if still Muslim at all. Although Muslim women in Tatarstan have practiced various kinds of veiling since the early 1990s, only seven percent of them wear the hijab.

If militancy is bred in war zones such as the Caucasus, Tatarstan has little reason to worry. With its lucrative oil industry, solid agricultural base, and strong manufacturing sector, Tatarstan ranked fourth among Russian regions for quality of life in a recent poll, after Moscow, St. Petersburg, and the greater Moscow area. Respondents who expressed the most fervent religious devotion were not the angry young men that Russian and Western journalists tend to caricature: they were instead female pensioners in the countryside. A starker contrast could not be drawn with the war-scarred republics of Chechnya and Ingushetia, where, in addition to there being ubiquitous violence,

at least one-third of the population is unemployed and despair and anxiety reign.

KREMLIN CONTRADICTIONS

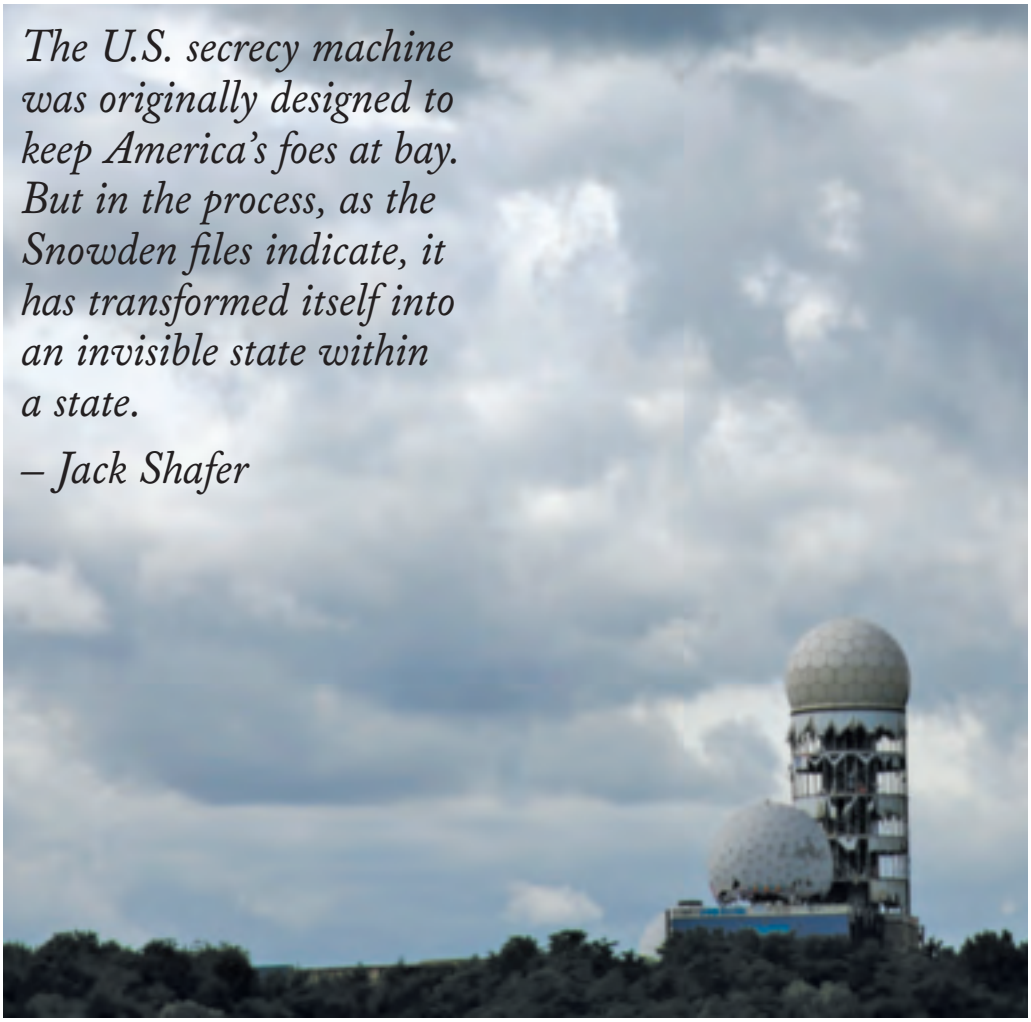
With its mix of cultivating religious allies, repressing others, and perpetuating an image of vast Islamic unrest emanating from the Caucasus, the Kremlin's approach to Islam is contradictory. The government works hard to highlight its distinctive mode of toleration, but by colluding with its handpicked intermediaries, it risks making new enemies. It proclaims Islam to be a traditional Russian religion, defended by the state, but stokes fear among non-Muslims of certain interpretations of Islam and brands entire regions with the label of Islamic militancy.

Moscow deals with all religious groups in Russia, including Orthodox Christians, in a similar way: by attempting to co-opt them. It takes only one state-backed voice to make an alleged deviation from religious orthodoxy a crime, whether that authority is from the Orthodox priesthood or a Muslim cleric loyal to and cultivated by the Kremlin. The state's support of one interpretation of a religion may prompt the persecution of those who adhere to another interpretation.

But the government's selective promotion of Islam corresponds with Putin's foreign policy goals. Putin's affirmation of Islam's historical ties to Russia, together with then President Dmitry Medvedev's 2009 declaration in Cairo (which Putin repeated in Ufa) that Russia was an "organic part" of the Muslim world, has framed Moscow's quest to restore its great-power status in Asia and the Middle East. Such pronouncements also represent an answer, however muted, to the growing domestic chorus of xenophobic and racist invective that populist politicians and right-wing organizations direct against Russia's immigrants.

Uncomfortable with the pluralism and variety of Islamic practice in Russia, the Putin government has gambled that it has picked the right interpreters of Islam. But in doing so, it has lost those Muslims who find collusion between Muslim authorities and the government distasteful. Ultimately, Russian Muslims themselves will decide who has the authority to speak in their names, no matter Putin's attempts to arbitrate religious relations with the state.

REVIEWS & RESPONSES



The U.S. secrecy machine was originally designed to keep America's foes at bay. But in the process, as the Snowden files indicate, it has transformed itself into an invisible state within a state.

– Jack Shafer

REUTERS / PAWEL KOPCZYNSKI

Live and Let Leak

State Secrets in the Snowden Era

Jack Shafer

Secrets and Leaks: The Dilemma of State Secrecy
BY RAHUL SAGAR. Princeton University Press, 2013, 304 pp. $35.00.

The U.S. government commands few capabilities more potent than its power to declare information secret. Even when the judiciary and Congress exercise their checks-and-balances powers over the executive branch, the American secrecy machine still finds a way to shunt aside substantive discussions about a host of programs and policies.

With little or no public input, the U.S. government has kidnapped suspected terrorists, established secret prisons, performed "enhanced" interrogations, tortured prisoners, and carried out targeted killings. After the former National Security Agency contractor Edward Snowden pilfered hundreds of thousands of documents from the NSA's computers and released them to journalists last summer, the public learned of additional and potentially dodgy secret government programs: warrantless wiretaps, the weakening of public encryption software, the collection and warehousing of metadata from phones and e-mail accounts, and the interception of raw Internet communications.

The secrecy machine was originally designed to keep the United States' foes at bay. But in the process, it has transformed itself into an invisible state within a state. Forever discovering new frontiers to patrol, as the Snowden files indicate, the machine molts its skin each season to grow ever larger and more powerful, encountering little resistance from the courts or Congress.

In his new book, *Secrets and Leaks*, the Princeton political scientist Rahul Sagar ably documents this growth in secrecy and the problems it poses, excavating from his thorough research a concise history of concealment and revelation from the Revolutionary War to the present. Atop this scholarship, he adds legal analysis and an attempt to map a regulatory framework that will keep the country secure, make the government accountable, and still preserve Americans' civil liberties. Yet in overestimating the damage leaks cause and underestimating how hard it will be to stop them, Sagar arrives at recommendations that are ultimately too impractical and too restrictive.

SWORN TO SECRECY

Sagar asks, when is it legitimate for an official to disclose secrets? His answer is both conventional and brave—because he must know how many readers will find examples that call his reasoning into question. Unauthorized disclosures of classified material should remain illegal, he writes, because no one official can know with any certainty which disclosures will ultimately serve the public interest. Having made the case

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for keeping the laws against leaking secrets intact, Sagar then sets five conditions a disclosure must meet before officials can disregard the laws: the disclosure must reveal real wrongdoing or the abuse of public authority, it must be based on evidence rather than hearsay, it must not threaten public safety disproportionately, it must be limited in scale and scope as much as possible, and the leaker must unmask himself and take his lumps to prove that he made the disclosure in good faith and not to gain advantage for himself or his allies.

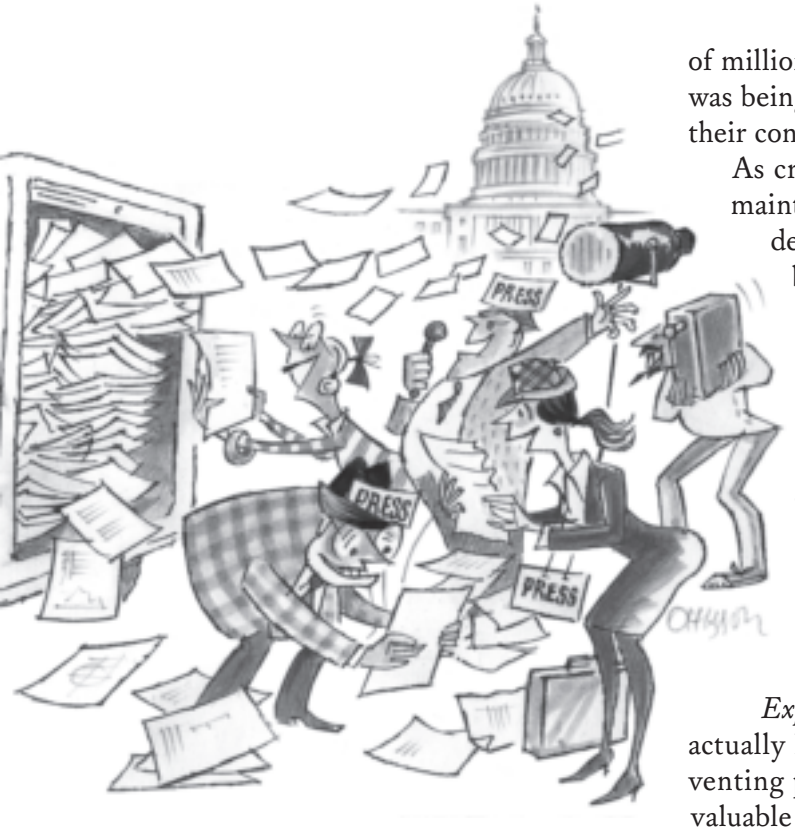
The Snowden affair happened too late for Sagar to include it in *Secrets and Leaks* beyond a throwaway footnote, but it makes for an obvious and interesting test of Sagar's framework. Snowden's unilateral disclosures do not come close to clearing Sagar's standard for legalization: as an NSA worker bee, Snowden was in no position to balance the public-interest repercussions of his acts. Nor do they clear Sagar's first condition for justifiability: although the mass surveillance Snowden revealed may have come as a disconcerting shock to many of his fellow citizens, it might not have been illegal.

As James Clapper, the director of national intelligence, reiterated in late October, "We believe we have been lawful." Given what the applicable laws say and the way they have been secretly interpreted and executed (quite liberally), Clapper might very well be right. The NSA's surreptitious collection, storage, and analysis of terabytes of personal data was sanctioned by the president, the members of Congress charged with oversight, and the Foreign Intelligence Surveillance Court, a special court established in 1978 to field warrants from the NSA and the FBI. The NSA's surveillance program may be wrong and repugnant to the values enshrined in the Fourth Amendment, which bars unreasonable search and seizure, but it cannot be called wrongdoing or an abuse of power. It is not in the same galaxy as, say, President Richard Nixon's domestic surveillance programs or the Watergate break-ins, which Nixon tried to pass off as part of a national security operation.

Snowden's leaks easily clear Sagar's second condition: you can't call hundreds of thousands of copies of secret NSA documents hearsay. But Sagar's third condition for legitimate leaking—that a disclosure not threaten public safety disproportionately—is so vague that it vaporizes on the page as you read it. That criticism won't surprise Sagar, who seeks a good, not a perfect, regulatory framework for controlling leaks. As he concedes, measuring the threat to public safety has historically been a crapshoot: he cites the 1979 case in which the U.S. government obtained a temporary restraining order to prevent the left-wing magazine *The Progressive* from publishing an article that detailed a design for a hydrogen bomb. (The magazine's recipe was concocted from public and declassified sources, but under the Atomic Energy Act of 1946, such information was deemed "born secret.") In his ruling, Judge Robert Warren found that *The Progressive*'s article, if published, "would irreparably harm the national security of the United States." But the case became a moot issue after another publication printed similar information. Needless to say, Warren's prediction of irreparable harm never materialized.

The government issued similar dire warnings in 1971, when Erwin Griswold, the solicitor general, argued the Pentagon Papers case before the Supreme Court. Leaked by the military analyst Daniel Ellsberg, the papers detailed the U.S. government's covert escalation of the war in Vietnam. Their publication, Griswold insisted, would deeply harm national security. But in 1989, he recanted that claim in a *Washington Post* op-ed. "I have never seen any trace of a threat to the national security from the publication," he wrote. "Indeed, I have never seen it even suggested that there was such an actual threat." Griswold still defended limited classification powers that would protect military plans as they are being made, negotiations with foreign governments, and details about weapons, but no more. "It quickly becomes apparent to any person who has considerable experience with classified material that there is massive over-classification and that the principal concern of the classifiers is not with national security, but rather with governmental embarrassment of one sort or another," he wrote.

If neither the publication of H-bomb secrets nor the release of the Pentagon Papers irreparably harmed national security, then what secrets gone feral will? Clearly, such secrets exist. The leaking of troop placements, battle plans, communications codes, the status of the nation's code-cracking efforts, the capabilities of some weapons systems, or details about ongoing military operations can damage national security and even result in the deaths of U.S. military personnel. But springing those sorts of secrets is of more interest to spies and



hostile foreign nations than to whistleblowers and the press.

As for the valid criticism that Snowden blunted the surveillance cutlery the NSA uses to cut into al Qaeda's communications by exposing the agency's methods, without a doubt, the leaks have taught terrorist organizations new techniques of surveillance avoidance. But that criticism doesn't land a knockout blow: according to the White House review panel convened last year to examine the NSA's surveillance practices, the bulk collection of phone records has stopped precisely zero attacks. "There has been no instance in which NSA could say with confidence that the outcome would have been different" had the metadata-collection program not existed, its report states in a footnote. So yes, Snowden gave the terrorists something, but he gave much, much more to the hundreds of millions of Americans whose data was being collected and stored without their consent.

As critics of overclassification maintain, most of the real estate devoted to state secrets is occupied by the mundane, the innocuous, and the obvious. U.S. drone strikes against suspected terrorist targets, common knowledge to all news consumers, were technically secret until President Barack Obama finally acknowledged the program in April 2012. In fact, as Senator Daniel Patrick Moynihan argued in his 1998 book, *Secrecy: The American Experience*, excessive secrecy can actually harm national security by preventing policymakers from learning valuable information required to make informed decisions. He gave the example of President Harry Truman, whom the U.S. Army and the FBI did not inform of the "Venona decryptions," intercepted communications documenting ongoing Soviet espionage in the United States, because they thought his White House was too leaky.

On condition four, that a disclosure be as limited in scale as possible, Snowden strikes out there, too, but primarily in terms of the volume of secrets stolen (since only a small portion of those have been publicly disseminated so far). According to Alan Rusbridger, the editor of *The Guardian*, his newspaper has published only one percent of the 58,000 files it obtained from Snowden. And on condition five, although Snowden has unmasked himself, his actions can hardly be characterized as civil disobedience, considering that he ran away to

Russia rather than submit himself for judgment and possible punishment within the system.

That the Snowden leaks fare so poorly according to Sagar's criteria, however, shows just how restrictive and establishmentarian Sagar's framework actually is and why a less rigid regulatory setup than Sagar proposes is desirable. After all, in December, a federal judge declared some of the practices that Snowden exposed to be unconstitutional, and nearly half the members of the House of Representatives have gone on record with what amounts to a soft endorsement of Snowden's revelations by voting for a bill defunding some of the activities revealed.

Sagar's framework has problems handling not just venti-sized leaks such as Snowden's but tall ones, too. Elected officials will continue to exploit the pent-up power contained in minor secrets by trickling them out to the press because they know prosecutors will not charge them and their colleagues will not censure them. Indeed, such secrets exist in ever-growing surplus. The most recent government report finds that more than 95 million "derivative classification decisions" were made in FY 2012—a derivative classification being a document, correspondence, or publication that is classified because it contains or paraphrases information previously classified. Given that 1.4 million individuals, including 483,000 contractors like Snowden, currently hold top-secret clearance over this giant aquifer of secrets, Americans should be grateful there isn't more leaking.

The routinization of leaking should be apparent to anybody who reads newspapers. Nearly every day, reporters grant anonymity to "current and former government officials" (as the telling passage usually goes), who then spill government secrets with permission from their superiors. The meat on many authorized disclosures is no less sacrosanct than the meat on unauthorized disclosures, but because these leaks serve the state's interests, they are tolerated. Government officials have been passing secrets to reporters in hopes of advancing the state's interests or to protect other, more important secrets since before the national security beat was invented. They do so "not to subvert policy but to explain it, to defend it and to execute it," as Steven Aftergood, the director of the Project on Government Secrecy at the Federation of American Scientists, has written. "Though it may seem counterintuitive (and may in fact violate formal procedures)," he adds, "sometimes officials will even reveal currently classified information to enhance security."

THE LEAKY CAULDRON

If Sagar's proposal for regulating leaking is not the right solution, then what is? Nobody is naive enough to believe that the spooks can police themselves: as Ryan Lizza put it in *The New Yorker* in December, "The history of the intelligence community . . . reveals a willingness to violate the spirit and the letter of the law, even with oversight." Sagar devotes a chapter to why the regulation of secrecy can't be turned over to the courts—they lack the expertise and the training to parse secrets, and they are supposed to be open institutions, doing their business in public. Nor can Americans expect Congress to do much better than the executive branch, he

argues in another entire chapter. Congress can serve as a watchdog, but there is no reason to think it "will behave any more responsibly than the president," especially when it knows that outsiders will not be able to second-guess its decisions.

That leaves whistleblowers and the press to hold the president accountable for his handling of secrets. Sagar shuns this option. Although he approves of leaks that prevent abuses of power, he believes (along with many others in and around government) that journalists lack the necessary understanding of the big picture to responsibly pass unauthorized disclosures on to the public.

I disagree (but then, as a journalist, I would), because from where I sit, it seems the press has actually been quite conscientious in this regard—for example, in its reporting on the files stolen by the army private now known as Chelsea Manning. In January 2011, my Reuters colleague Mark Hosenball, a national security reporter, cited internal U.S. government reviews that assert that the massive leaks of diplomatic cables by Manning "caused only limited damage to U.S. interests abroad" and "made public few if any real intelligence secrets." As with the publication of the Pentagon Papers, the leaks created more embarrassment than damage.

As for the Snowden leaks, it's too early for journalists and others to discount the damage they may have done to U.S. national security. But rare is the leaker whose output unites almost half the House of Representatives, as well as the top Internet companies—Google, Microsoft, Facebook, Apple, Twitter, LinkedIn, Yahoo, and AOL—which issued a joint statement in early

December protesting the government spying revealed by journalists working with Snowden.

At the end of his book, Sagar laments that the dilemma of state secrecy may not be solvable. But after reading his impeccable scholarship, a different, more plausible conclusion emerges: that there is no pressing dilemma or, rather, that the First Amendment has resolved the dilemma by giving freedom of the press primacy over secrecy laws. Yes, reporters can be compelled to surrender the identities of their confidential sources to the courts, but as Sagar observes, "no reporter, editor, or publisher has ever been prosecuted for publishing classified information." Even in cases in which journalists have disclosed communications intelligence, an explicit violation of federal law, prosecutors have still declined to file charges. According to Sagar, the press gets off easy because the government doesn't want to fight with the people who buy ink by the barrel or because it doesn't want to reveal additional secrets in court to make its case. More likely, however, it is because the government fears that should the First Amendment come into direct collision with secrecy laws, it will trump and weaken them.

Sagar finds despair in the eternal and "unruly contest" between the president and the press over secrecy. He'd like to see the press practice better "self-censorship," especially when leaks reveal kinds of law breaking that don't constitute genuine abuses of government power. But he promptly acknowledges the fragility of such self-censorship: leakers turned down by one publication are likely to continue to peddle their information until they find a taker. Presidents, he writes, could boost their own credibility and reduce the urge to leak by governing in a more open fashion, refraining from making self-serving leaks of their own, and abiding by the rule of law. But again, that sort of self-discipline does not come easy. The political advantages gained by dispensing official leaks are too enticing for most presidents. Even when presidents resist the temptation, other parts of the bureaucracy often plunder the growing stash of leaks for institutional gain.

Making secrets and managing them have always been a great source of political power, and the closer politicians get to this power, the more enamored of it they become. Case in point: as a member of the U.S. Senate, Obama co-sponsored or supported several failed measures that would have reduced the secrecy cloaking various NSA surveillance programs, as ProPublica detailed last summer. After becoming president, Obama quelled his reformist tendencies, and today, he's the custodian and protector of those programs.

"Where an excess of power prevails," to steal a phrase from James Madison, almost no leader can resist going too far in accomplishing his goals if the opportunity presents itself. And if you are the president of the United States, opportunity knocks loudly several times a day. The lesson of Snowden, a lesson Sagar points to but refuses to embrace, is that the United States' muddled system of leaks by lawbreakers to the press is an irreplaceable last resort.

How China and America See Each Other

And Why They Are on a Collision Course

Minxin Pei

Debating China: The U.S.-China Relationship in Ten Conversations
EDITED BY NINA HACHIGIAN.
Oxford University Press, 2014,
272 pp. $21.95.

It has become one of the most obvious clichés in international politics: the United States and China have the most important bilateral relationship in the world. What is not so obvious is the nature of that relationship. Until recently, most observers were willing to settle for an accurate but inelegant description: that the countries are neither friends nor foes.

At first glance, this designation seems reasonable. The United States and China are clearly not allies. They share no overriding security interests or political values, and their conceptions of world order fundamentally clash. Whereas Beijing looks forward to a post-American, multipolar world, Washington is trying to preserve the liberal order it leads even as its relative power wanes. Meanwhile, numerous issues in East Asia, such as tensions over Taiwan and disputes between Beijing and Tokyo, are causing U.S. and Chinese interests to collide more directly. Yet the two countries are not really adversaries, either. They do not see each other as implacable ideological or security threats. And the fact that their economies are so deeply intertwined makes both countries hell-bent on avoiding conflict.

But the world has changed a great deal since the "neither friends nor foes" label was first slapped on U.S.-Chinese relations two decades ago. The remarkable expansion of Chinese power and the global financial crisis that ravaged the economies of the United States and Europe have accentuated the sense that the West is declining and the rest are rising. The gap between U.S. and Chinese power, which was already narrowing before the financial crisis, has since closed further. In 2007, the United States' economy was four times as large as that of China; by 2012, it was only twice as large.

Any substantial shift in the balance of power between two countries is bound to change their attitudes and behavior toward each other. It should come as no surprise, then, that new strains have recently emerged in U.S.-Chinese relations. China has adopted a more assertive foreign policy since 2010, taking tough stances in territorial and maritime disputes with its neighbors. Its rapid military modernization program and cyberattacks have unsettled Americans and their East Asian allies. And Beijing has seen Washington's response to this new toughness—the so-called pivot to

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Asia—as a thinly disguised attempt to contain Chinese power.

Maintaining a reasonable grasp of the fluid U.S.-Chinese relationship is hard enough; an even tougher challenge is understanding the substantive disagreements between the two countries on the many issues critical to preserving stable ties. A new collection of essays edited by the political scientist Nina Hachigian attempts to accomplish both tasks. The idea behind *Debating China: The U.S.-China Relationship in Ten Conversations* is simple but clever: for each of ten conversations, it pairs one leading American expert on Asia with a Chinese counterpart to debate a specific bilateral issue. Hachigian moderates the series of conversations by framing the key questions the participants should address; the debaters exchange opinions and then, in a second round, focus on their disagreements. The result is a book that summarizes and scrutinizes each side's positions on everything from human rights to climate change. As a whole, the project is illuminating but disheartening; those optimistic about the future of U.S.-Chinese ties will find little to cheer in these pages.

RITES AND WRONGS

On some issues, the American and Chinese debaters share much common ground. They agree, for example, that the U.S.-Chinese relationship has become plagued by distrust, particularly as nationalism in China has surged. Remarkably, even some Chinese scholars acknowledge that many of the structural causes of friction will persist as long as China's domestic political system remains unchanged.

But sharp, even fundamental, differences emerge in the exchanges on China's military modernization, human rights, Taiwan, and regional security. The debaters see these issues from clashing perspectives and question each other's underlying premises. The Chinese scholar Zhou Qi insists that China does not see eye to eye with the West on human rights because the Confucian order is based on societal rites—"prescribed codes of ritual behavior"—rather than fundamental individual rights. Andrew Nathan, a Columbia University professor, flatly rejects this claim, saying it implies that there is a Chinese exceptionalism that exempts Beijing from complying with universal norms.

Without a doubt, the most revealing part of the book is the conversation on China's military modernization, which features two writers with irreconcilable differences: Xu Hui, a professor with the rank of senior colonel at China's National Defense University, and Christopher Twomey, who teaches at the Naval Postgraduate School. Over the last two decades, the People's Liberation Army has developed a range of new capabilities, including quiet attack submarines, mobile nuclear missiles, and advanced jetfighters. Twomey questions why China needs to expand its military so much when its security environment has improved. Today, China faces no threat of land invasion, and none of its neighbors comes close to matching Chinese power. Xu retorts that, by the same logic, the United States "should have given up on its military transformation a long time ago," since the Americans not only enjoy complete military technological superiority but also have no powerful neighbors to threaten them.

The debaters are divided not just by their philosophies: in some instances, they simply see the facts differently. The Chinese participants regularly dispute their counterparts' information or historical narratives, such as when Jia Qingguo, a Peking University professor, disagrees with Alan Romberg of the Stimson Center over whether Taiwan was ever actually an integral part of China. On some of the most sensitive issues, including Chinese territorial claims, the Chinese scholars tend to toe the Communist Party line, providing few insights into the motivations behind Chinese behavior.

One useful takeaway from the exchanges is that some bilateral disputes are more amenable to compromise than others. Judging from this book, Washington and Beijing should be able to overcome their differences on economic policy, climate change, and global responsibilities unrelated to security, since those issues are less poisoned by underlying distrust and each side has an interest in cooperation. But it is also painfully clear that other, deeper disagreements will play a larger role in determining the nature of the bilateral relationship—and that these disputes will remain unresolved for the foreseeable future. The United States and China should forget about trying to resolve their conflicts over China's military modernization, East Asian security, Taiwan, and political values and should instead find a way to manage them.

Indeed, the real value of *Debating China* is the extent to which it reveals that the U.S.-Chinese relationship is heading in an increasingly competitive direction. If the countries stay on their present course, the old neither-friends-nor-foes label will become irrelevant, and the most important bilateral relationship in the world will no longer be defined by engagement; it will be characterized by managed rivalry.

ASSUME AWAY

An explanation for this worrying trend can be found in the assumptions, arguments, and principles that the Chinese participants use in supporting their positions—and in the Americans' responses. The most basic assumption underlying the Chinese scholars' arguments for why Washington should change its Asia policy is that China is becoming more powerful. Many of the Chinese debaters mention the International Monetary Fund's widely cited estimate that the size of the Chinese economy will likely overtake that of the U.S. economy between 2020 and 2025. Pointing to this remarkable growth, Wu Xinbo, a professor at Fudan University, calls for an end to the "U.S.-centered Cold War structure" in East Asia. Yuan Peng, a leading Chinese scholar of U.S. foreign policy, suggests that because the rise of developing countries is upending the existing world order, China should seize the opportunity to "modify unreasonable international mechanisms . . . including international or regional organizations, regimes, and laws."

Not surprisingly, such arguments about a shifting balance of power and the inevitability of China's rise fail to convince the Americans. As they see it, the existing world order not only serves Chinese interests but also is capable of accommodating China's growing role and power. At the same time, some of them caution that there is nothing certain about China's future. As the

political scientist Kenneth Lieberthal argues, China's sustained economic development is far from guaranteed, given the constraints imposed on the country by demographics and the scarcity of resources.

Another revealing theme is each side's belief that many of the other side's actions and policies lack legitimacy. To the American writers, China's brash assertion of territorial claims, no-strings-attached assistance to resource-rich developing countries, and mercantilist trade policies undermine the liberal world order. But this criticism smacks of hypocrisy to the Chinese writers, who point out that Western countries, including the United States, were guilty of the same vices during their ascendance. They also argue that China's new assertiveness is perfectly appropriate for a great power. Moreover, they claim, the United States underwrites the global order not out of altruism but out of naked self-interest.

The revelation in *Debating China* that should worry Washington most is the degree to which its repeated insistence that the United States does not seek to contain China has fallen on deaf ears. As the Chinese writers make clear, both ordinary and elite Chinese believe that the United States will never willingly cede its global hegemony and allow China to become a great power in its own right. Wu bluntly states that "China doesn't like the United States' self-proclaimed leadership. . . . Beijing also suspects that Washington's intended role of balancer serves only to check a rising China, undermining its legitimate national interests in [East Asia]." The Americans respond to this sentiment with a mixture of incredulity and exasperation. They do not understand how Beijing can accuse Washington of trying to block China's ascent when the United States has opened its markets to China, trained hundreds of thousands of China's best and brightest at American universities, invested billions in Chinese manufacturing, and supported Beijing's accession to the World Trade Organization. They remind their Chinese colleagues repeatedly that there is no mainstream support in the United States for containing China. But the Chinese remain unconvinced and see any U.S. support for China as entirely self-interested.

THE REALIST'S DILEMMA

For the past three decades, U.S. policy toward China has rested on two assumptions, one based on liberalism and the other on realism. The first, liberal assumption is that as China integrates into the existing international order through trade and investment, it will inevitably, out of sheer self-interest, accept that order and take part in maintaining it. The second assumption, grounded in realism, is that until China becomes such a stakeholder (and even once it does), the United States ought to maintain the alliances and military might that allow it to deter and, if necessary, counter any Chinese actions that might threaten to undermine the existing world order.

The worrying dynamics on display in *Debating China* should tip the scales in favor of the realist view. The liberal assumption seemed more valid when China was relatively weak and lacked the ability to directly challenge the U.S.-led order. But what many liberals have overlooked is that China's current acquiescence in this order does not add

up to an endorsement of it. Given the incompatibilities between the defining characteristics of the international system (namely, openness and rule-governed behavior) and those of China's domestic regime (closed politics and the arbitrary exercise of power), it is doubtful that Chinese elites will ever view the Western order as legitimate, even if they concede its practical usefulness.

As a result, as China continues to grow stronger, it will seek either to modify the existing order or, if such an endeavor proves too risky or too costly, to construct a parallel order more to its liking. Such an order would not necessarily stand in direct conflict with the U.S.-led order, in the way that the Soviet bloc did, but it would have its own rules, exclude the West, and allow China to play a dominant role. Indeed, Beijing's investments in the Shanghai Cooperation Organization and the planned BRICS development bank (a joint financial institution to be established by Brazil, Russia, India, China, and South Africa) suggest that China is already moving down this path. China's controversial establishment last November of an air defense identification zone that overlaps with those of Japan and South Korea dramatically raised the risks of conflict with the United States and its allies. And it has further vindicated the realists' warning that China will not hesitate to challenge the Western order once it has the ability to do so.

The best American response to such behavior would be to continue its policy of strategic hedging—an approach, as explained by Michael Green of the Center for Strategic and International Studies, that backstops engagement by "shoring up relations with key maritime allies and partners and ensuring that states within the region are not easily intimidated by growing Chinese power." Strategic hedging can reassure China's neighbors and make Beijing think twice about advancing its interests through coercion. Meanwhile, liberalism offers no plausible alternative to such a policy, especially given how well versed in realism and balance-of-power tactics China's current leaders are. Of course, a policy of hedging, as typified by the pivot to Asia, will only confirm Beijing's long-held suspicion that Washington's liberal rhetoric masks a hard-nosed determination to perpetuate U.S. dominance.

But that is a price the United States must be prepared to pay. Until now, U.S. policymakers have relied on a two-pronged approach of hedging and engagement, drawing on both realist and liberal ideas about China. But as Chinese power continues to grow, maintaining such a balance will become harder than ever.

The First Cold War

The Environmental Lessons of the Little Ice Age

Deborah R. Coen

Global Crisis: War, Climate Change, and Catastrophe in the Seventeenth Century
BY GEOFFREY PARKER. Yale University Press, 2013, 904 pp. $40.00.

Reflecting on the "misery and misfortune" he had witnessed during the Thirty Years' War, Caspar Preis, a German farmer, was sure that "no one living in a better age would believe it." From 1618 to 1648, the population of Germany fell by as much as 40 percent. Roughly four million people were killed in the wars between Catholic and Protestant princes; many others died of starvation or disease; still others fled their homes in search of safety. The misery was worst in the 1640s, when summer frosts and storms wiped out crops and soldiers nearly froze to death. Towns were ruined, currencies depreciated, and people made meals of grass. As Denmark, Sweden, and France were drawn into the conflict, it looked as if all of Europe had fallen into civil war. Indeed, wars and revolutions were spreading chaos well beyond the view of a German peasant, throughout the British Isles and Russia, even in far-away China and the lands of the Ottoman Empire.

Historians have long debated whether these widespread upheavals were simply what passed for normal life in the premodern world or in fact constituted a decisive historical turning point: a "general crisis" that swept away an older order and cleared the ground for the emergence of modern states, economies, and systems of thought. From the start of this debate in the 1930s, scholars kept one eye on the present, using their research to reflect on the geopolitical and economic crises of the twentieth century. Now, the military historian Geoffrey Parker brings this history to bear on the environmental crisis of the twenty-first century.

In *Global Crisis: War, Climate Change, and Catastrophe in the Seventeenth Century*, Parker uncovers the environmental factors behind the seventeenth century's earthshaking events, from the English Civil Wars, to the collapse of the Polish-Lithuanian Commonwealth, to the Manchu conquest of China. The immediate cause of state breakdown in each case was often an impulsive decision by a shortsighted prince. But that, in Parker's terms, was merely the "tipping point." What brought each state to the brink of catastrophe, he argues, was instead a global environmental phenomenon: the Little Ice Age.

A wealth of scientific evidence shows that the seventeenth century was one of the more extreme periods in an era of global cooling that stretched from the fourteenth to the nineteenth century. Thanks to the telescopes that

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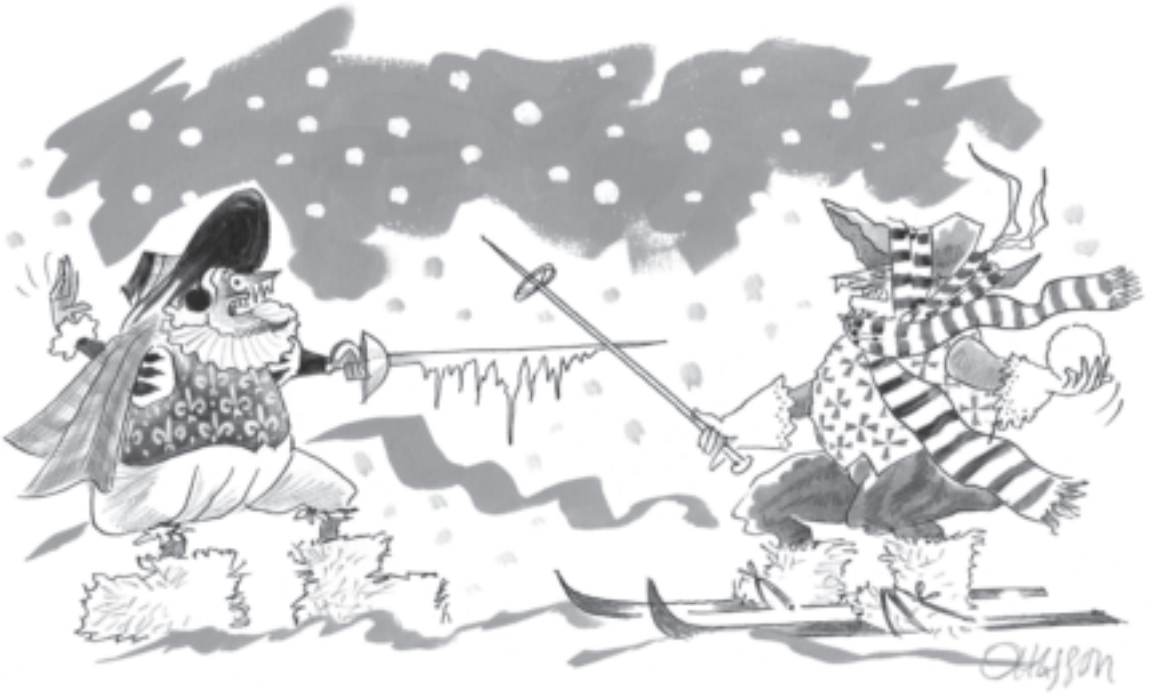


came into use around 1600, sunspot records indicate a low point in solar activity in the latter half of the seventeenth century. Following relatively mild conditions in the 1500s, the chill took seventeenth-century observers by surprise. "It is horribly cold," wrote the Marquise de Sévigné to her daughter in Provence in the summer of 1675. "We have the fires lit, just like you, which is very remarkable." She and her daughter agreed that "the behavior of the sun and of the seasons has changed."

Rivers that were usually navigable in winter froze solid, and the long winters were immortalized in the landscape paintings of the Dutch Golden Age. Seventeenth-century accounts of droughts, floods, insect infestations, famines, and epidemics trace the far-reaching effects of climate change. These scourges struck repeatedly and across vast regions, contributing to an estimated loss of one-third of the world's population.

Parker's book captures this century of upheaval in a political, economic, and cultural history of dozens of early modern states. Parker combed archives in six European countries, as well as India. His bibliographical essay modestly attests to a feat of research that would seem to call for an army of historians. Out of the details he uncovered, Parker weaves a gripping story that includes witch-hunts, palace intrigues (such as the travails of Osman II, the first Ottoman sultan ever to be killed by his subjects), and new distractions to cope with the misery: tobacco, coffee, tea, and chocolate. Parker has reconstructed the seventeenth-century crisis in a masterpiece of narrative history, which falters only when it turns to the present-day implications of climate change. By refusing to address the link between industrialization and global warming, Parker ultimately gives a skewed picture of the resolu-

tion of the crisis and a blinkered view of its implications for environmental policy today.

FROST, FIGHTS, AND FAMINE

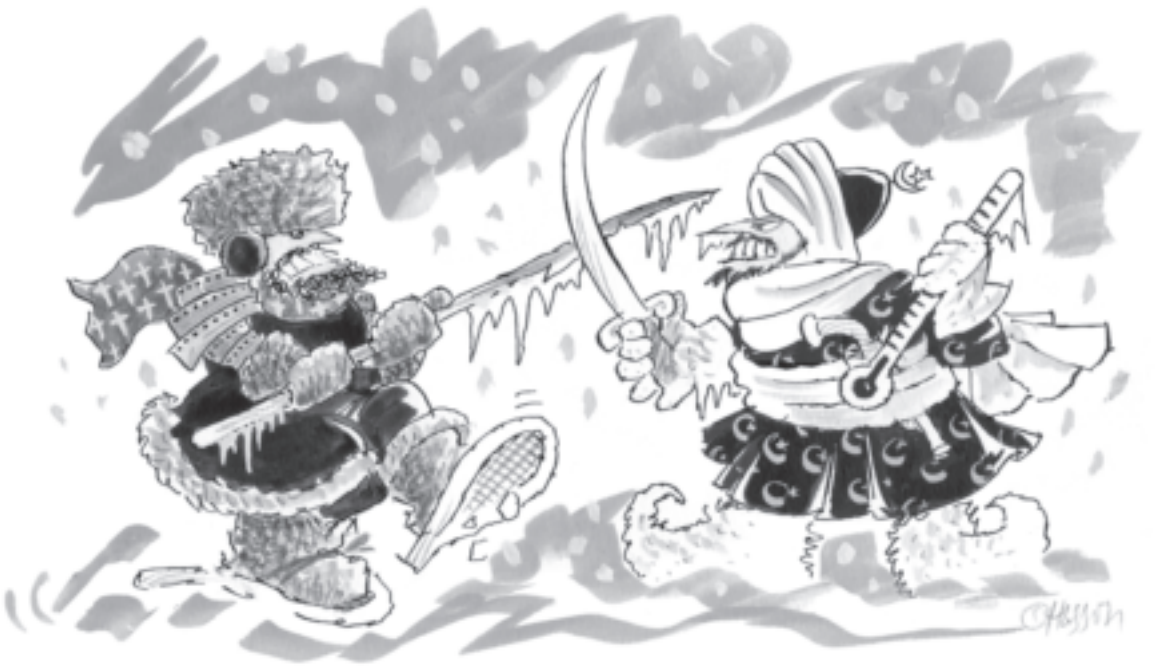
The first section of Parker's book refutes the claim that the violence and instability of the seventeenth century were nothing new. Examining each revolutionary state, from Ming China to Stuart England, Parker concludes that "the 1640s saw more rebellions and revolutions than any comparable period in world history." Nowhere does he claim that the collapse or near collapse of an early modern state was the direct result of climate change. He is no environmental determinist, but he does insist that many conflicts were fundamentally competitions over dwindling natural resources. Thus, he takes issue with the economist Amartya Sen, who has attributed famines not to food shortages in and of themselves but to flaws in the distribution of food. Parker suggests that Sen's argument has drawn the attention of historians and policymakers away from the environmental determinants of food crises.

Parker complements his narrative of the century's turmoil with an analysis of the strategies of those states that were able to stave off revolution and regime change. India, Japan, and Persia all avoided breakdown; Spain and the Italian lands restored order quickly; and the Americas, Australia, and sub-Saharan Africa saw little sign of crisis at all. All these countries and regions, Parker argues, entered the seventeenth century with relatively low population densities. Elsewhere, the warmer weather of the sixteenth century had led to overpopulation, with disastrous consequences once cooling set in. Among the most effective coping strategies during the crisis, Parker finds, were birth control and abortion, which reduced populations to more sustainable levels.

Japan under the Tokugawa shogunate emerges as the foremost success story. Parker attributes its stability in part to a centralized power structure that facilitated disaster preparedness, as well as to the avoidance of "foreign entanglements." But Japan also owed its stability to what the shogunate did not do: namely, raise taxes, punish the underreporting of harvests, or promote new ideas. Unlike the Stuarts in England and Scotland or the Habsburgs in Spain, Japan's leaders avoided imposing what Parker calls "burdens" and "innovations" on their subjects in the midst of an ecological crisis. But Japan's success had a high price, politically and environmentally: the repeal of vassals' rights, the exploitation of farmers and craftsmen, the destruction of forests, and the depletion of soils. Inertia paid off only in the short term.

KNOWLEDGE-BASED RECOVERY

Parker draws a fascinating conclusion from the fact that the political upheavals generally ended in the late seventeenth century while the global cooling did not. Stability, he claims, was achieved largely through two widespread innovations. In response to the crisis, every government hoped to regain some measure of control over its population and natural resources and to provide collective insurance against future threats. Particularly in China, England, France, and the Netherlands, the governments' efforts brought innovations such as



statistical surveys, systems of quarantine, and granary maintenance. As Parker argues, the crisis brought "welfare states" into existence.

Just as important to economic recovery around the globe, Parker argues, were intellectual developments that resulted in new ways of thinking about the natural world. Parker compares the emphasis placed on observational and experimental methods in seventeenth-century Europe—what historians call "the scientific revolution"—with contemporaneous intellectual trends in China, India, and Japan. In many parts of Asia, as in much of Europe, the crisis prompted a turn to what Parker calls "practical" reasoning. But only in western Europe did governments encourage and incorporate this style of thought. Only there did monarchs sponsor scientific academies that allowed one discovery to build on another, ultimately generating the knowledge that fueled industrialization in the eighteenth and nineteenth centuries. Parker thus contends that the end of the general crisis laid the intellectual foundations for what the political scientist Samuel Huntington has called "the Great Divergence," the economic acceleration of Europe relative to the rest of the world.

Here, Parker overplays his hand. The first problem is his assumption that seventeenth-century science was a precondition for industrialization. Decades of research on the history of technology have shown that technological innovations tend to depend more on the skills and experience of technicians than on scientific theories. Moreover, as the historian Prasannan Parthasarathi argues in *Why Europe Grew Rich and Asia Did Not*, the most important factors propelling British

industrialization—the timber shortage, which drove the country's shift to coal, and the competition from Indian textiles, which inspired the mechanization of spinning—had little to do with science.

A second problem is Parker's characterization of the new currents in European thought as uniformly "practical," in the sense of being an aid to economic recovery and thus a source of social stability. After all, the idea that the seventeenth century was a time of general crisis originally referred to the critical, even radical thrust of the period's natural and moral philosophy. In *The Crisis of the European Mind*, published in 1935, the French historian Paul Hazard argued that this intellectual ferment was responsible for the political instability that culminated in the French Revolution of 1789. "Reason was no longer a well-balanced wisdom," he wrote "but a critical audacity."

More recent historians have distinguished between critical and conciliatory strains of the new science, but Parker ignores such distinctions. Disregarding the differences among Francis Bacon's empiricism, René Descartes' rationalism, and Galileo's heretical search for universal laws, Parker instead lumps all these thinkers together with the fictional Robinson Crusoe as proponents of a stolid "practical learning." But such a generalization ignores the fact that there is no evidence that philosophers such as Descartes and Galileo had anything to do with Europe's economic recovery. Their appeals to the authority of reason potentially threatened all elements of the existing order.

THE NEXT CRISIS

A more fundamental problem with the book's argument emerges in the epilogue, where Parker considers the present-day implications of this history. The principal lesson he draws concerns the need for disaster preparedness at the national level—on the model of the construction of the Thames Barrier, downstream from central London, in the 1970s and 1980s. Wealthy nations, Parker implies, should follow the example of Tokugawa Japan and "avoid foreign entanglements." But here, the seventeenth-century example loses relevance. Unlike in the seventeenth century, the causes of climate change are clear today, and there is also a clear collective global responsibility to reverse it.

Concerted international efforts, rather than isolation, are needed today to avoid or minimize catastrophes of the kind that Parker so skillfully portrays. Yet Parker insists on separating the question of the cause of global warming from the question of how to respond to it. He urges the use of technical ingenuity to protect against disasters but says nothing of alternative energy technologies that could help limit the greenhouse effect. He would have readers believe that climate change today is fundamentally the same phenomenon it was in the seventeenth century: a natural and inevitable check on population growth.

But this history looks different when viewed squarely through the lens of the most recent climate science. Scientists have come to see the last 250 years as a distinct geological epoch, called the Anthropocene, that is marked by the transformative effects of human activities on the very conditions of life on earth. From this perspective, the dawn of the industrial

age in eighteenth-century Europe no longer looks like a happy ending to the general crisis but rather like the onset of a new and unprecedented crisis. The recognition of the unintended consequences of industrial development throws the very meaning of "practical" knowledge into question, since practicality must be judged by long-term costs, not only short-term benefits.

Discussing the impact of the Little Ice Age in Australia, Parker likens the adaptive behavior of seventeenth-century aboriginal people to the resilience of their continent's plants and animals. But historians in the Anthropocene should be wary of assuming that Englishmen learned more from the unusually cruel weather of the seventeenth century than Australians did. For a better example of truly practical lessons learned from the crisis, consider the German foresters who, faced with timber shortages in the wake of the Thirty Years' War, first articulated the idea of sustainable development. Or consider the explorers who left a cold and hungry Europe in search of tropical riches, only to realize that their own rapacity could quickly exhaust the bounty of an island paradise. Despite the breadth and force of *Global Crisis,* the story of the lessons learned from the Little Ice Age calls for one more chapter: on the dawning of an ecological consciousness.

Maimonides Meets Modernity

Contemporary Lessons From Judaism's Greatest Sage

Jay M. Harris

Maimonides: Life and Thought
BY MOSHE HALBERTAL.
TRANSLATED BY JOEL LINSIDER.
Princeton University Press, 2013,
400 pp. $35.00.

In the fall of 1993, as my daughter was getting ready to enter first grade at the Maimonides School in Brookline, Massachusetts, a friend of mine asked her where she was going to school. "Mommy's-monides," she replied. Apart from making clear which parent carried the most weight with her, this reply gave a new twist to the old quip, generally attributed to the Israeli scholar Shalom Rosenberg, that "there is *my*-monides, *your*-monides, and *their*-monides." Indeed, the medieval Jewish scholar Moses Maimonides (1138–1204, although frequently said to have been born in 1135) has been read in myriad ways. Surely the greatest Jewish intellectual of the Middle Ages (and arguably of any age), Maimonides has been invoked to support or challenge virtually all forms of Jewish life and discourse since the thirteenth century. Historians and scholars of Judaism have interpreted Maimonides in countless, sometimes contradictory ways: as a philosopher and as an anti-philosopher, as an upholder of Talmudic authority and as a subverter of Talmudic authority, as a religious zealot and as a herald of religious tolerance, and as a model of clarity and as a model of opacity.

Maimonides' readings of the Bible turned that document into a remarkably flexible text, capable of bearing interpretations that incorporate the insights of Aristotle, among others. Ever since it was "rediscovered" by Muslim, Jewish, and Christian thinkers in the Middle Ages, Aristotelian thinking has posed a fundamental challenge to the monotheistic traditions by, among other things, questioning the notion of a theistic God who manages nature and intervenes in human affairs. Because he incorporated many, but not all, Aristotelian ideas into his understanding of Judaism—while often striving to conceal that he was doing so—Maimonides remains one of the most challenging major thinkers to understand and explain. Many have tried, but no one has succeeded completely. There is no definitive interpretation of his works, and one can probably never be produced.

The Israeli philosopher Moshe Halbertal seems to realize this, and in his new book on Maimonides (originally published in Hebrew in 2009), he does not try to offer a definitive reading, although his preferred interpretations are often clear enough. He nevertheless pioneers a new path, walking the reader through the different interpretive schools and explaining what supports each one while acknowledging that Maimonides contradicts himself both across and

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My-monides, your-monides, their-monides: an illustration of Maimonides from 1754

GETTY IMAGES / HULTON ARCHIVE

within his many writings—at times purposefully, which inevitably leaves his readers perplexed. Halbertal is a wonderful guide, explaining how different approaches illuminate Maimonides' writings and how certain issues reverberate throughout the sage's work, returning in new forms and contexts.

Halbertal's book also demonstrates why Maimonides should matter beyond the rather narrow confines of Jewish theology, revealing how Maimonides dealt with questions common to all faiths and with some problems also faced by secular philosophies. At its core, Maimonides' work represents a powerful bastion against the retreat from rationality that too often accompanies contemporary discourse, religious and otherwise. Maimonides insisted that

the religious mind should not embrace the absurd or imagine that one honors God by resisting science and human understanding, fallible though they may be. He urged the faithful to include the study of the natural world in their quest for a righteous and loving God, or risk falling prey to "powerful anxieties and urges" that sow confusion and fear. For Maimonides, only religion informed by science and philosophy could allow believers to be at peace with the world and its complex reality, instead of their retreating from reality into a world of imagined demons and angels—literal or metaphoric.

SPANISH PRISONERS

Halbertal's book opens with a short but masterful biography of his subject, following Maimonides' journey from Spain, through the Maghreb, and on to Egypt after a brief sojourn in the Holy Land. Maimonides was born in Córdoba, the provincial capital of what was then al-Andalus (today Andalusia), a region of modern-day Spain that was ruled at the time by the Muslim Almoravid empire. His father was Maimon ben Joseph, a rabbinical scholar in his own right; his mother's identity remains unknown. Maimonides grew up in a culture that blurred many lines that elsewhere separated Jews, Christians, and Muslims. Poets, philosophers, and scientists all thrived under the Almoravids.

And yet it was an age filled with tension and religious extremism, as Christian crusaders sought to reconquer the Muslim territories of Iberia and retake the Levant and intra-Muslim struggles ultimately brought a militant Islamic regime—the Almohads—to power in al-Andalus. The Almohads treated non-Muslims harshly, forcibly converting or killing many Jews throughout their realm. When Maimonides was in his early 20s, his family fled to Fès, in present-day Morocco. But this did not help much, since the Almohads ruled there as well. A few years later, the family moved once more, this time to Acre, then part of the crusader kingdom in the Holy Land. Soon after, the family relocated yet again, this time to Egypt. Maimonides would spend the rest of his life there, ultimately rising to become the semiofficial head of the Jewish community in Egypt. He supported himself by working as a physician in the Jewish community and at the court of the Muslim ruler of the region, Saladin. It was in Egypt that Maimonides established his reputation as a great scholar of Jewish law and thought, his renown spreading throughout the Islamic world and into Europe. Letters reached him from all over the Jewish world, seeking his advice and legal rulings.

Drawing on all of Maimonides' writings, and especially his many letters, Halbertal crafts a portrait of a refugee who never fully left home and felt the pain of exile for his entire life. This character study forms the backdrop for Halbertal's discussion of Maimonides' intellectual output, which covers virtually all the legal and philosophical works that Maimonides produced. Halbertal pays little attention to Maimonides' medical writings (except when they shed light on legal or philosophical matters) and provides only a limited overview of his other works, focusing on matters that stand out as unique contributions to Jewish ethical, legal, or philosophical discourse or that generated significant controversy. As a result, the novice

approaching Maimonides through this book might not fully appreciate the audacity of what Maimonides attempted in each of his major works.

Nevertheless, Halbertal deftly guides the reader through Maimonides' contributions to Jewish thought. Among these is Maimonides' embrace of what philosophers refer to as "virtue ethics," which calls for people to act morally by developing a longing for what is right or a disgust for what is wrong—in contrast, for example, to desiring the pleasures of the flesh but refraining from them out of a sense of duty. Virtue ethics presents a distinct challenge to a Jew loyal to the laws of Judaism, which seem to insist that obeying God's commandments—and nothing else—should form the basis of one's moral life. In other words, Jewish law seems to speak to duty, not disposition. It is thus difficult to imagine a strictly observant Jew embracing virtue ethics; the same could be said for strictly observant Muslims or Christians, as well.

Halbertal shows how Maimonides tried to resolve this problem by distinguishing between acts that reason identifies as virtuous (such as caring for others or refraining from violence) and things that have moral importance only because God has weighed in on them (such as consuming some kinds of food but not others). Maimonides argued that fulfilling the latter type of duties can contribute to the cultivation of virtue by encouraging a kind of discipline: learning to follow God's commands can help one develop the habits needed to lead a virtuous life. Thus, reason came to occupy a central place in Maimonides' view of the properly lived religious life, in which duty is subservient to the demands of virtue.

CRACKING THE CODE

Halbertal's most significant contribution comes in his discussion of Maimonides' two most important works, his code of Jewish law (*Mishne Torah* in Hebrew) and his great philosophical work, *The Guide of the Perplexed*. Maimonides attempted to codify the entirety of Jewish law, an unprecedented effort that has never been repeated. Other codes of Jewish law (of which there are many) are selective in one way or another, generally choosing to focus on only a specific set of laws or only those laws that would apply to Jews in exile. Maimonides, by contrast, dealt with laws that involve the sovereign institutions of the state and even with laws that would apply only during a hoped-for messianic age. (It is worth noting that unlike in the apocalyptic visions of the end times so common among many Christians and Jews, in Maimonides' account, the Messiah's return will usher in world peace and political maturity without any transformation of nature, human or otherwise. When "the end" comes, people will still live, reproduce, and die but will do so while "accepting the true religion," leading to a world without plunder or destruction.)

Halbertal, understandably, does not dwell on the minutiae of Jewish law, focusing instead on the broad philosophical themes that form the foundation of the *Mishne Torah*. In particular, Halbertal shows that in the philosophical sections of his code, Maimonides seems to say that the world exists eternally as an extension of God's unchanging wisdom and not as a creation of God's will (as the Bible seems to suggest). In a created world, God is the supreme power in the universe and continuously brings about

his desired outcomes. That is the more conventional, familiar religious view of creation. But in Maimonides' view, the world represents an extension of God's wisdom, not his will, so it is impossible for God to, say, change the course of someone's health or determine the victor in a battle. This does not suggest a limitation on God's power but serves as an expression of God's perfection; after all, perfect beings do not change their minds.

This is one of Maimonides' concessions to Aristotelian logic and seems to run contrary to the meaning of the Bible, not to mention the thousands of pages of Jewish commentary on the Bible. It is all the more audacious coming in a code of Jewish law, since such a code seems wholly dependent on the notion of a willing God who responds to human behavior. After all, why refrain from eating pork if not to please a God who will respond with favor?

Of course, a God devoid of a discrete will cannot respond to human behavior at all. So why bother observing any of these laws? For Maimonides, one observes because observance both cultivates and expresses love and awe for a God stripped of all personality or caprice. Observance is not, as generally assumed, a submission to divine will.

In general, Maimonides' code presents a system of Jewish law that seeks to eliminate the nonrational elements from human life. To be sure, the *Mishne Torah* presents many laws whose purpose seems less than rational to most people. But as with virtue ethics, the laws' apparently nonrational dimensions serve a rational purpose: to develop habits of behavior that will encourage virtue. Still, Halbertal concedes that, at times, even Maimonides had to push his considerable interpretive skills to their limits in order to explain how many of the laws and customs inherited from the ancient rabbis, which seem on the surface so distant from rational purpose, actually serve to bring the observer nearer to knowledge of God.

SPEAKING OF GOD

When he turns to Maimonides' other major work, *The Guide of the Perplexed,* Halbertal once again finds the philosopher confronting the question of whether the world was created by God's will or exists eternally by virtue of God's wisdom. As Maimonides himself notes in *The Guide*, "everything is bound up with this problem." As the name implies, *The Guide of the Perplexed* was written to help those confounded by Aristotelian philosophy, and nowhere did Aristotle challenge the core of Judaism and the other scriptural monotheistic faiths more than in his insistence that the world was not created in time and certainly not as an act of will by a benevolent God. The issue is further complicated by the challenges of language. How does one speak of God? What does it mean to say that God has a will? That God could one day be satisfied with no universe and the next day begin creating one? Does such language even make sense? What does it mean to say, as the book of Genesis does, that God "rested," or that God created man "in his own image," or that God was "angry" or "jealous"? Can a sophisticated thinker even take such ideas seriously?

Maimonides devoted much of *The Guide* to examining the limits of language and the need for metaphor and

allegory to communicate basic truths about God and humanity. This led him to the notion of what has come to be called "negative theology": the claim that one cannot make any affirmative statements about God without introducing corruption but that one can describe what God is not. Further, one can describe how God is manifest in the world. Here, Maimonides presents an interpretive tour de force, explaining the mysterious back-and-forth between God and Moses that takes place in the book of Exodus, in which Moses asks to see God's glory, and God replies that Moses may not see his face but may see what is usually translated as God's "back." Maimonides reads this passage as saying that a human cannot know what God is but can recognize God's effects in the world, which Maimonides believes will reveal a God who brings about righteousness and loving-kindness.

The Guide also reflects on the reasons for the commandments in the Torah. In other works, Maimonides presents the commandments as an aid in forming the habits of virtue. That notion does not entirely disappear in *The Guide*, but Maimonides shifts to an emphasis on the commandments' role in steering observant Jews away from idolatry, considered to be false ideas about God that represent the most corrupting force imaginable. Maimonides insists that a proper understanding of God (knowing what God is not), together with the commandment to imitate God as he is manifest in the world, will lead people to a life devoted to righteousness and loving-kindness—the essence of God's impact on the world. A mistaken understanding of God, on the other hand, can lead people to place a divine

imprimatur on all manner of evil acts. Thus, the failure to think properly about God is ultimately a moral failure, one that has led to the spilling of much blood. With this extraordinary philosophical and moral vision, *The Guide* ends. It is to Halbertal's great credit that he brings this vision to life for the contemporary reader.

O YE OF LITTLE FAITH

The specific challenges of Aristotelian philosophy no longer keep many people up at night. But the question of how to understand the origins of the universe is as alive as ever—and the retreat from the challenges of existence, the refuge of the imaginative and the "miraculous," remains as seductive as ever. Maimonides demands something more honest and mature than that. As Halbertal writes, "Many faiths place God's appearance under the rubric of 'miracle.'" But, he continues,

> Maimonides considered that belief to offer a flimsy, ad hoc expression of divine revelation. At the focus of religious consciousness, the world must remain as it is, as the highest expression of God's mercy, justice, and wisdom. Relying on the wondrous and the extraordinary as the basis for religious experience rests on an inability to distinguish the impossible from the possible.

Many of the world's current ills result from just that inability.

Centuries after Maimonides, Sigmund Freud (among others) would come to see the abolition of religion as the only way to overcome people's reluctance to face the world as it is. Yet in the decades that have elapsed since the publication in 1927 of Freud's *The Future of an Illusion*, religion has shown no sign of disappearing—nor has contemporary secular political or moral discourse particularly distinguished itself when it comes to dealing with the world in all its complexity.

More than anything else, Maimonides provides an understanding of religion generally, and Judaism specifically, that suggests our species must go through, not bypass, its great spiritual dilemmas. As Halbertal writes toward the end of his extraordinary book, Maimonides believed that by

> grasping the vast beauty and power of the world we learn to perceive it for what it is—a grand manifestation of God's wisdom in which we humans are one marginal aspect of its design. In internalizing this non-instrumental attitude we reconcile ourselves with the world, a world that is suited to our potential as creatures capable of knowledge and capable of transcending the initial grip of fear and the imagination.

In this respect, Maimonides' work has as much to offer today as at any time since his demise more than eight centuries ago.

Hypocrisy Hype

Can Washington Still Walk and Talk Differently?

The Game Has Not Changed

Michael A. Cohen

In their essay "The End of Hypocrisy" (November/December 2013), Henry Farrell and Martha Finnemore argue that the biggest threat from leakers of classified information such as Chelsea Manning and Edward Snowden is that "they undermine Washington's ability to act hypocritically and get away with it." According to Farrell and Finnemore, the more than 750,000 diplomatic cables and incident reports leaked by Manning and the highly classified material disclosed by Snowden have provided "documented confirmation . . . of what the United States is actually doing and why." Thus, the country will find itself "less able to deny the gaps between its actions and its words . . . and may ultimately be compelled to start practicing what it preaches."

The Manning and Snowden leaks do shed light on U.S. foreign policy, sometimes in an unflattering way. But they certainly do not prove that Washington acts hypocritically. Indeed, the most compelling revelation from Manning's leaks is the remarkable consistency between what the United States says in private and does in public. Of the hundreds of thousands of diplomatic cables leaked by Manning, very few show wide gaps between the actions and words of U.S. officials. What hypocrisy the cables reveal is more often that of other governments, including, for example, U.S. allies, such as Saudi Arabia, which privately implored Washington to attack Iran to curb its nuclear ambitions while publicly opposing such a strike.

Snowden's leaks do pose a number of dilemmas for U.S. policymakers, but they don't really expose American duplicity. As Farrell and Finnemore note, before Snowden's disclosures, "most experts already assumed that the United States conducted cyberattacks against China, bugged European institutions, and monitored global Internet communications." And Farrell and Finnemore offer no evidence that the United States has denied such activities. Indeed, as the National Security Agency's website plainly states, the agency "collects, processes, and disseminates intelligence information from foreign signals for intelligence and counterintelligence purposes." So where is the hypocrisy? One could argue that Washington acted dishonorably by criticizing other countries for collecting intelligence on their own citizens while it was doing the same thing to Americans. But that exaggerates the intrusiveness of the NSA programs Snowden revealed, which look nothing like the active monitoring of citizens practiced by authoritarian states.

Like Manning's leaks, Snowden's revelations also highlighted hypocrisy on the part of other governments, which reacted to the disclosures by expressing outrage over actions that they almost certainly knew were taking place and even participated in themselves. For example, when *Le Monde* reported that the NSA had scooped up more than

70 million French phone records, Paris lodged an official protest with Washington. But days later, *The Wall Street Journal* revealed that the records in question had actually been collected by the French government outside of France and then turned over to the NSA.

If Farrell and Finnemore believe, as they write, that "the U.S. government, its friends, and its foes can no longer plausibly deny the dark side of U.S. foreign policy" and that exposures of U.S. hypocrisy will transform international relations, they ought to present a clear case that U.S. foreign policy actually possesses a dark, hypocritical side. But they don't provide much compelling evidence for that claim. In fact, one of the most striking assertions Farrell and Finnemore put forward is that although the United States "may attempt . . . to draw distinctions between China's allegedly unacceptable hacking, aimed at stealing commercial secrets, and its own perfectly legitimate hacking of military or other security-related targets . . . those distinctions will likely fall on deaf ears." But if U.S. hacking is, in fact, legitimate and genuinely distinct from Chinese hacking, then aren't accusations of American hypocrisy unmerited? Farrell and Finnemore seem to be arguing that the credibility of U.S. policymakers is undermined not by facts but rather by unproven allegations and false perceptions.

A FEATURE, NOT A BUG

Still, even if one grants Farrell and Finnemore the benefit of the doubt, or concedes that even false accusations of American hypocrisy are harmful, it is difficult to accept their larger claim: that Washington's alleged inability "to consistently abide by the values that it trumpets" will harm the national interest by changing the way other countries act toward the United States. Manning's and Snowden's leaks proved embarrassing, and Washington has had to deal with some short-term diplomatic fallout. But the leaks are highly unlikely to have lasting diplomatic effects. For the sake of comparison, consider the impact of the U.S.-led "global war on terrorism." After 9/11, U.S. actions and policies on a wide range of issues, such as torture, detention, and preventive war, pointed to a fairly wide gulf between the country's stated principles and its actual behavior. And during the Bush administration, Washington treated some of its close European allies so poorly that their leaders responded by publicly distancing themselves from the United States. In 2002, for example, German Chancellor Gerhard Schröder successfully ran for reelection by trumpeting his opposition to U.S. plans to invade Iraq.

Yet none of these actions led to a wholesale change in the transatlantic alliance or to global bandwagoning against Washington. The reason should be somewhat obvious: foreign countries, particularly close U.S. allies, continue to rely heavily on American diplomatic, military, and economic power. Farrell and Finnemore assert that the potential gap between Washington's stated values and U.S. actions "creates the risk that other states might decide that the U.S.-led order is fundamentally illegitimate." But that risk is vanishingly small: after all, the U.S.-led order greatly (even disproportionately) benefits U.S. allies, and even some rivals. Germany might be angry about the fact that the NSA bugged Chancellor Angela Merkel's private cell

phone, but not so angry that it will leave NATO or fundamentally change its bilateral relationship with the United States. Likewise, it is hard to imagine that Brazil would curtail its significant economic ties to the United States because of the NSA's spying on Brazilian President Dilma Rousseff—or, for that matter, that China would disengage from the World Trade Organization because the United States is hacking Chinese computers.

Farrell and Finnemore never explain why other countries would respond to U.S. hypocrisy (real or imagined) by taking steps that could end up doing them more harm than good. Throughout the post–Cold War era, even when the United States has taken actions that other countries opposed, those countries have nevertheless maintained their fealty to the U.S.-led liberal world order. That is not a bug of the international system: it is its most important feature, and an indication of its strength.

This should hardly come as news to Farrell and Finnemore, who have long been insightful observers of international politics. But they perhaps should have looked more closely at some of the very evidence they cite. Consider, for example, their interpretation of remarks made in 2010 by then Secretary of Defense Robert Gates, who said that the national security implications of Manning's leaks would be "fairly modest." Farrell and Finnemore claim that Gates downplayed the impact of the leaks because they did not reveal anything that was truly unexpected. But that's not why Gates thought the effect of the leaks would be mild. "The fact is," Gates said, "governments deal with the United States because it's in their interest, not because they like us, not because they trust us, and not because they believe we can keep secrets. . . . Some governments . . . deal with us because they fear us, some because they respect us, most because they need us. . . . So other nations will continue to deal with us. They will continue to work with us."

Gates' full statement, which Farrell and Finnemore disregard, is perhaps the most compelling refutation of their thesis: an unusually candid reminder of precisely how international cooperation works in the U.S.-led global order. Farrell and Finnemore are right to acknowledge that hypocrisy is the "lubricating oil" of that order. But they err in believing that is going to change anytime soon.

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Farrell and Finnemore Reply

We hoped to provoke a good debate with our essay, and we are grateful to Michael Cohen for his admirably clear and forcefully argued response. Cohen's case is not convincing, however. He argues that the United States is not hypocritical, although its allies and enemies are. He then writes that even if the United States were hypocritical, it would not matter, since other countries would still have no choice but to continue to work with it. Both claims are wrong.

Hypocrisy is, in fact, a pervasive element of U.S. foreign policy. For decades, Washington has extolled human rights, free trade, democracy, and the rule of law while also supporting unsavory regimes and pursuing

opportunistic trade policies. In recent years, the U.S. government has condemned other states for engaging in torture at the same time that its intelligence agencies were waterboarding detainees or shipping them off to be interrogated in countries whose security services are notorious for conducting torture. The Obama administration has reformed such policies but declined to prosecute the senior officials responsible for introducing them—a failure that is especially striking when contrasted with the zeal with which the administration has pursued leakers such as Chelsea Manning.

Nor is U.S. hypocrisy limited to the issue of torture. Consider just a few more examples. The cables Manning obtained and that the anti-secrecy organization WikiLeaks released suggest that the Bush administration knew that civilian casualties in Iraq were higher than it ever acknowledged. And yet the administration dismissed the estimates of outside groups as inflated. Meanwhile, Snowden's leaks revealed that the National Security Agency has worked in secret to weaken cryptographic standards that it claimed to be improving. In another vein, last year, an unnamed senior U.S. official admitted to Craig Whitlock of *The Washington Post* that the United States gives countries that cooperate on counterterrorism a "free pass" on human rights while trying to "ream" less pliant governments. So, for example, last July, when Egypt's army toppled the country's first freely elected government, the Obama administration did everything it could to avoid even acknowledging that a coup had taken place. As for the hypocrisies relating to U.S. trade and economic policy, these are too many to list and describe.

As our original essay showed, American condemnations of Chinese cyber-incursions hypocritically ignore Washington's own attacks on Beijing's computers. The United States has at times emphasized a distinction between "legitimate" incursions, aimed at military and political targets, and "illegitimate" ones, aimed at stealing commercial and technological secrets. But this distinction is unconvincing to those outside the small club of technologically advanced countries with an interest in protecting their intellectual property. Indeed, even the United States, when it was at an earlier stage of economic development, once had laws actively encouraging the pirating of foreign technology.

NO MORE BLIND EYES

Cohen argues that other countries are hypocritical. We agree. American hypocrisy has not become more problematic because other governments are sincerely outraged by Washington's behavior (although some foreign officials are genuinely shocked and unhappy). Rather, the real trouble is that the hypocrisies of the United States and those of other countries no longer reinforce each other. As we argued in our essay, countries that used to prefer to turn a blind eye to objectionable American behavior can now no longer ignore it. One case in point is Brazil's reaction to the revelations of NSA spying on its state-owned oil company, Petrobras. Brazilian President Dilma Rousseff would likely have preferred to pretend that the spying had not happened, so that she could continue to build economic ties with Washington. But public anger at the revelations in Brazil led her to aggressively curtail relations and introduce

legislation forbidding the export of Brazilians' personal data overseas. This reaction is, of course, hypocritical. But Brazilian hypocrisy now cuts against U.S. hypocrisy rather than reinforcing it, by highlighting the contradiction between U.S. exhortations for a free and open Internet and its exploitation of that openness to compromise foreign computer systems.

European outrage at NSA spying is partly for show. European governments have their own spies and sometimes monitor their own citizens in intrusive ways. Yet the current outrage reflects genuine anger among citizens and is likely to have far-reaching consequences. Forthcoming European legislation will likely mandate harsh penalties for American firms that share the personal data of Europeans with the U.S. government, a restriction that will likely lead to a major transatlantic confrontation. U.S. President Barack Obama has described EU-U.S. electronic information-sharing arrangements as crucial to counterterrorism. Thanks to the scandal prompted by Snowden's leaks, such arrangements are now threatened.

U.S. hegemony rests on military force and economic might as well as hypocrisy. Yet armies and money only go so far. Even the most powerful states need to persuade and exhort as well as impose. Over time, revelations of U.S. hypocrisy will tend to corrode this form of soft power. The United States will encounter increased resistance from allies, as advocates for civil liberties in other democracies decry American hypocrisy and stoke public outrage. Washington's adversaries will use evidence of American hypocrisy as ammunition in their attacks on the U.S.-led liberal order. Finally, the decentralized international community that establishes the Internet's technical standards will embrace stronger cryptography, which will make the NSA's surveillance far more difficult and costly.

American hypocrisy has long remained unchallenged and deeply intertwined with U.S. foreign policy. This makes it nearly invisible to many members of the foreign policy elite, even ones as thoughtful as Cohen. One result is a good deal of inconsistency in the ways that U.S. officials have responded to the Manning and Snowden scandals, seeming to vacillate between denying that the leaks pose a major problem and harshly overreacting against those who have exposed the emperor's nudity. Sooner or later, however, if the United States wants to remain able to convince others through the force of its legitimacy rather than just through threats or bribery, Washington must acknowledge the past importance of hypocrisy as well as its new limits.

Is Cyberwar Real?

Gauging the Threats

Cyberattacks and Violence

Jarno Limnéll

Thomas Rid ("Cyberwar and Peace," November/December 2013) describes cyberattacks as somehow separate from conventional warfare because they fail to meet all three of Clausewitz's definitions of war as violent, instrumental, and attributable to one side as an action taken for a political goal. Therefore, he says, "cyberwar has never happened in the past, it is not occurring in the present, and it is highly unlikely that it will disturb the future." But his argument is a simplified representation of the complex realities of war and security today and their inherent links to cyberspace.

Today, the world is so immersed in technology that activities in cyberspace have become inseparable from the everyday operations of business, education, government, and the military. Actions online affect actions offline, and vice versa. Thus, far from being separate from conventional war, as Rid would have it, cyberwar is deeply embedded in contemporary military practices.

Cyberwar, in fact, is part of the evolution of conventional warfare, which itself is linked to broader social and political change. It is no longer easy to imagine a confrontation that does not include some element of cyber-activity, such as surveillance or sabotage. Asking whether cyberwar is real, then, is less important than concentrating on how to contain the threats posed by some uses of computer technology. After all, a cyberattack need not kill someone or cause major material damage to still be considered dangerous.

Moreover, understanding war as solely physical contestation is an unnecessarily limited view. Consider, for example, nonlethal military tactics that fall under the broad category of strategic communication, which include psychological operations. States and militaries seeking to avoid unnecessary or disproportionate killing need to find other ways to influence potential adversaries and strengthen ties with allies. Strategic communication seeks to coerce enemies and sway allies and includes operations in peace as well as war, blurring the line between the two.

The concept of violence is also ambiguous. In addition to causing physical injury or death, violence can refer to mental abuse and different forms of deprivation. The academic discipline of peace studies has for decades advanced the concept of structural violence, such as racism and sexism. In its widest sense, then, violence can be found in almost any coercive situation. And the various attacks and activities associated with cyberwar, from stealing data to disrupting other governments' computer systems, clearly fall within this broad category.

Still, Rid is right to criticize the hype over cyberwar. The specter of cyberwar, with its supposedly vast and unimaginable destructive potential, contributes to plenty of fear-mongering. The hype must be tamed, but not to the point where it minimizes or ignores real and present dangers.

The best defenses against those threats should be built into everyday practices. Governments and businesses need to strengthen people's understanding of cyberattacks and make cyberspace safer. But officials and ordinary people alike also need to learn to live with the threats. Decision-makers in the public and private sectors need to think strategically about how to organize cyberdefenses in government, business, and the military. Such coordination is the only way to secure today's Internet-dependent societies, even as waging cyberwar still remains the business of the armed forces alone.

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Rid Replies

Jarno Limnéll argues that activities in cyberspace are an inherent part of conventional warfare. He also contends that the psychological impact, not just the physical violence, of cyberattacks matter. I agree on both counts. But Limnéll's conclusion, that "waging cyberwar still remains the business of the armed forces alone," is simply wrong—and the U.S. government thinks so as well.

Last December, the White House announced that it would not separate the National Security Agency and the Pentagon's Cyber Command and that it would continue to put one chief in charge of both agencies. Like Limnéll, some other experts, including the members of a review panel appointed by U.S. President Barack Obama,

recommended separating Cyber Command's military capabilities from the NSA's intelligence activities. But the White House's decision to maintain the current setup was correct. Creating separate agencies focused on offensive cyber-operations would be rash, because it would mean ignoring four problems.

First, there is actually little difference between contemporary computer-based military operations and the signals intelligence work of the NSA. Indeed, most cyber-operations that are considered offensive actually amount to intelligence collection, not sabotage of critical infrastructure. Thus, an artificial institutional division of labor between the military and the NSA would likely create duplication and waste.

Second, it is unlikely that an independent cyber command would accomplish much. Hawkish generals and politicians ignore the fact that it is quite difficult to create a cyberweapon, software that can physically harm an opponent's critical infrastructure. There is a reason why proponents of such operations have only one proper example to draw on: Stuxnet, a U.S.-Israeli operation that was designed to damage Iranian uranium-enrichment centrifuges. A high-end sabotage campaign is likely to be a complex, intelligence-devouring, labor-intensive, and target-specific engineering challenge. As frustrated and confused lower-ranking insiders have told me, their superiors balk at that reality and turn to developers and say, in general terms, "Build me a cyber–Tomahawk missile."

This relates to a third problem: a potential arms race in cyberspace. If having a cyber command becomes a symbol of power, other nations will want to have their own cyber commands. Some countries, among them the United Kingdom, are already considering plans to waste significant resources on offensive cyber-capabilities, needlessly gearing up for a cyberwar that may never occur.

Finally, the idea of creating an independent cyber command ignores the fact that refined offensive capabilities do not translate into better defensive ones. Many conventional weapons can be used defensively or offensively. But cyberweapons are different; Stuxnet, for example, could be used only offensively. The NSA's offensive strategy exploits vulnerabilities, or "back doors," in widely used software. But U.S. computer systems have back doors, too: just ask Edward Snowden, the former NSA contractor who leaked classified information about such vulnerabilities. In cybersecurity, a good offense is the worst defense.

U.S. officials should work to prevent a "cyber–Pearl Harbor" through better defenses. But waiting for cyberwar, as Limnéll suggests, is a failure of imagination. "This is our cyber-9/11," a British intelligence official told me, referring to the Snowden leaks. "We just imagined it differently."

Recent Books

Political and Legal

G. John Ikenberry

Individual Rights and the Making of the International System
BY CHRISTIAN REUS-SMIT. Cambridge University Press, 2013, 244 pp. $85.00 (paper, $29.99).

Scholars have offered a variety of explanations for the rise and triumph of the nation-state. Reus-Smit argues that most accounts fail to explain why people wanted independent statehood in the first place. His answer is human rights. The book looks closely at the three great waves of state expansion: in Europe in the seventeenth century, in Latin America in the nineteenth century, and in the worldwide decolonization movements that took place after World War II. Reus-Smit argues that in each of those watershed periods, it was the struggle for human rights by subject people within empires that broke the old orders apart, triggering crises of legitimacy for imperial powers and paving the way for sovereign independence. At each juncture, the enemy of human rights was empire, and the vehicle for acquiring and protecting those rights was the sovereign state. The book is impressive, but Reus-Smit disregards the ideological and great-power struggles of the twentieth century, which played a critical role in dooming empire and allowing for the most recent expansion of sovereign self-determination.

Socializing States: Promoting Human Rights Through International Law
BY RYAN GOODMAN AND DEREK JINKS. Oxford University Press, 2013, 256 pp. $99.00 (paper, $29.95).

Over the decades, states and organizations have established a large body of international human rights law. But does it really influence the way governments behave? In this sophisticated study, Goodman and Jinks argue that international law affects states primarily through a process of socialization, in which state officials and other actors take on the beliefs and norms of others in their surrounding environment. Peer pressure, mimicry, identification, and the search for status are some of the factors that Goodman and Jinks believe bend states in the direction of the prevailing international human rights laws. The authors usefully summarize empirical studies that demonstrate that states have a tendency to imitate best practices in areas such as education, market liberalization, the environment, arms control, science policy, and human rights. The book leaves no doubt that in various circumstances, national decision-makers might well be motivated by social pressure and learning dynamics to adhere to internationally acceptable norms of state behavior. Although the book does not actually settle the question of when, how, and under what conditions states are socialized into accepting the prevailing norms of human rights, it suggests a rich agenda for further research.

Reflections on the Modern and the Global
BY BRUCE MAZLISH. Transaction, 2013, 170 pp. $39.95.

In a series of short portraits of historical eras and their thinkers, Mazlish captures the changing ways that Western societies have understood the self and visualized the world as they moved from medieval to modern life, a process he calls "a seeing revolution." The great humanists and scientists of the Renaissance, the Enlightenment, and the Industrial Revolution make appearances, including Alberti, Copernicus, Bacon, Galileo, Kepler, Descartes, Adam Smith, and Hegel. During these time periods, traditionalism and religion gave way to the modernizing forces of science and capitalism, which helped transform human consciousness and redefine ideas about the individual and his rights and capacities. The book's most interesting claim is that consciousness is being reshaped yet again by the forces of globalization, although Mazlish does not properly define that process. The world is surely witnessing an intensification of interdependence and a spreading understanding of humanity as a unified community inhabiting a fragile planet. Yet the book does not squarely grapple with the most important question: If there is a growing global consciousness, what are its political consequences?

How Rivalries End
BY KAREN RASLER, WILLIAM R. THOMPSON, AND SUMIT GANGULY. University of Pennsylvania Press, 2013, 280 pp. $69.95.

Scholars have noted that a very small group of states is responsible for most interstate disputes and wars. These strategic rivalries last for decades, periodically flaring up to threaten peace and security. This book represents one of the best efforts yet to understand why they emerge, persist, and, most important, end. The authors argue that de-escalation occurs when adversaries assume new understandings and expectations of their opponents. Such shifts sometimes occur after a crisis or shock pushes leaders in one or both states to question the viability of the conflict. The warming of U.S.-Chinese relations in the early 1970s, for example, was preceded by various shocks: the Tet offensive in Vietnam, Sino-Soviet border clashes, and the trauma of the Chinese Cultural Revolution. Shifts can also take place after new leaders come to power with new expectations, as was the case with the Egyptian-Israeli rivalry, which persisted for decades and subsided only after significant changes in both countries' governments. The book might lead readers to wonder what sort of shock in Northeast Asia might fundamentally reorient relations between North and South Korea.

The Sources of Social Power. Vol. 4, *Globalizations, 1945–2011*
BY MICHAEL MANN. Cambridge University Press, 2013, 496 pp. $99.00 (paper, $34.99).

With this volume, Mann, a renowned historical sociologist, completes his magisterial survey of power and society across human history, producing an almost breathtaking synthesis of modern history and social science that depicts the changing character of power and

social relations in the post-1945 world system. In Mann's view, that system is held up by three pillars: capitalism, the nation-state, and the United States, which Mann sees as the last remaining empire. Together, these three organizing forces drive forward globalization, the master process of the contemporary era. In this sense, globalization and the nation-state have been not rivals but companions, pushing and pulling the world into a single system. Mann argues that the United States is more willing to protect capitalism abroad than to safeguard democracy. But the book also shows a pragmatic American embrace of sovereignty and state capitalism among poorer nations, which allows for hegemonic, rather than imperial, U.S. domination. In the end, Mann thinks that a "multilateral order" will tackle global problems such as climate change better than a U.S.-centric one. This may be true, but after four seminal volumes about the role of power in world history, Mann's post-American vision is strangely devoid of a serious discussion of the realities of power.

Economic, Social, and Environmental

Richard N. Cooper

The Memoirs of Walter Bagehot
BY FRANK PROCHASKA. Yale University Press, 2013, 224 pp. $38.00.

Walter Bagehot (1826–77) is best known among economists for his oft-quoted views on how central banks should behave, in particular as lenders of last resort. He wrote prolifically—a few books, but mainly articles for quarterly magazines and for *The Economist*, of which he became editor in 1861. But he wrote no memoirs. This unusual book is what Prochaska imagines Bagehot, once dubbed "the greatest Victorian," might have produced. It provides a fascinating glimpse of British intellectual and practical life in the mid-nineteenth century, drawing extensively on Bagehot's writings (in which he often mused on an enormous range of subjects), his letters, and the diaries of his wife. Bagehot was a banker who loved literature and poetry and who was blessed with an active, inquiring mind, stimulated by what he observed around him. He believed that economic principles yielded powerful insights but that the dullness of economic writing obscured those insights and made them difficult to apply, a state of affairs he tried to correct as an editor and writer for *The Economist*—a tradition the magazine continues today.

How Much Have Global Problems Cost the World? A Scorecard From 1900 to 2050
EDITED BY BJORN LOMBORG. Cambridge University Press, 2013, 401 pp. $99.00 (paper, $34.99).

In this interesting collection, expert analysts assess the costs of ten global problems over the past century, measured in economic terms, and make projections about their costs in 2050 (or 2100 in the case of climate change). The ten problems are air pollution, armed conflict, climate change, threats to ecosystems and biodiversity, inadequate education, gender

inequality, illness, malnutrition, trade barriers, and poor water and sanitation. Putting aside armed conflict, the past century has been a good one, in the sense that the estimated costs of these various problems were much higher at the beginning of the century than at the end. The book's contributors expect such improvements to continue until the middle of this century, although they project that the costs associated with climate change will rise sharply toward the end of the century. The estimates the book provides are certain to be challenged, but there is value in its attempt to quantify the effects of problems that are typically discussed only in qualitative and often emotional terms and in the way it shows how much progress has been made—and how much further the world needs to go.

Dogfight: How Apple and Google Went to War and Started a Revolution
BY FRED VOGELSTEIN. Sarah Crichton Books, 2013, 272 pp. $27.00.

The Everything Store: Jeff Bezos and the Age of Amazon
BY BRAD STONE. Little, Brown, 2013, 384 pp. $28.00.

Amazon, Apple, and Google are three firms that have helped define the early twenty-first century. All three are smashingly successful thanks to the Internet, whose value they contributed to developing. All three U.S.-based start-ups hardly existed (or did not exist at all) 25 years ago but have now joined the ranks of the world's most highly valued firms. These easy-to-read books, written by accomplished and well-informed journalists, recount the companies' origins, their evolutions, their rivalries, and their dependence on the visions and persistence of their founders, all of whom represent distinctive styles of leadership. The books also offer tribute to the many other people who contributed to the companies' success and who typically became wealthy by working hard and by occasionally funding what began as highly uncertain ventures. The founders relied on quite different business models in the three cases, but they all pursued goals other than mere profitability, such as usefulness, beauty, and customer satisfaction. They were not inventors but rather innovators who were not bound by business conventions. It is worth remembering that people write books such as these about successful enterprises and not about the hundreds of similar efforts that did not succeed. But these success stories nevertheless provide encouragement to new efforts.

The Map and the Territory: Risk, Human Nature, and the Future of Forecasting
BY ALAN GREENSPAN. Penguin Press, 2013, 400 pp. $36.00.

Greenspan, who served as chair of the U.S. Federal Reserve from 1987 to 2006, is possibly unique among central bankers in having become a celebrity. He presided over nearly two decades of U.S. economic prosperity, guided by a monetary policy protected and defended by his profoundly Delphic pronouncements. An economic forecaster in private life, he had as good a grasp of the U.S. economy as anyone, perhaps even better—or so he thought. The financial crisis of 2008 was perhaps a greater shock to him than to many others,

precisely because his understanding turned out to be badly off the mark. This book is his attempt to come to terms with those traumatic events. He identifies psychological propensities that influence economic and financial behavior and tries to find patterns in those propensities that might provide guidance to future economic forecasters. In addition to examining his own failure to appreciate the irrational elements of a seemingly rational economic system, he reflects on many other issues: the U.S. political system, now stalled by its inability to reach necessary compromises; American technology and education; and the excessive size of today's largest financial institutions.

Action and Reaction in the World System: The Dynamics of Economic and Political Power
BY THIERRY DE MONTBRIAL. University of British Columbia Press, 2013, 376 pp. $95.00 (paper, $34.95).

This well-regarded book is now appearing in English, 12 years after its original publication in French. It is characteristic of fine French scholarship: abstract and logical but enlivened by numerous examples. The author tells readers how to think about problems in the current international political and economic system, but not exactly what to do about them. He is impressed by the system's complexity but believes it is unstable and fragile, since relatively small perturbations could (but not necessarily will) lead to large and disturbing changes in the alignments among states and between states and increasingly important nonstate entities. This is a dense but thoughtful and thought-provoking book.

Military, Scientific, and Technological

Lawrence D. Freedman

Arguments That Count: Physics, Computing, and Missile Defense, 1949–2012
BY REBECCA SLAYTON. MIT Press, 2013, 272 pp. $35.00.

In June 1985, a software engineer named David Parnas resigned from a panel established to evaluate the computer software used by U.S. President Ronald Reagan's antimissile Strategic Defense Initiative. Parnas objected to Reagan's "Star Wars" system because there was no sure way to remove the risk of a catastrophic failure, since there would be no way to find bugs in the system before it faced its first and possibly only great test. Why, asks Slayton, did it take so long for dilemmas like that one to take center stage in the debate over missile defense? She provides the answer in an original and engrossing study. Since the earliest days of thinking about missile defense, in the 1950s, the field had been dominated by physicists who were mostly preoccupied with the problem of identifying and tracking incoming warheads. Only when software specialists began to acquire more professional standing did their concerns come to the fore. In addition to providing new insights into the debate over missile defense, Slayton raises valuable questions about the broader interaction between scientific expertise and advocacy.

Wargames: From Gladiators to Gigabytes
BY MARTIN VAN CREVELD.
Cambridge University Press, 2013, 341 pp. $95.00 (paper, $27.99).

Van Creveld is incapable of writing an uninteresting book. His latest provides a history of war games, which he defines very broadly to include almost any activity that links play and conflict, from gladiatorial combat, to jousting, to chess, to hunting, and to all manner of reenactments and simulations. Games can be played for a variety of purposes, from pure entertainment to dispute resolution, and can also represent serious preparation for the main business of war by allowing participants to learn how to use weapons, develop tactics, and understand how to anticipate the way conflicts develop. The book is held together by the richness of the material and van Creveld's curiosity. Van Creveld is superb on the purposes and practices of gladiatorial combat and fascinating on how planners war-gamed some of the big moves of World War II; the Japanese, it turns out, first war-gamed an attack on Pearl Harbor in 1927. But van Creveld appears less comfortable exploring the world of computer games. And to judge from an awkward disquisition on why women have not been so enthusiastic about gaming, he should stay clear of gender issues.

The Value of Violence
BY BENJAMIN GINSBERG.
Prometheus Books, 2013, 222 pp. $24.95.

Ginsberg's book is a direct challenge to the optimism of the celebrated cognitive neuroscientist Steven Pinker, whose 2011 book, *The Better Angels of Our Nature,* argued that violence is playing a diminishing role in human affairs. Ginsberg counters that violence is essential both to transformational change and to the preservation of political and social order. Ginsberg stresses the importance of bureaucratic organization to effective violence and examines how apparently peaceful processes can still rest on the possibility of violence—for example, the risk that security forces will attack a peaceful antigovernment protest. Despite his book's title and his professed cynicism—which reads more like frustrated idealism—Ginsberg is not arguing that all violence is valuable: for example, he deals with the excesses of law enforcement agencies and criticizes U.S. foreign policy's overreliance on war. Ginsberg suggests that activities that governments characterize as legitimate alternatives to violence, such as exercising "soft power," in reality mostly serve as force multipliers. But this claim minimizes the qualitative differences between actual violence and coercive threats that simply set limits on behavior.

Thermonuclear Monarchy: Choosing Between Democracy and Doom
BY ELAINE SCARRY. Norton, 2014, 640 pp. $35.00.

This curious book addresses what Scarry describes as the incompatibility of nuclear weapons and democracy. But her knowledge of nuclear matters is superficial, and she says very little about the weapons, other than to draw attention to their awfulness and to the fragile, illegitimate, and dangerous structures that govern their possession

and potential use. The book is mainly a treatise on the social contract between individuals and governments. It includes some interesting ruminations on the sources of consent and on human behavior in emergencies. Even on such abstract matters, Scarry is reliably readable. But having underlined the absurdity of the nuclear condition, in which fallible human beings can inflict terrible destruction in a matter of minutes, she offers only a feeble remedy. Her proposal is to reassert those provisions of the U.S. Constitution that distribute responsibility for war-making among the population rather than concentrating it solely in the hands of the executive. She does not explain, however, how ordinary people in the United States and other nuclear countries might come to share her views, much less act on them.

Foreign Fighters: Transnational Identity in Civil Conflicts
BY DAVID MALET. Oxford University Press, 2013, 272 pp. $49.95.

The conflict in Syria is only the most recent civil war in which the presence of foreigners has had a major effect on the fighting. In his thorough exploration of why and how foreign fighters get involved in wars far away from their homes, Malet focuses on the importance of transnational identity and the need to support fellow members of a community under threat. His case studies include the Texas War of Independence (an inspired choice), the Spanish Civil War, the Israeli War of Independence, and Afghanistan from 1978 to 1992, with some concluding observations on Islamist participation in various recent conflicts in the Middle East. Three important themes emerge from this account. The first is the essential role played by organizations that recruit, train, and dispatch volunteers. The second is the importance of how conflicts are framed in determining whether volunteers can accept another's fight as their own. And the third is the tendency of indigenous and foreign fighters to eventually fall out with each other.

The United States

Walter Russell Mead

Duty: Memoirs of a Secretary at War
BY ROBERT GATES. Knopf, 2014, 640 pp. $35.00.

In this engaging and candid memoir of his time as U.S. secretary of defense in both the Bush and the Obama administrations, Gates offers some trenchant criticisms of the way executive and legislative policymakers have addressed the problems of the last eight years. Gates directs most of his ire at Congress and the Pentagon bureaucracy. In Gates' view, both institutions failed to respond to the wars of the last decade with sufficient energy and vision. Congress continued to focus on pork-barrel spending and narrow political interests at the expense of intelligent defense planning. The Pentagon bureaucracy resisted pressure to shift to a wartime footing, dragging its feet on urgent military needs and neglecting to adequately care for wounded warriors.

Gates found himself increasingly frustrated and came to see his main task as advocating for the frontline troops against the bureaucratic and political status quo. Young people who want to understand and live up to the highest ideals of American statesmanship would do well to read this book carefully; Gates has much to teach about the practical idealism that represents the best kind of American leadership.

Days of Fire: Bush and Cheney in the White House
BY PETER BAKER. Doubleday, 2013, 816 pp. $35.00 (paper, $17.95).

The George W. Bush era in U.S. politics was one of drama, conflict, and polarization. In producing the first comprehensive narrative history of what will surely remain one of the most controversial presidential administrations in U.S. history, Baker has done yeoman's service. All subsequent writers dealing with the subject will find his book indispensible. Focusing on the difficult and changing relationship between Bush and Vice President Dick Cheney, Baker sifts through the conflicting stories and memories of the main players to show how and why the administration responded to its challenges as it did. Like many observers, Baker sees a shift between the first and the second terms of the administration, as Cheney's influence declined and Bush's thinking gradually changed, especially on foreign policy. Many observers wondered which man was really in charge; Baker's conclusion, which will almost certainly stand the test of time, is that Bush is his own man and was responsible for the decisions made in his name.

The Great Debate: Edmund Burke, Thomas Paine, and the Birth of Right and Left
BY YUVAL LEVIN. Basic Books, 2013, 296 pp. $27.99.

In this lively and probing book, Levin, one of the most influential conservative writers in the United States, looks at the ideas of Edmund Burke and Thomas Paine, towering figures in the late-eighteenth-century transatlantic Enlightenment, which continues to shape the political discourse of the English-speaking world. Levin argues that for all their differences, Burke and Paine shared an overarching liberal worldview—and so do their ideological heirs, whether or not they realize it. Today's Tea Party conservatives, Levin argues, have much more in common with Paine's radicalism than with Burke's conservatism. But Levin also notes that Paine moved away from his libertarian, small-government views early in his career and urged a greater government role in protecting the poor and the aged from the economic vicissitudes of the Industrial Revolution. Today, the argument between the radical, humanist Paine and the cautious, tradition-minded Burke is played out on both the left and the right sides of the American political divide. *The Great Debate* won't settle any of the political disputes roiling U.S. politics today, but those who read it carefully will find it easier to understand their opponents—and perhaps even to find some common ground.

Simpler: The Future of Government
BY CASS R. SUNSTEIN. Simon & Schuster, 2013, 272 pp. $26.00.

Simpler brings together a collection of

what Sunstein, a Harvard Law School professor and former Obama administration official, calls his most controversial academic essays. The intellectual thread that runs throughout the essays, and the likely source of the controversy that surrounds Sunstein's work, is a kind of moral monism at the core of his thought. Unlike liberals of earlier generations—say, Isaiah Berlin—who believed that people prefer many different things and will never agree on what the good life is, Sunstein is committed to an almost Rousseauian idea of the general will. It is the job of intellectuals to discover the "right" answers to policy questions, to persuade the unenlightened to see things the correct way, and to develop laws and institutions to realize the general good. Reflecting an attitude that defines the Obama administration, Sunstein values liberty for heuristic purposes; he believes that free inquiry and debate help elucidate the correct solution to social issues. He does not have much sympathy for the belief that the diversity of human preferences makes liberty and pluralism ends in themselves rather than means to forging a consensus.

The American Senate: An Insider's History
BY NEIL MACNEIL AND RICHARD A. BAKER. Oxford University Press, 2013, 472 pp. $29.95.

This is a rich repository of information about the quirkiest branch of the U.S. government. The Founding Fathers believed that the House of Representatives would emerge as the more powerful of the two legislative chambers; instead, from early times, the Senate has overshadowed its larger partner. In the Senate's so-called golden age (roughly 1820 to 1854), debates among such giants as Daniel Webster, John Calhoun, and Henry Clay over slavery and the nature of the federal union transfixed the country, and the Senate became the chamber that addressed the most consequential questions of the day. In the twentieth century, the Senate maintained its supremacy over the House even as Congress as a whole lost ground to the presidency and the Supreme Court. For some, the Senate's overrepresentation of small states makes it suspect, and bitter fights over its arcane rules continue to draw criticism. Nevertheless, the Senate remains one of the founders' most successful creations, and *The American Senate* will help readers understand why.

Western Europe

Andrew Moravcsik

Turbulent and Mighty Continent: What Future for Europe?
BY ANTHONY GIDDENS. Polity, 2013, 224 pp. $22.95.

In this book, Giddens—an eminent British sociologist, a Labour Party member of the House of Lords, and the man often credited with coining the phrase "the third way"—seeks to renew the commitment of the British left to social democratic ideals and to European cooperation. His argument rests on solid premises: the EU helps nations manage and master interdependence; EU reforms should be federal, balancing

Brussels' power with national and local governments; and Europe is mightier (for good or bad) than most observers believe, so resolving its current malaise should be a concern even to the British. Yet Giddens' scheme for "a federal Europe, with the eurozone as its driving force" recycles tired slogans of the Brussels technocracy. He produces a familiar wish list that includes such things as a pan-European social welfare state that assures generational equity, standardized tax policies, new trade agreements, the admission of Turkey and other worthy countries to the union, and (in a surprisingly cursory conclusion) a deepening of the eurozone, largely at the expense of Germany. This vision looks good in theory but shows surprisingly little appreciation for the devilish details of how real-world politics work or for the tough tradeoffs imposed by today's political and economic climate.

Countrymen
BY BO LIDEGAARD. Knopf, 2013, 416 pp. $28.95.

This understated yet engaging book provides the best modern account of why, alone among all Nazi-occupied peoples, the Danes mobilized effective organized resistance to the Holocaust. They punished anti-Semites, evacuated most Danish Jews to nearby neutral Sweden, and interceded on behalf of the few unlucky enough to be deported to the concentration camp in Theresienstadt, in what was then Czechoslovakia. As a result, 99 percent of Danish Jews survived. These events have been subject to mythmaking over the decades, so Lidegaard's nuanced and sober account is most welcome. A critical factor in the Danish campaign was the social solidarity of the Danes, who reacted almost unanimously against the persecution of minorities. Danish leaders also organized the evacuation pragmatically, offering direct payments to fishermen who ferried Jews across the straits to Sweden. One surprise is the essential role played by the ambivalence of some local Nazis, who—perhaps aware that the war was not going well for their side—quietly looked the other way and, in a few cases, even leaked vital information to the resistance. This intelligent and uplifting tale reminds readers that a tight sense of community and identity can be a force for progressive tolerance in the modern world.

The EU and Military Operations: A Comparative Analysis
BY KATARINA ENGBERG. Routledge, 2014, 210 pp. $135.00.

Do not be daunted by this book's thick prose, which reflects the author's background as an experienced European diplomat with a doctorate in the field of peace and conflict studies. Engberg's analysis challenges the conventional wisdom about European defense policy. To explain why Europe is not more active militarily, many observers point to interstate disagreement, a lack of adequate defense materiel, and the absence of centralized EU institutions. This book explodes those myths. In fact, the major European states rarely disagree, let alone block one another, and the greatest constraint on their action stems from sensible and prudent caution, often due to local conditions

in the places where they seek to intervene. Moreover, European shortages of military materiel arise mostly because European forces are already active in so many places—including Afghanistan, Lebanon, Libya, and numerous African countries. Finally, although EU defense cooperation could be improved, it is remarkably well suited to its major role of backstopping the UN, NATO, and ad hoc "coalitions of the willing."

A Taste for Intrigue: The Multiple Lives of François Mitterrand
BY PHILIP SHORT. Henry Holt, 2014, 640 pp. $38.00.

When François Mitterrand was president of France, from 1981 until 1995, the most common adjective used to describe him was "Machiavellian." During his 50 years in politics, he seemed always to improvise the precise political alliances required to assure his own survival. The result was a series of paradoxes. The most successful Socialist leader of postwar France never fully renounced his lifelong links to Vichy collaborators, allied his party with the Communist Party only in order to destroy it, and ended up in a ruling coalition with right-wing parties. He socialized a third of the French economy, then turned around and privatized an even larger portion of it. He once came close to ruining his political career when he was double-crossed by someone he had hired to fake an assassination attempt on him. His personal life was just as tangled: he kept two families, one with his wife and the other with a mistress, while amicably sharing quarters with his wife's lover. Short has interviewed more insiders than anyone else. The resulting book lacks precision on Mitterrand's inner thoughts and on the policy challenges he faced, but it is the best account of the extraordinary machinations of this fascinating, ambiguous politician.

Western Hemisphere

Richard Feinberg

The Fight to Save Juárez: Life in the Heart of Mexico's Drug War
BY RICARDO C. AINSLIE. University of Texas Press, 2013, 296 pp. $25.00.

Ainslie's book is mainly a journalistic account of the horrific drug-related violence and deeply entrenched police corruption that have wracked the border town of Ciudad Juárez. This narrative is interspersed with compelling interviews with, among others, the city's besieged and courageous mayor, a sympathetic mistress of a successful drug trafficker, and a human rights activist. Between 2008 and 2010, the citizens of Juárez suffered through several intertwined struggles: turf battles between the Juárez and the Sinaloa cartels, between various levels of Mexican law enforcement, and between the cartels and the central Mexican state. In this Byzantine world, even the president of the country was accused of acting on behalf of one of the cartels. But Ainslie strongly believes that then President Felipe Calderón had no choice but to take on the increasingly powerful drug-trafficking organizations. Initially, the frightened citizens of Juárez welcomed the intervention of the army

and the federal police. But as the violence mounted, the voters elected an old-guard mayor with a reputation for collusion with the drug gangs, anticipating that he could negotiate a truce. The violence in Juárez has since abated, but the causes of this are the subject of heated debate.

Metropolitan Governance in the Federalist Americas: Strategies for Equitable and Integrated Development
EDITED BY PETER K. SPINK, PETER M. WARD, AND ROBERT H. WILSON. University of Notre Dame Press, 2012, 328 pp. $38.00.

Throughout the Western Hemisphere, frustration with dysfunctional national governments is inspiring a search for alternatives at the supranational, regional, and very local levels. This scholarly volume highlights the potential for good governance at an intermediate tier between the federal and the municipal levels: large metropolitan regions, which are well suited, the book's contributors assert, to address pressing collective-action problems, such as natural disasters, inefficient infrastructure, and the unequal provision of social services. But the six country studies (on Argentina, Brazil, Canada, Mexico, the United States, and Venezuela) uncover few reasons for hope. Sustained experiments with metropolitan governance are surprisingly few in number, and they often fail to meet the contributors' expectations. Several powerful forces appear to stand in the way: popular preferences for the national government or for very local politics, a lack of incentives to pioneer new institutions, inadequate metropolitan-level tax bases, and widespread reluctance to redistribute resources from wealthier to poorer areas. Apparently, the contributors' preferences, particularly for the purposeful redistribution of wealth, are not widely shared in any of the countries in question.

Quesadillas
BY JUAN PABLO VILLALOBOS. TRANSLATED BY ROSALIND HARVEY. Farrar, Straus and Giroux, 2014, 192 pp. $14.00.

Narrated by a clever teenage boy, *Quesadillas* is a satirical, tragicomic, bottom-up portrait of Mexico in the 1980s, in the waning years of the Institutional Revolutionary Party's dominance. In its treatment of youthful rebellion and alienation, the novel recalls J. D. Salinger's *The Catcher in the Rye*. But Villalobos places his unhappy teenage protagonist in a specific Latin American political setting that defines the character's social milieu and his family's dynamics. The boy's father, a high school civics teacher—poor, but not dirt poor—sits in front of his television and screams curses at fraudulent politicians and other phonies, while his mother bakes quesadillas whose quality fluctuates with the rate of inflation. The family loses their home as the result of a real estate scheme hatched by local elites. But the family itself is also appallingly dysfunctional: there are too many mouths to feed, there is constant bullying and deceit, the father's stubbornness and pride blind his decision-making, and the mother is an emotional basket case. Redemption comes only through fantasies allowed by the novel's magical realism.

Intimate Activism: The Struggle for Sexual Rights in Postrevolutionary Nicaragua
BY CYMENE HOWE. Duke University Press, 2013, 248 pp. $84.95 (paper, $23.95).

As a young anthropologist, Howe traveled to Nicaragua to investigate how rights typically codified in the developed world, especially sexual freedoms, might be reformulated in the developing world. "In a puzzling irony," Howe writes, she observed the Nicaraguan Congress pass a repressive anti-sodomy law in 1992, then overturn it in 2007, all while tightening strict anti-abortion laws that criminalize even interventions to protect the health of a pregnant woman. Thus, it appeared that the Roman Catholic Church, and not other, more contemporary social institutions, remained the most influential transnational moral force in Nicaragua, embraced even by the populist Sandinista president, Daniel Ortega. Howe also examines the role of foreign scholar-activists and nongovernmental organizations that depend on international funding. Their agendas have evolved radically over time, shifting from a focus on Marxist notions of social revolution in the 1960s and 1970s to the advocacy of individual rights and civil-society activism today. Of particular interest is Howe's reporting on three lesbian discussion groups, one hosted by a European-backed nongovernmental organization, another facilitated by local grass-roots activists, and a third convened in a rural setting. Throughout, Howe keenly observes "intimate pedagogies": small face-to-face meetings that address deeply personal aspects of people's lives.

Democracy in Latin America: Between Hope and Despair
BY IGNACIO WALKER. TRANSLATED BY KRYSTIN KRAUSE, HOLLY BIRD, AND SCOTT MAINWARING. University of Notre Dame Press, 2013, 280 pp. $38.00.

Offering much more hope than despair, these sophisticated reflections by a veteran Chilean scholar-politician—who currently serves in the country's Senate—seem especially pertinent after the landslide electoral victory of Michelle Bachelet, who was recently reelected to the office of president after holding it before, from 2006 until 2010. Walker's Christian Democratic Party will represent an integral part of Bachelet's governing coalition. His book provides a powerful exegesis of Chile's remarkable successes, emphasizing the importance of learning from painful mistakes and of responsible leadership. Walker faults the failure of scholars of Latin American affairs to predict or even explain the region's favorable outcomes. He rejects deterministic theories, many pessimistic, which had condemned Latin America to authoritarian politics and economic distress. Deploring irresponsible populism such as the type practiced by the late former president of Venezuela, Hugo Chávez, Walker highlights the more positive, dominant wave of democratic legitimacy. For Walker (and Bachelet), the challenges ahead are to make democratic institutions more effective for the average citizen and, by raising taxes and social spending, to build a more communitarian economy capable of providing enhanced, universal benefits.

Eastern Europe and Former Soviet Republics

Robert Legvold

Lost Enlightenment: Central Asia's Golden Age From the Arab Conquest to Tamerlane
BY S. FREDERICK STARR. Princeton University Press, 2013, 696 pp. $39.50.

In this graceful, luxuriant history, Starr recovers the stunning contributions of Central Asian scientists, architects, artists, engineers, and historians during the four centuries that began just before the Arab onslaught of the eighth century and lasted until the Mongol siege in the thirteenth century, a period when this now inglorious region was "the intellectual hub of the world." From this creative caldron came breakthroughs in astronomy that would later guide Christopher Columbus (and that anticipated the existence of the Americas seven centuries before his voyage); medical advances that would shape Renaissance European medicine and even a version of medicine practiced to this day in India; and remarkable achievements in optics, anthropology, mathematics, and geology. Starr focuses on the genius polymaths who dominated the era, stressing their diverse origins, which were related to Persian and Turkic culture as much as to Arabic culture. In the process, he highlights the importance of those Central Asian roots, which have long been glossed over by historians. The book offers a lucid exploration of the era's intricate philosophical and theological debates and a succinct depiction of its poetry and art, enhanced by many illustrations.

Red Fortress: History and Illusion in the Kremlin
BY CATHERINE MERRIDALE. Metropolitan Books, 2013, 528 pp. $35.00.

This book will enthrall anyone who has visited the Kremlin or gazed at pictures of it, presenting as it does a wonderfully detailed story of the fortress' many incarnations over the centuries. Merridale, however, does more than write an architectural history. She also embeds each phase of the citadel's transformation, from its origins in the twelfth century to today's era of Vladimir Putin, in the drama surrounding each of its autocratic overlords—the machinations swirling within the toxic circle of aristocrats, court servants, and church officials who made up life within the Kremlin. The result is a full-bodied history of the often macabre reigns of the tsars who made the Kremlin the seat and symbol of their power, until Peter the Great substituted his creation, St. Petersburg. Merridale then explores what happened to the Kremlin during the long interlude before Vladimir Lenin moved everything back to Moscow in 1918. The book is not a broad history of Russia but makes a large chunk of that story enjoyable and accessible.

State Erosion: Unlootable Resources and Unruly Elites in Central Asia
BY LAWRENCE P. MARKOWITZ. Cornell University Press, 2013, 216 pp. $45.00.

The countries of the former Soviet Union

form fertile ground for the study of how powerful security forces, opportunities for corruption and looting, and the tug of war between local bosses and central authorities can combine to produce fragile and sometimes failed states. Markowitz, using the cases of Uzbekistan and Tajikistan, stresses the importance of "immobile capital"—for example, cash crops such as cotton or coffee, which require the sanction and facilitation of officials high up in the food chain. When local authorities, security services, and senior officials collude to profit from the sale of these goods, the state, although warped and weakened, hangs together. When such resources are scarce and local elites cannot find any willing patrons ready to make deals, those elites compete among themselves, suborn the security forces in their regions, and turn their backs on central authority. Such, Markowitz maintains, is what happened in the Tajik civil war of the 1990s. He concludes by applying his theory to six other cases, in Eurasia, the Middle East, and Africa.

The Crooked Mirror: A Memoir of Polish-Jewish Reconciliation
BY LOUISE STEINMAN. Beacon Press, 2013, 240 pp. $26.95.

Sometimes, meaning emerges from analysis; other times, from searing, soul-shaking experience. Steinman is a secular, second-generation American Jew whose ancestors immigrated to the United States from Poland. Like many others who share her heritage, she grew up alternately dismissing and despising Poles and Poland for their assumed indifference to or, worse, complicity in the Holocaust. But beginning with a visit to Auschwitz in 2000, she undertook a series of pilgrimages to Poland that ultimately brought her to Radomsko, her family's ancestral hometown. There, she stood at the site of the synagogue where members of her extended family had been burned alive; walked through the cemetery where other relatives, bullets to the backs of their heads, had fallen into trenches they had been forced to dig; and viewed the railway station from which other family members had departed for the concentration camp in Treblinka. Steinman describes these visits as feeling like a "brick to the stomach," and the reader can feel it, too. No broad-based reconciliation takes place during her time in Poland, because she knows too well the role of anti-Semitism in the country's past and witnesses its lingering hold. But she achieves something close to peace with those struggling intensely to understand and rectify Poland's Jewish past.

The Myth of the Strong Leader: Political Leadership in the Modern Age
BY ARCHIE BROWN. Basic Books, 2014, 512 pp. $29.99.

Brown warns of the dangers of leaders who, whether in a democracy or a tyranny, seek to dominate policy and all those around them. The reality or the delusion of unchallenged power often leads to faulty policy and misfortune for those governed. Better, Brown insists, that a leader possess "a questioning mind, willingness to seek disparate views," flexibility, and courage, among other virtues. The argument is straightforward, but too rich and multidimensional to fit easily into conventional theory. Drawing

on a long academic career spent studying leaders, principally in authoritarian communist regimes but sometimes in democracies as well, he explores a multitude of factors that influence leadership, including political culture, the institutions of leadership, forms of government, and the "psychological dimension." He also presents three special categories of leaders: the "redefining" leader (who manages to effect "radical policy change"), the rarer "transformational" leader (who alters the domestic or international order itself), and the "revolutionary" leader (who, when in power, often becomes a distorted, high-cost version of the transformational leader). Brown concludes by judging success and failure among specific leaders in democratic, "hybrid," and authoritarian systems.

The Limits of Partnership: U.S.-Russian Relations in the Twenty-first Century
BY ANGELA E. STENT. Princeton University Press, 2014, 384 pp. $35.00.

Until now, there have been no broad-based studies of the vexed contemporary U.S.-Russian relationship in English—or, for that matter, in Russian. This volume fills that void admirably. It moves rapidly and succinctly over four U.S. presidential administrations, from that of George H. W. Bush to that of Barack Obama, attempting to understand why the "resets" with Russia undertaken by all four began with high expectations but ended each time with disappointment. Stent's analysis proceeds chronologically, lingering longest over the issues that most roiled the relationship, such as the Iraq war, the 2008 Georgian-Russian war, missile defense, and, more recently, the civil war in Syria. The heart of the problem, Stent argues, is the asymmetry in the two countries' economic power and military strength and the distance between their views of international realities. The relationship is also stymied by the inability of both sides to shake the legacy of the Cold War. Notwithstanding the genuinely important reasons Moscow and Washington have to cooperate, Stent contends that the relationship will remain a limited and troubled partnership as long as these obstacles are left in place.

Middle East

John Waterbury

After the Sheikhs: The Coming Collapse of the Gulf Monarchies
BY CHRISTOPHER M. DAVIDSON. Oxford University Press, 2013, 320 pp. $34.95.

Predicting business as usual is always the safest bet. Davidson follows a riskier path, predicting that the monarchies and emirates of the Arabian Peninsula will collapse within the next five years. As causes, he cites declining fossil fuel reserves, fiscally unsustainable social pacts, restive Shiite populations, alienated youth, and the impact of the Arab uprisings. But the evidence he presents is not convincing. Much depends on the nexus of declining fossil fuel revenues and outlays on social welfare. But Davidson shares no systematic data on either part of that

equation. And so far, the Arab uprisings have served to enhance, rather than undermine, the legitimacy of the Gulf monarchies. That said, the Sunni monarchy of Bahrain emerges as the one government whose grip on power seems most precarious, owing to the resistance of the country's oppressed Shiite majority. But Bahrain's ruling family has successfully wed itself to U.S. national security policy; the U.S. Navy's Fifth Fleet is based in Bahrain. If Davidson's predictions do materialize, the United States will be in an awkward position.

Shifting Sands: The United States in the Middle East
BY JOEL S. MIGDAL. Columbia University Press, 2014, 424 pp. $35.00.

Migdal's intriguing analysis rests on a somewhat revisionist take of the main phases of U.S. Middle East policy, which forces readers to reconsider some conventional wisdom. Migdal asserts that the U.S. strategic alliance with Israel began not during the Six-Day War, in 1967, but rather in 1970, when U.S. support for Israel's military buildup along its border with Jordan helped maintain stability during the regional conflict that grew out of the Black September revolt against the Jordanian monarchy. He also believes that the U.S.-Israeli strategic alliance actually ended with the 1990–91 Gulf War, when the United States forbade Israel from playing a role in responding to Iraq's invasion of Kuwait and told the Israelis to sit quietly even as Saddam Hussein rained missiles down on Israel. U.S. Presidents Ronald Reagan, George H. W. Bush, and Bill Clinton all missed the significance of the decline of Arab nationalism and the simultaneous rise of political Islam and non-Arab actors—namely, Iran and Turkey—in the Arab world. During the Clinton years and until the September 11 attacks, Washington's Middle East strategy was "rudderless." President George W. Bush, by contrast, had a rudder—but steered the ship in the wrong direction. Each of Migdal's assertions is plausible and sometimes surprising, but it is possible to employ his evidence to arrive at very different conclusions.

The Second Arab Awakening: And the Battle for Pluralism
BY MARWAN MUASHER. Yale University Press, 2014, 232 pp. $30.00.

Will the Middle East Implode?
BY MOHAMMED AYOOB. Polity Press, 2014, 136 pp. $45.00 (paper, $12.95).

These succinct and accessible texts explore the same terrain but use different guideposts. Muasher, a former foreign minister and former deputy prime minister of Jordan, has produced an optimistic liberal manifesto. Ayoob, a political scientist, is more pessimistic and sees looming chaos throughout the region.

The first Arab uprising of the last century, according to Muasher, achieved liberation from colonial rule but did not advance the causes of pluralism and democracy. It is up to the recent Arab uprisings, which he terms "the second Arab awakening," to advance that agenda. Doing so will take decades, he concedes, but he sees signs of a "third force" emerging that opposes both illiberal political Islam and the authoritarianism of the

old order. The fate of pluralism and democracy will rest largely, but not exclusively, in the hands of local actors, rather than outside powers. In contrast, Ayoob attributes far less agency to the people of the Arab world, arguing that the mostly negative interference of outside actors, such as the United States and Russia, has derailed the natural processes of internal evolution. He cites a possible U.S.-Israeli war against Iran and outside meddling in the Arab uprisings in Bahrain, Libya, and Syria as harbingers of a coming implosion. Both agree that political Islam is here to stay, that it must be accommodated, and that it can reconcile itself with democratic governance. Muasher wrote his book before the July 2013 military coup that brought down Egypt's Islamist president, Mohamed Morsi, but he would likely join Ayoob in condemning the plot. Both believe that excluding Islamists from the democratic game will push them toward violence. Both also see the unresolved Arab-Israeli conflict as a major obstacle to any evolution toward pluralism.

Both authors propose partial solutions to the conundrums they describe. Muasher calls for a thorough reform of Arab educational systems, which, he argues, inculcate subservience, intolerance, and uncritical rote learning. He joins Ayoob in calling for a solution to the Arab-Israeli conflict, although for Ayoob that would entail creating a single democratic state for the Israelis and the Palestinians to share, whereas Muasher supports the idea of two states for two peoples.

Civil Society in Syria and Iran: Activism in Authoritarian Contexts
EDITED BY PAUL AARTS AND FRANCESCO CAVATORTA. Lynne Rienner, 2012, 259 pp. $58.00 (paper, $22.50).

This collection calls into question, not always convincingly, a body of scholarship dubbed "transitology," which emphasizes the positive role played by civil society during the transitions to democracy in eastern Europe and Latin America. Contributors to this volume counter that in Iran and Syria, civil-society organizations are tools in "authoritarian upgrading"; rather than catalyzing transitions to democratic rule, they aid repression. For instance, Bassam Haddad points out that as Syria pursued neoliberal reforms in the early years of the last decade, the state fostered Islamic nongovernmental organizations to fulfill certain welfare functions. But the collection presents inconsistent evidence. For example, Salam Kawakibi and Paola Rivetti suggest that "government organized nongovernmental organizations" might in fact evolve toward autonomy and opposition to the state on specific issues. And Peyman Jafari shows that over time the state-sponsored Iran Chamber of Commerce, Industries, Mines, and Agriculture has become hostile to the quasi-state sector. But none of the authors grapples with the basic underlying question: Can authoritarian regimes evolve toward political liberalization, or is rupture (violent or otherwise) the only way to break their grip?

Asia and Pacific

Andrew J. Nathan

Taming Tibet: Landscape Transformation and the Gift of Chinese Development
BY EMILY T. YEH. Cornell University Press, 2013, 344 pp. $75.00 (paper, $26.95).

China's attempt to consolidate its control over Tibet through modernization has gone tragically awry. After pouring money into programs for a "new socialist countryside," "civilized cities," and "comfortable housing" and even a "gratitude education" campaign, Beijing faces resentment. Yeh digs beneath accurate but incomplete conventional narratives of ethnic prejudice and religious repression to show how development efforts in the region have affected relations between Tibetans and the ethnic Han who make up the majority of China's population. Entrepreneurial Han migrants to Tibet rent land and living space from residents and use government aid to start businesses, pushing local people to the economic margins. In response to Tibetan disaffection, the authorities have increased surveillance, making Tibetans feel "already guilty" just for looking and acting Tibetan. Drawing on anthropological theory, Yeh argues that development imposed from outside is "both present and poison."

Chinese Industrial Espionage: Technology Acquisition and Military Modernization
BY WILLIAM C. HANNAS, JAMES MULVENON, AND ANNA B. PUGLISI. Routledge, 2013, 302 pp. $155.00 (paper, $39.95).

This book rings alarm bells about technology theft on a scale that the authors say is unprecedented in history and that they believe has strategic implications. They claim that the U.S. government (for which two of the authors work) has underestimated the severity of the threat from China, prompting them to go public with a brief based entirely on open sources. Traditional espionage and hacking are only the most sensational techniques the Chinese authorities use to obtain proprietary information and technology. The others include employing a vast bureaucracy dedicated to collecting open-source material, demanding technology transfers from foreign investors in exchange for access to the Chinese market, participating in academic exchanges, and tapping ethnic Chinese professional and alumni associations in the West for intelligence. Innocent-sounding rhetoric about development and scholarship surrounds many of these activities, and many of the collection methods are legal. But the authors show that these intelligence and espionage activities constitute a strategic initiative guided from high levels of the Chinese government. They push back against what they anticipate will be charges of alarmism (and even racism) and argue that, so far, U.S. counterintelligence operations have been outmanned and outclassed.

38 North (www.38north.org)
U.S.-Korea Institute at the School of Advanced International Studies, Johns Hopkins University. Free online.

North Korea: Witness to Transformation (www.piie.com/blogs/nk)
BY MARCUS NOLAND AND STEPHAN HAGGARD. Peterson Institute for International Economics. Free online.

These websites offer unique insight into the North Korean enigma. Curated by the veteran diplomat and analyst Joel Wit and the North Korea scholar Jenny Town, 38 North posts vigorous short essays by accomplished North Korea watchers on the regime's internal political struggles, foreign policies, and weapons activities and the daily lives of the North Korean people. Contributors ponder strains in Beijing's relations with Pyongyang and offer suggestions for U.S. policy. The site also reviews books and debunks media myths. A special feature is a running analysis of commercial satellite imagery that often scoops the international news media with information about the status of North Korea's nuclear weapons and missile programs.

On the site Witness to Transformation, the economist Noland and the political economist Haggard update their important published research with postings on social and economic conditions in North Korea, food security, political events, Chinese and South Korean enterprises operating in the North, and the state of women's rights in the country. Some posts are grouped in separate categories labeled "Satire" and "Not Satire," which help tell fact from fiction when it comes to topics such as North Korean comic books, the former basketball star Dennis Rodman's odd friendship with Kim Jong Un, and the Kim family's personality cult.

Both sites are updated almost daily and allow users to subscribe to e-mail newsletters that carry links to new posts. Over the several years that both sites have been running, the news from North Korea has only gotten worse. Regular readers will be in a good position to understand whatever happens next.

Asian Maritime Strategies: Navigating Troubled Waters
BY BERNARD D. COLE. Naval Institute Press, 2013, 320 pp. $34.95.

Economic and technological changes are shrinking the Asian maritime commons. Cole reports that most of the littoral countries are building up their navies and coast guards. Lesser powers have acquired submarines and advanced tactical aircraft, although they seldom have clear strategies for using such technologies. Meanwhile, the region's big powers must confront strategic dilemmas, including an increasing risk of accidents and clashes. The United States might not be able to maintain its dominance of Asian waters if it also insists on keeping up its deployments elsewhere. Japan's navy takes second place to its coast guard when it comes to defending the country's maritime interests because the constitution and public opinion limit the use of explicitly military forces. The Indian navy remains a budgetary stepchild of land and air forces that focus on Pakistan, even as India sees growing competition from China in its home ocean. For its part, China faces so many security challenges in its near seas that it might not be able

to develop what it really wants: a "blue-water navy," which would be able to project power in distant seas.

China Mission: A Personal History From the Last Imperial Dynasty to the People's Republic
BY AUDREY RONNING TOPPING. Louisiana State University Press, 2013, 472 pp. $36.00.

Three generations of Ronnings have been involved with China, beginning with Topping's grandparents, Halvor and Hannah Ronning, who worked as missionaries in Hubei Province, in China's deep interior, from 1891 to 1908. Their letters, diaries, and family photos allow Topping to tell their stories in moving detail. She shifts skillfully back and forth from the intimate canvas of family love stories and tragedies, to the complex dynamics of rural Chinese society, to the wide frame of Chinese politics during the Boxer Rebellion. Her account brings to life an unfamiliar society that was primitive and cruel and a missionary enterprise that was dangerous and almost insanely ambitious. Yet Halvor and Hannah saved many lives, taught many children, and won many converts. The story continues with China-related episodes from the life of one of Halvor and Hannah's sons, Chester Ronning, a distinguished Canadian diplomat and Topping's father, and from the lives of Topping herself and her husband, Seymour Topping, both journalists who have been involved with China on and off since 1946. All three generations fought against the mutual contempt felt by many Westerners and Chinese for each other's cultures. This empathetic book continues that mission.

Uncharted Strait: The Future of China-Taiwan Relations
BY RICHARD C. BUSH. Brookings Institution Press, 2012, 450 pp. $36.95.

Bush's masterful assessment of Chinese-Taiwanese relations predicts that "the momentum of cooperation on stabilization that began when [Taiwanese President] Ma [Ying-jeou] took office in 2008 will decelerate and most likely stall." This was a prescient claim, as that is exactly what began to happen last summer, months after Bush's book was published, after the Taiwanese legislature balked at passing a cross-strait agreement on liberalizing trade in services. Bush terms the subjects on which the two sides reached deals before 2013 "the low-hanging fruit." Almost all the agreements concern economic affairs, with nothing substantive addressing politics. Progress has been further slowed by Ma's recently plummeting approval ratings, which are currently languishing in the mid-teens. Bush could not have foreseen the dramatic decline in Ma's popularity; indeed, no specialist has offered an adequate explanation for it. Ma's ineffectiveness must surely increase Beijing's worries. It might hasten the end of what Bush terms "the paradigm of mutual persuasion" and convince Chinese leaders to start exploiting their power advantage more aggressively. Bush's book offers an exceptionally lucid and comprehensive analysis of what such a shift would likely mean for the region.

DANIEL C. LYNCH

Africa

Nicolas van de Walle

The Great African Land Grab? Agricultural Investments and the Global Food System
BY LORENZO COTULA. Zed Books, 2013, 176 pp. $107.95 (paper, $22.95).

This measured book summarizes the extent of what is known about the recent evolution of the commercial market for land in sub-Saharan Africa—which is to say, very little. Urbanization and population growth, combined with the global boom in commodity and food prices, have increased the value of land on the world's least densely populated continent. The ambiguity of land titles and the weakness of property rights in the region provide openings for corrupt governments and avaricious local chiefs to wheel and deal with local and international investors. The losers in such arrangements are usually poor local populations who see their land expropriated without adequate compensation. Beyond those basic facts, the book offers mostly conjecture. Cotula concedes that no one really knows the total amount of land that has been sold since the supposed boom began during the last decade. Although a small number of massive land purchases by foreign governments and multinationals have made headlines and have led to an outraged narrative of "land grabbing," Cotula cites one study suggesting that a majority of the confirmed sales have gone to local investors and involved parcels no larger than 210 acres.

Making Citizens in Africa: Ethnicity, Gender, and National Identity in Ethiopia
BY LAHRA SMITH. Cambridge University Press, 2013, 276 pp. $85.00 (paper, $29.99).

Food and Agriculture in Ethiopia: Progress and Policy Challenges
EDITED BY PAUL DOROSH AND SHAHIDUR RASHID. University of Pennsylvania Press, 2013, 376 pp. $59.95.

Two very different books, both fascinating, attest to the socioeconomic and political progress Ethiopia has made during the last two decades—and to the enormous challenges still facing this country, whose more than 90 million people belong to 75 distinct ethnolinguistic groups and whose recent history includes civil war and several massive famines.

Smith examines the substantial expansion of what she calls "meaningful citizenship" in the country since the 1970s, by which she means the actual exercise of rights inscribed in formal institutions but too often ignored. The formal promulgation of those rights has begun to empower traditionally subordinate segments of society, such as women and certain ethnic groups. Smith is cautiously optimistic, recognizing that progress slowed down during the contentious final years of Meles Zenawi's tenure as the country's strongman, which ended with his death in 2012. One particularly worthwhile chapter narrates the evolution of the role of ethnicity in Ethiopian politics and includes a nuanced analysis of the interaction between cultural norms and formal institutions in shaping the role of women in the country.

In their analysis of Ethiopian agriculture, the contributors to Dorosh and

Rashid's collection say little about the country's ethnic or gender inequality, preferring instead to focus on less contested topics. The book describes the appreciable effects of the Meles government's economic policies over the course of the last two decades, in particular its comprehensive food policy. Meles made substantial investments in rural infrastructure, liberalized agricultural pricing policies, and put in place an early warning system to combat food shortages. Partly as a result, the country witnessed a substantial decline in poverty and an improvement in food security. Massive famines such as those of the 1970s and 1980s now seem virtually inconceivable. But here, too, the story is one of many remaining challenges; as Dorosh and Rashid note, 45 percent of the population remains undernourished.

Foreign Intervention in Africa: From the Cold War to the War on Terror
BY ELIZABETH SCHMIDT. Cambridge University Press, 2013, 284 pp. $80.00 (paper, $27.99).

Schmidt's history of military intervention in the region during the last half century breaks no new empirical or theoretical ground, but it does provide a good introduction to the Africa policies of outside powers. She starts with the interventions that accompanied the decolonization of the parts of the continent long dominated by Belgium, France, and the United Kingdom (with a particularly good chapter on the Congo crisis in the early 1960s), then examines the conflicts surrounding the later decolonization of Portuguese-speaking Africa and the end of apartheid in South Africa. She finishes with a chapter on the African dimension of the U.S.-led "war on terror." Schmidt assumes that economic interests motivated the outside powers that intervened in Africa during these conflicts, argues that such powers have almost invariably relied on the collusion and collaboration of local actors, and concludes that the interventions have usually had devastating effects on the continent. But she does not integrate her critique into a broader analysis of Africa's international relations, barely mentioning foreign aid and humanitarian assistance and disregarding the effects of external support from the UN and regional peacekeeping forces.

Inside African Politics
BY PIERRE ENGLEBERT AND KEVIN C. DUNN. Lynne Rienner, 2013, 451 pp. $75.00 (paper, $32.50).

Academics no longer need lament the absence of a good textbook on African politics for undergraduates. Englebert and Dunn have produced what will no doubt become the standard text for years to come: a sharply written, well-informed, and completely up-to-date book that should find a wide audience beyond the classroom, as well. Exceptional scholars in their own right, Englebert and Dunn introduce the reader to a wide variety of debates about the region, which they examine evenhandedly and with a minimum of jargon. The discussions of civil conflict and security issues are particularly good. The authors reveal how breakdowns of law and order are intimately connected to failed projects of national integration and state formation, and they place specific conflicts in their proper regional and international contexts.

Letters to the Editor

JUST THE FACTS

To the Editor:

Harold Koh and Michael Doyle, in their response to our article "The War of Law" ("The Case for International Law," November/December 2013), have responded to arguments that aren't ours. We did not make them and do not subscribe to them.

We never said that transnationalists are undermining American principles "by promoting U.S. compliance with international law." We never opposed "due respect to the laws that [govern] peaceable relations among sovereign states." We never contended that constitutional values "are threatened by adherence to international law." Our imaginations are not titillated by the "pipe dream of an autonomous nation that could ignore international law."

We did say that "Americans can benefit from international cooperation that is rooted in countries' widespread acceptance of useful rules of the road. But U.S. officials should adopt such rules, as they do with domestic legislation, through democratic processes." We do believe that in determining which international laws are applicable to the United States, Americans should use the normal processes of American liberal democracy rather than follow the transnational legal process and its interpretive communities, as described by Koh.

Scholarly argument over the so-called new international law has raged ever since the legal scholars Jack Goldsmith and Curtis Bradley published an influential article on the topic in 1997. International law is different in important ways from domestic law. Its meaning is frequently contested, yet there is often no way to resolve disputes definitively.

We argued against new approaches to international law that aim to put legislative power in the hands of people who are not accountable to American voters, whether those people are U.S. officials in the executive branch, judges, officials of foreign governments, or leaders of multinational organizations. Our argument was for constitutional democracy. And that should be easily understood by anyone who reads our article without preconceptions.

JON KYL
Senior Adviser, Covington & Burling, and U.S. Senator from Arizona, 1995–2013
DOUGLAS J. FEITH
Senior Fellow, Hudson Institute, and U.S. Undersecretary of Defense for Policy, 2001–5
JOHN FONTE
Senior Fellow, Hudson Institute

STATUS CONSCIOUS

To the Editor:

In his critical yet sympathetic review of Perry Anderson's *The Indian Ideology* ("India and Ideology," November/December 2013), Pankaj Mishra does not challenge Anderson's faulty assertion that a "rigid social hierarchy was the basis of [India's] original democratic stability."

After India's independence brought about universal suffrage, the country's first five general elections, which took place between 1952 and 1972, brought about a massive social revolution. India effectively transitioned from a Brahman raj (upper-caste elite rule) to a Sudra

raj (lower-caste rule). These groups constituted some 80 percent of the population; building on existing local caste associations, they participated in electoral politics on a massive scale.

The result was that they elected their own to office. Lower-caste leaders, such as Kumaraswami Kamaraj in Madras (now Chennai), Kapoori Thakur in Bihar, and D. Devaraj Urs in Karnataka, became chief ministers of their home states. And of course, new social policies placed Dalits and other so-called backward classes in government jobs and universities, opening the way to middle-class careers.

India's "original democratic stability" was thus the result not of a "rigid social hierarchy" but of a remarkable participatory pluralism that gave lower castes access to political power and the status and benefits that came with it.

SUSANNE HOEBER RUDOLPH
William Benton Distinguished Service Professor of Political Science, Emerita, University of Chicago
LLOYD I. RUDOLPH
Professor Emeritus of Political Science, University of Chicago

IMMIGRATION MATTERS

To the Editor:

Jagdish Bhagwati and Francisco Rivera-Batiz ("A Kinder, Gentler Immigration Policy," November/December 2013) recommend that the United States stop trying to prevent illegal immigrants from entering the country, since that will never work, and instead let the states compete for them. This alluring proposal requires some judicious examination.

The authors begin by dismissing the Senate-passed comprehensive immigration reform bill. Even in the unlikely event that the bill was passed by the House, they argue, it would work no better than the 1986 law did. Although many experts are likely to disagree with this conclusion, it is these authors' main justification for turning immigration policy over to the states. Yet immigration is clearly a federal responsibility. Although states may choose whether or not to provide illegal immigrants with driver's licenses, for example, they cannot provide citizenship, passports, or refugee status.

The authors also argue that as long as immigration restrictions exist, people will continue to enter the United States illegally. But if Bhagwati and Rivera-Batiz favor open borders, they should have said so explicitly, or at least spelled out their position on border enforcement. Moreover, the policy they propose could produce the opposite of its intended effect. With the states competing, illegal immigration could increase substantially.

Finally, Bhagwati and Rivera-Batiz do not consider the potential application of their arguments to other countries that restrict immigration, such as India, Israel, and Italy. They do not explain why the governments of such countries have not considered their recommended approach. Despite their proposal's shortcomings, however, the authors provide a fresh look at a vital issue.

JOSEPH CHAMIE
Former Director, UN Population Division, and former Editor, International Migration Review

Bhagwati and Rivera-Batiz reply:

Joseph Chamie misreads us. First, he argues that we would turn over immigration policy to the states. We would not. As the Supreme Court has ruled,

the federal government controls immigration policy. However, many state-level policies directly and indirectly affect illegal immigrants, especially those policies that regulate access to state and local government services. For example, a number of states, including California and New Jersey, have allowed illegal immigrants to compete for university scholarships. Many other states do not.

Chamie also argues that we favor open borders. Our piece does not propose open borders; it recognizes that border enforcement has diminishing marginal returns. Over the past 20 years, massive increases in funding for border enforcement have failed to reduce illegal immigration.

Finally, Chamie argues that local policies regarding immigrants do not exist in other countries. But they do: Australia allows regions to independently sponsor immigrants depending on local needs, and Canada permits provinces to negotiate immigration quotas with the federal government.

INTERVENTION RULES

To the Editor:

Michael Mazarr ("The Rise and Fall of the Failed-State Paradigm," January/February 2014) argues that Washington's interventions over the past decade have distracted the United States from what should be its core mission: stabilizing the international system. Yet although these interventions were indeed plagued by mistakes and fell short of expectations, the United States should not overcorrect. It must be able to protect its interests in weak states, even if large-scale interventions remain unlikely.

Military intervention is not a fad; it has been a key feature of U.S. foreign policy since at least World War II, well before what Mazarr calls the "decade of distraction." Whether to defend human rights, fight communism, or counter terrorism, the United States has intervened in weak states time and again. The current backlash against state building is therefore unlikely to last, especially since terrorism, the true driver of U.S. national security strategy over the last decade, is still tied to at least 15 weak states.

As Washington refocuses its attention on balancing rising powers, it should not assume that traditional wars will be more likely than wars in weak states. The U.S. military needs to be able to conduct a full range of combat operations, including counterinsurgency. The odds of a traditional war, especially with another nuclear power, remain low. If the United States were to wage war against a second-tier power, such as Iran, the U.S. military's technological edge and combat experience would allow the United States to win—at least before an insurgency began. And if Washington went to war with a first-tier power, such as China, the conflict would probably not play out on the ground. Since 1945, nuclear deterrence has severely constrained great-power conflict, and it will most likely continue to do so.

The United States should consider intervention in weak states a reduced yet significant concern. As Mazarr himself notes, his argument does not "suggest that a concern for the problems posed by weak or failing states can or should disappear entirely from the U.S. foreign policy and national security agendas." But I would go further. The United States needs to understand which elements of state building are essential to its future security. Core state-building capabilities, organiza-

tions, doctrines, and personnel must be protected. The U.S. military should not have to relearn the painful lessons of the past decade. Given the United States' long history of interventions, the low probability of a great-power war, and ongoing problems with terrorism, weak states are likely to trouble U.S. diplomats and generals for many decades to come.

CARTER MALKASIAN
Center for Naval Analyses

BORDERLINE DOUBLE STANDARD

To the Editor:

Matthias Matthijs ("David Cameron's Dangerous Game," September/October 2013) suggests that a British exit from the EU would be "disastrous" for the United Kingdom. Imagine the outcry from Washington were the United Kingdom to press Mexico's case for unimpeded entry of its nationals into the United States. The North American Free Trade Agreement has no provision for the free movement of labor, and no American or Canadian politician would dare suggest such a policy. In contrast, the free movement of people is a bedrock principle of the EU. Yet the U.S. government openly urges the United Kingdom to remain part of the ever-expanding union.

So far, the United Kingdom's debate over the EU has failed to address the key issue of sovereignty, the most fundamental aspect of which is the ability to control who can reside in a country. All else is trivia.

YUGO KOVACH
Winterborne Houghton, United Kingdom

FOR THE RECORD

Mitchell Orenstein's article on Poland (January/February 2014) referenced the country's 2013 Ease of Doing Business Index ranking (55th) rather than its 2014 ranking (45th). Moreover, the World Bank's associated report says that Poland requires four government procedures to register some businesses, whereas the article stated that it requires as many as 33 separate stamps from various government agencies.

A January/February 2014 article ("NAFTA's Mixed Record") misstated the growth in Mexico's per capita income between 1994 and 2012. According to the World Bank, during that period, the country's per capita income rose from $6,932 to $8,397 in constant U.S. dollars, an average yearly rate of 1.2 percent.

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