U.S.–Mexico Futures Forum 2008
Ovshinsky and Alternative Energy
Orozco’s ‘Epic of American Civilization’
# Berkeley Review of Latin American Studies

## Spring 2008

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Front cover: Boy with sun. Photo by Jinaa Ibraheem.
Climate change and alternative energy are two themes that are featured in this issue and that ran through our spring 2008 program.

The Center was very honored to host Stanford R. Ovshinsky, a defining figure in the science and technology of alternative energy. His contributions pioneered a new area of physics and encompass what he calls the hydrogen economy. His technological innovations include a machine the length of a football field that churns out thin-film solar arrays by the mile and the nickel metal hydride battery that powers virtually all hybrid vehicles on the road today. While Ovshinsky emphasized the dangers and irreversibility of global warming, he pointed to alternative energy technologies as key to both development and the environment in Latin America. For him, harnessing the energy of the sun is the route to a better world, and his ground-breaking work has taken us an impressive way down that path. Three articles in this Review cover his talk, scientific contribution and remarkable career.

Alternative energy was also a central theme at the fifth U.S.–Mexico Futures Forum, held in Mexico City at the end of March. Forum participants discussed the challenges facing Mexico’s troubled oil industry and the possibilities for innovative uses of alternative energy on both sides of the border. “Policy is going to be the place where we win or lose the global warming battle,” maintained Daniel Kammen, the Class of 1935 Distinguished Professor of Energy at UC Berkeley and a presenter at the energy session. “You get more jobs when you invest in energy efficiency and renewables.”

Forum participants also explored new directions for immigration reform, reflecting on the meltdown in the U.S. Congress in 2007 and the best approaches for addressing this contentious but critical issue in the future. The challenge of drugs and violence for both Mexico and the United States was the focus of a third session that ranged from the destructive effects of drug violence on Mexican communities in general, and on journalists in particular, to the policy choices both countries face. Several articles reflecting the themes raised by the Forum comprise a special section in this issue of the Review.

Juan Gabriel Valdés, Chile’s Permanent Representative to the United Nations (2000–03) and now the country’s Director of Public Diplomacy, was in residence for a week and engaged the topic “Where Is Latin America Heading?” in a public talk. He raised the paradox of an outpouring of popular participation throughout the region—strengthening democracy — combined with a crisis of representation.

Jacquelynn Baas, the Director Emeritus of the UC Berkeley Art Museum and Pacific Film Archive, tells the story of the great Mexican muralist, José Clemente Orozco and “The Epic of American Civilization,” his extraordinary series of murals at Dartmouth College, in an article and photo spread at the center of this issue.

And, finally, we conclude with an excerpt from “State of the Planet,” a poem by UC Berkeley English Professor Robert Hass that was part of his most recent collection Time and Materials, which won the 2008 Pulitzer Prize for poetry.

— Harley Shaiken
The U.S.–Mexico Futures Forum
The United States and Mexico share a complex history, increasingly integrated economies, cultures that spill over boundaries and a 2,000-mile border. While we are inextricably bound together, the title of Alan Riding’s 1985 book about Mexico still seems apt: *Distant Neighbors*.

The U.S.–Mexico Futures Forum, now in its seventh year, seeks to shrink that distance. The Forum — jointly organized by the Center for Latin American Studies (CLAS) at the University of California, Berkeley and the International Studies Department at the Instituto Tecnológico Autónomo de México (ITAM) and funded by the Rockefeller Foundation and the William and Flora Hewlett Foundation — brings together scholars and political leaders, public intellectuals and journalists, leaders from social movements and business executives. The participants include those with long experience analyzing the U.S.–Mexico relationship and those who bring a fresh perspective to the table.

The goal of the Forum is to establish an ongoing dialogue and to develop creative approaches to the issues facing the U.S. and Mexico. These goals are realized through a year-round public program on the UC Berkeley campus, working groups and research projects, publications, a website and meetings that alternate between the two countries.

The fifth meeting of the Futures Forum took place in Mexico City at the end of March 2008. A special section of this Review reports on these discussions.
with the United States in the midst of a presidential election and Mexico consumed by its own pressing issues, U.S.–Mexico relations have slipped off the political agenda. That said, the social and economic ties between Mexico and the United States continue to pull us closer, and underlying cross-border issues affect millions in their everyday lives. For the 30 or so participants and presenters at this year’s U.S.–Mexico Futures Forum, this proved an unusually important time to address key issues and seek to develop creative perspectives. Three policy areas dominated this year’s discussions: Pemex and alternative energy, immigration reform and drugs and violence. Whatever the state of the relationship today, there was a sense that the election of a new U.S. president in November could provide a window of opportunity to address issues critical to both countries.

Pemex and Alternative Energy

The unifying theme — perhaps surprisingly — of the discussions on energy policy at the Futures Forum was the inextricable link between the issues of global alternative energy and Pemex, Mexico’s troubled oil monopoly.

For Mexico, the most immediate and pressing energy policy concerns involve the future of Pemex in the face of declining oil production as well as repeated and ongoing charges of corruption. Although matters related to Pemex are primarily domestic issues with tremendous political and economic implications for Mexico, they also have cross-border relevance, not least because Mexico is among the largest suppliers of oil to the United States. More generally, as established by Miriam Grunstein, an attorney and professor of Energy Law at ITAM, and by the eminent Cuauhtémoc Cárdenas, no economic or environmental issues can be considered without addressing Pemex, given that the oil company contributes more than half of its revenues to the Mexican state, accounting for 40 percent of the government’s income.

The largest unaddressed environmental and economic issues for both Mexico and the U.S. may be related to the looming threats posed by global climate change. In his presentation, UC Berkeley’s Professor Daniel Kammen made a forceful argument that only deliberate, transnational energy policy adopted at multiple levels of government could head off the impending climate crisis. Many participants supported his view, including Congresswoman Linda Sánchez. Moreover, as Kammen and others noted in discussion, the Mexican economy could benefit from the implementation of a “green policy,” with the creation of high-skilled jobs providing a vehicle for a high-road path to development.

As Forum participants traded ideas for solutions, their proposals ranged from the immediately pragmatic to the longterm and visionary. Grunstein and Cárdenas both offered different suggestions for revitalizing Pemex. Grunstein was of the opinion that the Mexican constitution should be amended to explicitly allow foreign companies to exploit oil resources. Cárdenas, however, countered that such changes were not only highly unlikely but also unnecessary. He proposed that the unexpected surplus generated by Pemex from high oil prices be reinvested in new technology and oil exploration.

Transformative proposals involving alternative energy also emerged in the discussion. Martha Delgado, Mexico City’s Minister of the Environment, argued for a move from a short-term to a longterm view. She maintained that conserving and diversifying energy sources is just as essential as preserving oil for future generations. Contributing an important framing point that is also relevant to the other issues discussed at the Forum, former House Democratic whip David Bonior observed that energy had been left out of Nafta, the current legal framework for U.S.–Mexico relations. He suggested that just as the European Union began with cooperation on coal and steel, the U.S. and Mexico should launch a joint energy project. As a symbolic first step, Forum co-convener Professor Harley Shaiken of UC Berkeley proposed a pilot, cross-border collaboration.

Picking up on Kammen’s observation that Mexico has tremendous untapped solar potential in its northern region, Shaiken offered the idea of a joint U.S.–Mexico investment in a solar installation that would provide a concrete example of how alternative energy can mitigate carbon emissions while generating a new source of jobs.

Perhaps most surprising, however, was Kammen’s response to a question put by Clyde Prestowitz, president of the Economic Strategy Institute, based on the assumption that Kammen would welcome Pemex’s demise. On the contrary, Kammen maintained, the money and expertise to develop alternative energy rests with the large oil companies.
The current increase in energy costs is the second large-scale upheaval we have seen in the energy sector. The first “shock” was the OPEC oil crisis of the 1970s and early 1980s. In retrospect, it is clear that the OPEC crisis was driven by economic and political factors rather than an absolute scarcity of resources. In many ways, this distinction is akin to Nobel Laureate Amartya Sen’s classification of famines which differentiates between those caused by a shortage of absolute food resources and those prompted by a lack of “food availability,” with the latter a matter of politics and logistics, not total global resources.

In contrast to the crisis of three decades ago, the run-up we’re seeing now — while it certainly has political elements — is driven by a much broader set of factors. To begin with, competition for energy resources has intensified. Supplies, at least of conventional oil, are also dwindling, but the supply of unconventional fuels, such as heavy oil, tar sands, shale oil and fuels made from coal is truly vast.

In fact, with these resources taken into account, the world has not used roughly half of the available oil as the “Peak Oil” story suggests, but less than one-fortieth of the total. The problem is we are running out of atmosphere far faster than we are running out of dirty fossil fuels to burn. And so, in Tom Friedman’s words, “this is not your grandfather’s energy crisis. No, this is something so much bigger…” The overriding consensus is that oil prices will not drop back to the $20, $30 or even the $40 or $50 per barrel range. We’re much more likely to see $150 per barrel than we are ever to see $50 per barrel again. This fundamentally changes the debate about our energy future.

In fact, the debate is broader than just where the oil prices are going to go and who is going to make a lot of money on the deal. The standard night-picture of the Northern Hemisphere (above) clearly represents Mexico and the United States but also includes Canada, the single largest source of U.S. oil and the producer of over one
There is more oil in Canada than in all of Saudi Arabia and, per gallon, it is even more damaging to the environment than gasoline. The reason, therefore, to include all three nations in a close, petro-political debate is that energy security in the Americas involves Canada as critically as it involves Mexico and the United States.

Given the fact that the United States now consumes a quarter of the world’s oil — and those numbers are expected to rise — it’s clear that we have a complicated situation. Unfortunately, we have a situation now where the limiting factor is not the price of oil but the environmental impacts of the carbon economy, which are going in an exceedingly problematic direction.

Despite the lack of aggressive policies from many countries to make their economies more energy efficient and less-carbon-emitting, those of us who are concerned about global warming had been able to take some consolation from the fact that we’ve had about a hundred-year run where the amount of carbon admitted to the atmosphere by the global economy had been decreasing. On the graph below, this trend is indicated by the slowly decreasing line called the decarbonization curve. We were getting more efficient; it was getting less-carbon-intensive to make a dollar or a peso of GNP.

Unfortunately, over the last decade, that trend has stopped. And there’s nothing more frightening for people who think about energy and climate change than to see that — in spite of all of the good press that California, much of Europe, Japan and now Australia are getting for enacting very impressive climate and energy policies — the trend is going in the other direction. This is a global graph. This is not picking out one’s favorite region. The graph clearly shows that the global trend is no longer toward decarbonization. That trend has stopped. And it’s not just because of policies in the United States. It’s also due to the dramatic run-up in India and China. But together these factors are working in exactly the opposite way of how the science shows we need to go.

And, outside of a few buildings in Washington, D.C., the climate science debate is over. We have politicians, including our governor, Arnold Schwarzenegger, saying, “The science is in; it’s time to move on.” What we don’t know is how rapidly climate change is going to happen. We don’t know how dramatic its effects will be. We may never know whether Hurricane Katrina was 10 percent, 0 percent or 100 percent due to global warming, but we know events like that are going to become more frequent. Western forest fires, the forest fires in Greece — all of these events, whether they began by arson or not, are going to be more common in the future. So the economic cost of this fossil-fuel-intensive economy will rise.

And unfortunately, the features that we’re seeing on the overall energy budget side are also frightening. Since the 1970s, when scientists began really charting these numbers, we have seen an increase of greenhouse gasses in the atmosphere of about 1 part per million per year. That number had increased somewhat during the intervening decades, but
in the last six or seven years it has nearly doubled. A large fraction of this increase is due to overall economic growth, but the natural system that sucks up those greenhouse gasses is also deteriorating. Changing wind patterns in Antarctica, changing forest patterns; there is globally significant evidence that our natural world’s ability to absorb our fossil fuel signature is being degraded.

The baseline story is very problematic. And even though it is easy to get caught up in the short-term and critically important events around security and 9/11, I don’t have any qualms in predicting that by 2050, 9/11 will be a minor footnote in history compared to what we did or didn’t do about creating a low-carbon economy. As an aside, but a vitally important one, this is one of the reasons why the 2008 U.S. presidential election, which will almost certainly reshape U.S. energy policy, is of such global importance.

The problem is not just the dramatic run-up in the amount of natural gas we’re using or the run-up in the amount of oil we’re using. The problem is that, without strong policy, what high energy prices may do is enrich a few individuals and companies who have made a good play in the wind or the solar or the carbon sequestration industries without fundamentally changing the economy. These efforts won’t change the basic problems we’re talking about here, whether oil is $99 a barrel or $105 or $80. That’s minor compared to the economic costs, the immigration costs, the social costs of the environmental problems that we’re setting up for ourselves.

The North American example I’ve chosen is not in Mexico or the U.S. but in Alberta, Canada. There is more oil in the ground in Alberta than there is in Saudi Arabia, but it’s in solid form. Basically 10 percent of the soil is oil by weight. And it is so full of pollutants that huge pyramids of sulfur are piling up at the site where they separate out the usable oil in order to send it to the United States. Alberta is now sending one million barrels of oil to the United States per day. And that wouldn’t have happened when oil was $40 or even $50 a barrel because it takes $30 a barrel to separate out this dirt. If we ever get through burning up the oil in Alberta, there’s a harder to get at but equally large supply in Venezuela. So
essentially we’ve just discovered two additional Saudi Arabias out there. And the reason this is a worry is that high oil prices make these sorts of technologies and these sorts of supplies much more accessible, and oil from tar sands is much easier to incorporate into the economy than large amounts of wind or solar power, no matter how attractive those resources are.

Policy is going to be the place where we win or lose the global warming battle. It’s not going to be won by waiting for a wonderful scientist or engineer to come up with cold fusion or the magic battery or the miracle wind turbine. It’s going to be a policy battle, first and foremost. And that’s a sobering thought because, in this area, policy in the United States moves slowly and has historically moved slowly.

Global climate agreements pose a difficult challenge for the incoming U.S. president. The United States did not participate in the Kyoto Protocol, and the next stage of that agreement has already begun. The December 2007 meeting in Bali generated what is called the “Bali Roadmap,” which is supposed to produce a treaty to be signed in Copenhagen in November and December of 2009. That gives the next administration literally eight months to: 1) come up with a workable way to reengage the United States; 2) sort it out with a host of less-than-useful actors who are in important U.S. government positions; and 3) convince the European, Mexican, Canadian and Asian governments that we’re serious about this process. This is a very complicated thing to do: those who have served in administrations know how long it can take just to move out the previous set of people and get the new ones in, even in easy times.

The Copenhagen Protocol puts a much more complicated spin on things. While all of the U.S. presidential candidates are pretty good on this issue — you might want to talk about relative goodness, but in terms of energy policy per se, Obama, Clinton and McCain are all pretty reasonable — but this problem of getting the U.S. into a position where we’re serious is going to be an incredible challenge.

One significant tool that policymakers have at their disposal to reach the goals set forth in the Bali Roadmap is energy efficiency, which has been proven to work in Mexico, the United States and around the world. There are some parts of the United States and Europe where per capita energy use has remained constant since the 1970s. Despite the global run-up in energy use, we’ve seen an actual flat line in terms of new energy needed per person. And that’s come through better light bulbs, better meters, better pricing policies — a whole variety of things. In Australia, for example, there is a new campaign to outlaw the incandescent light bulb. There have been a whole variety of similarly dramatic changes.

Furthermore, better energy performance and better service are actually working together. The Moscone Center in San Francisco is a case in point. One side uses new, efficient light bulbs and timers; the other uses the old light bulbs and timers. The quality of purpose on the left side is better and saves the city $400,000 a year. There are lots of examples like this. So the old debate that “it’s going to cost you more” is false.

In 2006, Governor Schwarzenegger, “the Jolly Green Giant,” passed Assembly Bill 32, the most significant greenhouse gas law in the United States, that calls for California to essentially admit that we should’ve gotten serious about the Kyoto Protocol and to make up for it. Assembly Bill 32, the Pavley-Nuñez Bill, calls for California to reduce its emissions back to 1990 levels by 2020. So we have 12 years to cut our greenhouse gas emissions by roughly 25 percent. That’s going to be a huge effort. And the big part of the story is that this 25 percent cut is not the endpoint.

The governor also trumped all the environmentalists and all the Democrats by announcing in 2005 that the state was committed to an 80 percent reduction by 2050. That would be in Schwarzenegger’s 13th or 14th term. Although unfunded, it is dramatic and very clever politically, and it is the right environmental statement. That 80 percent cut in emissions by 2050 is exactly what the Intergovernmental Panel on Climate Change (IPCC) calls for — 80 percent or more. So Californians have said they’re going to do it. The
the corner; the action is not there yet.

We’re also seeing versions of what’s happening in California in the upper-Midwest, the Pacific Northwest, New England and the Mid-Atlantic states. They involve different approaches to how we will cap and trade, tax carbon and price electricity in more dynamic ways. What are the various things we will do to reduce carbon emissions? That’s the hard part.

But the picture in the United States has changed dramatically. We now have 30 U.S. states, including Texas, that have passed obligations to buy renewable energy. Some of them are not so dramatic. Policymakers in Maine, for example, haven’t figured out that natural gas is not a renewable source, so they count it. But other states such as Nevada, Arizona, California, and New Jersey are emphasizing very aggressive solar programs. Wind power is also being pursued aggressively: Texas now boasts about its wind production capability and is twice as wind-installed as California. It’s a remarkable thing. This policy tool, this obligation to use renewable energy, started under Governor Bush and his chair of the energy commission, Pat Wood, and it has been a huge success in terms of setting up a series of aggressive targets.

California’s targets help set an agenda for low-carbon electricity generation in a number of western states by redefining the market for clean power. Some of the coal-fired power plants that were being installed as far away as Montana to sell to California are already being turned off because after 2011 the California market will no longer buy coal-fired power.

There’s a nice framework out there, although the details are unclear. And part of the story, which is interesting for immigration and labor, is that one of the few things that politicians all across the spectrum agree on is that the dividend for going green is real. You get more jobs when you invest in energy efficiency and renewables, when you use natural gas but also sequester the carbon. These policy changes are truly generating a green energy economy. And this recognition that you can help rebuild economies, that you can build a green-collar labor force, is an important part of the equation.

I’ve left all the technical details out of this presentation, but they are vital, and I do spend a great deal of time on them. For specifics on my laboratory’s efforts in solar and wind power and in energy futures forecasting, see our website: http://rael.berkeley.edu. My favorite technologies using solar, wind and tidal energy are evolving rapidly, and each clearly highlights this changing landscape of innovation and market potential. But what I want to end with is this problem that policy is going to be required if the worst effects of climate change are to be averted. Hoping for new technologies will not solve the problem because the advantages that come to new fossil fuel technologies at higher energy prices will overwhelm moves to green the economy unless the policy agenda changes dramatically.

Professor Daniel Kammen is the Class of 1935 Distinguished Professor of Energy and has appointments in the Energy and Resources Group, the Goldman School of Public Policy and the Department of Nuclear Engineering at UC Berkeley. He is also the founding Director of the Renewable and Appropriate Energy Laboratory and a member of the Intergovernmental Panel on Climate Change that shared the 2007 Nobel Peace Prize.

This article was adapted from a transcript of Professor Kammen’s presentation at the 2008 U.S.–Mexico Futures Forum.
If we want to develop real strategies for managing oil and energy in Mexico, rather than wasting time and opportunities on debating the ownership of oil or the constitutional basis for oil management and the energy sector, we should consider these five important points:

First, the strategic diversification of energy sources is essential for Mexico. We have great wind, solar, geothermal, biomass and oceanic potential in Mexico, not just hydrocarbon potential. We are rich in these other resources, but we are missing the opportunities they present by focusing all our strategic efforts on oil. We are failing to develop policies that protect future generations, and these are policies that we must begin putting in place today. Not in the future: today!

Second, as a country and as a society, we are failing to take into account the environmental impact of producing electricity in Mexico. We have underestimated the growing costs of energy production and transportation. Promoting alternatives to fossil fuels in Mexico through renewable energy sources would help reduce the damage to the environment and protect Mexico’s environmental riches.

Third, the energy sector isn’t just about meter readings and electricity bills. Nonetheless, public policy is focused on the generation, distribution and cost of electricity. What we do at home or the office (even in government offices) is also very important. It is cheaper to save energy than to generate it, but we are doing nothing to promote energy conservation.

Fourth, energy policy also entails industrial, political, technological and employment policy and therefore has an impact on the economic development of the country. Mexico can be competitive in the development and production of technology for small-scale power generation and renewable energy. At the end of the day, decisions on energy policy are also decisions that affect employment, development of technology and industrial opportunities.

Finally, the energy sector also involves society, but the current debate is far removed from the community. The government and political parties have been unable to explain the concrete benefits of their proposals. The benefits for the community today and in the future must be made clear. Energy is an issue of concern for everyone living in this country, and citizens must be involved.

Martha Delgado is Mexico City’s Minister of the Environment. This article was adapted from her comments at the 2008 U.S.–Mexico Futures Forum.
I think most Mexican political actors agree that there will be no constitutional reform: Article 27 will stay as it is; there will be no privatization of Pemex or of those activities the Constitution reserves to the Mexican state. I expect, after a deep discussion, there will be no opening on exploration, exploitation, refining, transportation or any of the activities that are reserved by the Constitution to the Mexican government, that is, no opening to private investment in these areas.

It is possible for the Mexican state, through Pemex, to change our oil policies and do what has to be done. For me, the main problem is the need to carry out a real fiscal reform. The fiscal system which is applied to Pemex strips the company of every benefit and every resource. We have a situation in which 40 percent of the state’s fiscal resources come from the export of crude oil. Until the mid-1970s, our oil policy was oriented to satisfy internal demands. Mexico exported some petrochemicals, but it didn’t export crude oil.

In the second half of the 1970s, giant deposits were discovered and began to be exploited. This changed the focus of oil policies. By the beginning of the 1980s, this change had become much more drastic. Since that time, Mexico has had an oil policy which prioritizes the exportation of crude oil. Pemex abandoned the effort to extend its productive chains and create an integrated industry: it hasn’t continued to invest in the petrochemical industry or in new refineries, leaving internal markets to imported products. Right now, about 40 percent of our gasoline is imported from abroad.

This policy change also caused Pemex to drastically reduce its investment in exploration. As a consequence, there has been a serious fall in the life expectancy of proven reserves: while in the 1970s and 80s Mexico had oil reserves for 40 years of supply, at the present rate of extraction it now has proven reserves for only nine years.

I think what the oil industry needs is investment. The state needs to let Pemex keep some of its windfall profits. With oil prices rising, there has been a significant difference between the projected price of oil in the federal budget and the actual price of oil. In 2007, Pemex made $18 billion more than anticipated. And it has made about $10 billion more than projected every year for the past five or six years.

If those resources had been left for Pemex to invest, the company could have built the needed refineries and modernized, integrated and expanded the industry.

My position is that if Pemex is given the resources, it can have access to the technology needed to explore for oil in very deep waters, or for any other industrial process, without having to go to risk contracts. Risk contracts are prohibited by our Constitution.

Cuauhtémoc Cárdenas is President of the Fundación para la Democracia. He was the mayor of Mexico City from 1997-99. This article was adapted from his comments at the 2008 U.S.–Mexico Futures Forum.
In 1961-62, Martin Luther King Jr. spent several months in the small Georgia city of Albany, working with a local desegregation campaign. The effort was a dismal failure. Despite its high-wattage leadership and the involvement of most blacks in Albany, the movement made little progress; one march erupted in racial violence, and King left the city empty-handed, deeply demoralized about his strategy and indeed the future of the civil rights movement.

The 2007 Senate defeat of comprehensive immigration reform was a failure of a different order — much bigger. But the aftermath is not unlike King’s experience in the wake of the Albany campaign. The momentum is gone. It’s hard to see the road ahead. The strategies and tactics of the failed attempt appear utterly discredited. And for many proponents of reform, it’s difficult to believe that victory will ever be possible.

King’s answer was to retreat and rethink. Many veterans of the battle for immigration reform are doing the same thing. And while it may be too soon to report on the outcome of that rethinking, it’s not too soon to assess the political landscape in which a renewed campaign would be waged.

What were the consequences of the Senate defeat last June? How has the national debate on immigration evolved in the months since? And what can be learned in this fluid, uncertain interim — uncertain for immigration reform and
for American politics generally — about the prospects of overhauling the immigration system in years to come?

The Senate battle over immigration was a national conflagration. Not just policymakers in Washington, but the media, local and national, and ordinary citizens in every walk of life were engaged. According to one poll fielded shortly afterward, in mid-summer 2007, 86 percent of the public had followed the debate that spring — an extraordinary figure. Emotions ran high on all sides, and people who had hardly thought about the issue before the Senate brought it up found themselves taking harder and harder positions. Political clashes of that magnitude don’t fade easily — the intensity doesn’t just dissipate. And in the wake of the Senate battle, reform opponents in particular were determined to continue the struggle by other means, channeling their energy into the presidential campaign and, beyond that, to the states, where many legislators were eager to tap into the emotions roused by the congressional contest.

The result, through the summer and fall of 2007, was an ever-rising fever — anti-immigrant fever. Immigration became Topic A on the campaign trail. Presidential hopefuls — and not only Republicans — jostled fiercely to outdo each other in pandering to xenophobic voters. Single-issue candidates Tom Tancredo and Duncan Hunter drove the Republican field relentlessly rightward until — the phrase of the fall — virtually all the GOP contenders were vying to “out-Tancredo Tancredo.” The debate in Iowa was particularly and, to many, surprisingly bitter and — because it took place in a heartland, bellwether state — seemed a harbinger of the national campaign to come. By the turn of the year, there was no questioning the conventional wisdom: immigration was going to be the wedge issue of the 2008 election.

So too in the states — in local politics from Mississippi to Oregon. Immigration dominated a number of off-year state and local elections, and policymakers showed up at their legislative sessions in January 2008 determined to do what voters seemed hungry for — take over where the feds had failed and crack down on the illegal traffic. It didn’t matter that the U.S. Constitution and also federal law forbade this. There didn’t even have to be many newcomers, legal or illegal, in the state. Immigration became the issue state legislatures had to take on, and it was widely expected that many states would imitate the draconian laws passed in 2007 in Arizona and Oklahoma — laws designed to drive unauthorized immigrants out of those territories.

This fever raging beyond the beltway naturally had consequences in Washington. Blocked by Congress from overhauling the system, the Bush administration concluded that it had no choice but to step up its efforts to enforce the laws on the books, however unrealistic or impractical.

Federal immigration raids proliferated. Several hundred miles of border fence were built. The Department of Homeland Security issued new regulations intended to force employers to use Social Security numbers to weed out and fire unauthorized workers. Court challenges put a hold on some initiatives. But virtually no one, Democrat or Republican, seemed to have the stomach to buck the rising nativist tide.

Things hit bottom when powerful House Democratic Caucus chair Rahm Emanuel called immigration the new “third rail of American politics” and warned the Democratic majority in Congress not to touch it — not to consider moving a new reform bill — until 2013 at the earliest. Even reform advocates, once able to act as a block, now found themselves rudderless and drawn in a dozen different directions. The upshot: in Washington as elsewhere, the approach known as “enforcement-only” — to distinguish it from enforcement combined with an overhaul of the system — dominated the day unopposed.

But then, just when things looked bleakest, the fever broke — nationally and in the states. Presidential candidate Tom Tancredo, informed by his pollsters that he would garner no more than 2 to 3 percent of Republican primary votes, dropped out of the race before a single ballot was...
cast. Fellow candidates Mitt Romney and Mike Huckabee discovered what Tancredo and Pat Buchanan before them had discovered: demagoguing immigrants doesn’t work at the polls, not even in Republican primaries at the height of what seems like an anti-immigrant tidal wave. Pro-immigration Republican John McCain bested both Romney and Huckabee in race after race and emerged in early spring as the GOP nominee — despite his well-known record of support for an immigration overhaul. Meanwhile, most strikingly, exit polls in primary states found consistent Republican backing — 60 percent of GOP voters in state after state — for what more restrictionist Republicans have lampooned as “amnesty”: legalizing the undocumented workforce.

Similarly, as the spring wore on, it became apparent that things were not going nearly as badly as had been feared in many state capitals. By April 1, when most legislatures began to wrap up their sessions, only one or two had imitated the harsh laws in Arizona and Oklahoma. In fact, as legislators in several states made clear, they had looked closely at the outcome in Arizona and Oklahoma — immigrants fleeing en masse, businesses closing, tax revenues plummeting — and decided that was the last thing they wanted to happen in their states.

Many state legislatures passed some sort of immigration package — politicians felt they had to respond to voter demand that they take action. But as often as not, policymakers negotiated with immigrant advocates and business owners to produce a bill those groups could live with. Only Mississippi made it mandatory for employers to use the federal E-Verify system — a controversial computer-based program designed to identify undocumented hires. All the other states that considered it ultimately backed off. And even in Arizona, 2008 seemed to bring a reprieve: rather than the still more severe legislation many had expected, there was an effort to dial back the excesses of the law passed the year before.

So the anti-immigrant tide is ebbing — or seems to be — in mid-spring 2008. But where exactly does that leave us? And what are the prospects for reform in the months and years ahead? By any assessment, the climate is uncertain. The likely outcome of the coming presidential election is as murky as any in memory. The economy is slowing and a recession looming, still unpredictable in depth and duration. Immigration has clearly faded from the tops of most voters’ minds — there are many more important political issues to worry about. But that doesn’t mean the damage hasn’t been done — setbacks to badly needed policy change and a hardening of attitudes across society.

Look at Arizona, where the tough laws passed in recent years are aimed at far more than enforcement. As anti-immigrant advocates proudly boast, Arizona is experimenting with an “attrition strategy.” The next best thing in hardliners’ minds to simply deporting the state’s half million undocumented residents — as if that were possible — this approach sets out to make life so miserable for unauthorized immigrants that over time they leave the state voluntarily. Arizona has cut off virtually all government benefits for those in the state illegally. Harsh new laws that threaten to shut down businesses with even one undocumented employee are making it all but impossible for those without papers to work. And Maricopa County Sheriff Joe Arpaio has made a career out of stretching legal limits to terrorize the state’s illegal population.

Arpaio’s latest tactic: high-profile dragnet operations, overseen by a squad of officers and a hovering helicopter, where his men stop Latino drivers for small infractions — a broken tail light is enough — to inquire about their
immigration status, then proceed to arrest and deport those who cannot produce valid documents. The result: over the past year, some 7,000 undocumented workers have been detained in Maricopa County. Thousands of others have fled the state. The mood in the immigrant community is close to hysteria. Many, legal and illegal, are afraid to leave the house. Some parents have stopped sending their children to school for fear that state officials will follow them home in search of unauthorized relatives. Fewer and fewer undocumented residents are willing to report crimes to the police. And petty criminals, aware of this hesitance, are said to be preying on them without restraint.

The question for the future is what kind of scars this unprincipled enforcement and the fever of 2007 will leave in their wake: how lasting the hardening of attitudes and how deep the tear in the social fabric. The effect among the native-born has been to fan the flames of prejudice. Tactics like Sheriff Arpaio’s make it seem legitimate to use color as a proxy for legal status — and to deprive those without papers of even the most basic rights. In spite of the likely economic fallout, more and more people, in Arizona and elsewhere, are starting to believe that attrition is a plausible strategy. And while many ordinary Americans have been appalled — the backlash to the backlash has been palpable in Arizona and elsewhere — for far too many others, the crackdown has become a convenient cover for bigotry of the ugliest kind.

Meanwhile, immigrants, legal and illegal, are feeling less and less welcome in the United States. Fear and suspicion on one side of the equation is breeding anger and alienation on the other, particularly among immigrant youth — the second generation that traditionally makes the leap from hesitant newcomer to full-fledged American. Instead, more and more Latino young people find themselves doubting whether that kind of full inclusion is possible, and the perception, as one young woman put it to me, that “Americans hate us,” is eating away at their desire. The irony: an anxiety about immigrants born largely out of fear that they will not assimilate is making it less and less likely that many will attempt or succeed in doing so. And the longer the current, angry interim lasts, the worse this long-term damage will surely be — the more bitter and entrenched attitudes are sure to grow on both sides of the color line.

Still, even in this painful, uncertain climate, it’s possible
to find reasons for hope — hope for a reframing of the politics of immigration that would make an overhaul possible in the next year or two.

The good news starts at the top. All three leading presidential candidates are on record in favor of immigration reform. And given the way the issue has played out politically in recent months, unless a new bout of nativist fever breaks out on the campaign trail — and of course, that is still possible — whoever is elected should feel they have some room to maneuver in advancing change once they take office.

So too among the public. For all the polarization hardening in states like Arizona, polls still show no more than a minority of voters — some 20 to 25 percent — dead set against an immigration overhaul. It’s a vocal, intense minority: both its media spokesmen — TV anchor Lou Dobbs and others — and its rank and file. But most of the nation, while anxious about large numbers of newcomers and angry at the erosion to the rule of law, is prepared to think pragmatically about how the U.S. should handle the realities we face. Poll after poll shows that most voters recognize that immigrants are hard workers, that they are filling jobs few if any Americans want to do and that most of the undocumented population is here to stay, attrition or no attrition. These voters aren’t pro-immigrant — far from it. And they aren’t going to raise their voices in favor of an overhaul. Still, they might accept one — if Congress could find its way to passing a bill.

The challenge for policymakers is how to thread the needle between this weak acceptance and strong opposition to reform. A stunning number of seemingly hesitant legislators — politicians who generally avoid immigration except to take the safe side of unavoidable votes on enforcement measures — tell you in private that they “get it”: that they understand the country’s need for immigrant workers and grasp that it would be better for everyone if the flow were legal. But, they explain, they can’t vote for that so long as their constituent mail continues to run the way it does: depending on who’s counting, more than 20-to-1 against an immigration overhaul.

Still, there is good news here too — two pieces of good news. First, those trying to advance reform don’t need to completely turn the tide of public opinion — it isn’t flowing as one-sidedly against them as you might think if the only television you watch is “Lou Dobbs Tonight.” And second, the advocates don’t need to change the minds of a large number of hostile members of Congress. They merely need to provide enough political cover so that legislators who already agree with them feel comfortable voting their beliefs — or feel there will be a price to pay for running the other way whenever the issue comes up.

Where will that political support come from? What’s needed is pressure on the left and the right: from newly engaged and enfranchised Latino voters on one side and increasingly concerned business owners on the other — employers finding it harder and harder to stay in business or grow their way out of an economic slowdown because immigration enforcement is depriving them of workers. Will this pressure materialize in the strength that’s needed in the next year or two? Only time will tell.

Immigration won’t be on the agenda in the new president’s first 100 days — there are too many other, more pressing issues. It’s hard to imagine Congress passing an overhaul as long as the country is stuck in an economic slowdown. And it’s hard to be too optimistic when the climate in places like Arizona is as bitter as it is. Still, nearly a year after the Senate defeat, it’s clear that the national mood has shifted — that much, if not all, of the air has gone out of last year’s ugly anti-immigrant furor. The road ahead is still murky. Momentum is still stalled. But perhaps it’s not too soon to think about Martin Luther King’s last words on Albany. “When we planned our strategy for Birmingham months later,” he wrote in his autobiography, “we spent many hours assessing Albany and trying to learn from its errors. Our appraisals not only helped to make our subsequent tactics more effective, but revealed that Albany was far from an unqualified failure.”

The March on Washington took place just 12 months after the defeat in Albany.

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I was invited by President Calderón to come on his trip to the United States in late February 2008. He went to New York, Chicago, Sacramento and Los Angeles, where he had lengthy meetings with leaders of the Mexican community in the U.S. And of course, in my role as an academic and observer, I was taking notes. So let me share with you some of the concerns expressed by Mexicans in the U.S. during this very harsh period.

First of all, they demanded improvements in consular services. Currently, there are 48 Mexican consulates in the United States, but that is not enough. Demand for Mexican passports is up 200 to 300 percent because of a change in U.S. law that requires a passport to travel to Mexico. At the Mexican Consulate in Raleigh, North Carolina, for example, it now takes 11 months to get an appointment. It is much worse at the U.S. embassy in Mexico. Another stress on consular resources is the surge in Mexican-born parents registering their American-born children as Mexican citizens. The parents, fearing that they will be deported, want to be able to bring their children back with them to Mexico. The increase in the number of birth registrations is just phenomenal, and Mexican consulates are overwhelmed by these new demands.

The second thing I came away with is that people are very angry about what is happening to Mexico’s image and to the image of immigrants. They are even creating local anti-defamation leagues, just as the Jews have done in the past, because they believe that Mexico is becoming a scapegoat for all sorts of problems. And they are asking the Mexican federal government to react to this new Mexico-bashing.

Third, they are very worried about increasing deportations. Some of them are not calling 911. Some of them are not going to the hospital. Some are not even sending their kids to school. It is very scary for them. And of course it is very scary for them to drive a car because most have to drive without a license.

Fourth, they are worried about human rights and labor abuses, especially at the local and state level. This is bad news because that is where the immigration issue is now playing out. The entire U.S. is becoming like California in the early 1990s when Proposition 187 was passed. California once again was predicting the future.

Fifth, and this is very interesting, they are demanding social services in the U.S. from the Mexican government: education, books, libraries, community education centers, health services. At 23 consulates they have what is called the ventanilla de salud or health window, where the undocumented can go for information about obtaining health care. The demand for these services is on the rise.

Sixth, they are very concerned about human rights abuses against Central American transmigrants in Mexico. To be honest, I think this caught President Calderón off guard. The first time this point came up was during the president’s speech at Harvard University. A Guatemalan student suddenly stood up and demanded help and some important transformations in Mexican immigration policy. According to the National Migration Institute, in 2005 close to half a million Central Americans tried to reach the U.S. through Mexico. However, in Mexico we don’t have a horizontal southern border. We have a vertical southern border. Very few Central Americans are stopped at the southern border because we don’t have the
resources to apprehend them there. We continue to stop them in Mexico City, in San Luis Potosí and even in Tijuana, and this allows for human rights abuses to take place all through Mexican territory.

The seventh demand was for absentee voting. They complained that only a small percentage of Mexicans living abroad were able to cast a vote in 2006. They really want to vote. They feel that they are contributing to the Mexican economy, that they are very active in Mexico, and they want to be able to register to vote with the IFE [Federal Electoral Institute] in the U.S. and not have to go to Mexico to register. Obviously it is impossible for 7 million undocumented workers to travel back to Mexico to register to vote.

And finally, they kept asking President Calderón to establish a ministry for immigration issues. To me, it was fascinating to observe all of their demands because they show how intertwined U.S.–Mexico relations really are. Domestic policies in the U.S. — fiscal, health and education policies, which are created for domestic purposes — are affecting Mexicans in the U.S., and therefore they are affecting Mexico. It is fascinating to see those Mexicans, those 12 to 14 million people who were born in Mexico but now live in the U.S., asking the Mexican government for services and protection. It is interesting because it is really changing the role and the conception of Mexican diplomacy in the U.S.

Diplomacy is now about helping Mexicans who live in the U.S., advising them, for example, about how to get an education or health services. It is not about anything else. I believe that President Calderón really understands the new nature of U.S.–Mexico relations, and it is fascinating to see what is happening there, to see all of the new links being forged. We are truly linked to each other as countries. And with 12 to 14 million Mexicans living in the U.S. plus another 18 million U.S. citizens of Mexican origin, there really is a Mexico inside the United States. It is fascinating what could happen with this community if they truly integrate into the U.S. mainstream and become successful.

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Imagine what Lou Dobbs or Samuel Huntington would say if they read Dr. Rafael Fernández de Castro’s statement that “there really is a Mexico inside the United States.” Certainly, the sheer number of Mexicans and U.S. citizens of Mexican ancestry living within the United States is enough to raise eyebrows: over 30 million people, about 10 percent of the U.S. population. But numbers alone do not cause fear or raise the specter of a country within a country. For example, there are over 34 million U.S. residents who claim Irish ancestry — nine times the population of Ireland. Yet no one today argues that Ireland or the Irish have taken over American society.

Immigrants have been shaping the “American” identity from the beginning of this country’s founding, and nativists spewing virulent anti-immigrant rhetoric have always sought to limit that impact. Why are today’s immigrants viewed as particularly difficult to integrate? What is it about the Mexican experience in the U.S. that creates such concern for so many?

Innovations in communications and travel coupled with the harshness of anti-immigrant/anti-Hispanic federal, state and local policies may provide an answer. It is not the total number of Mexicans or those of Mexican ancestry that causes concern. Rather, it is the number of undocumented immigrants (about 12–13 million), especially Hispanics (more than 10 million) and specifically Mexicans (some 7 million), with minimal human rights living today in the U.S. Without legal status and its concomitant rights, these new immigrants are finding that integrating into American society has become a lengthier and more difficult process than ever before.

As pointed out in Dr. Fernández de Castro’s article, Mexicans without legal status are turning to their country’s representatives in the U.S. for help in conducting their lives as human beings. They refuse to stand still in the face of efforts to dehumanize them or to accept their treatment as disposable workers who have no rights because they are not supposed to be in the U.S. in the first place. They are seeking help with social services; asking their government to protect their children by ensuring that those children belong to at least one country, as Mexican citizens, in the event that the U.S. deports the whole family; and they are organizing to protect themselves from deportations and Mexico-bashing. Newscasts and pictures, telephone lines and the Internet cross borders, providing evidence of the struggles to survive in the U.S. and creating a sense of outrage back home.

Therein lies the quandary. For Mexico, if it ignores the pleas for help from its citizens who find themselves “strangers in a strange land,” it abandons its citizens to another country’s mercy. But if the Mexican government begins to provide social services; helps immigrants navigate U.S. systems to obtain education, health or other services; or assists in the fight against deportations and discriminatory policies, it may inadvertently weaken or destroy the emerging ties between Mexicans living in the United States and the broader U.S. society. For the United States, if it continues to treat those without legal status as second-class human beings, it will sow the seeds for non-integration and make the statement “a Mexico within the United States” a reality. By making life miserable, not just for undocumented Mexicans but for all immigrants, governmental policies are stopping the process of immigrant integration, a process that has been perhaps unique in the world and may well be the key to U.S. success over the last decades.

In short, had Germany, Ireland, Italy or any of the myriad other countries whose citizens have migrated to the U.S. over the years been able to maintain strong connections to those who left their borders and had they been able to fight to protect their citizens from the hatred that greeted them upon their arrival in the U.S., perhaps the process of distilling all of those cultures and peoples into the American identity might not have succeeded quite as well as it has. Dr. Fernández de Castro wonders, “what could happen with this community if they truly integrate into the U.S. mainstream and become successful.” Unfortunately, a more robust defense by Mexico of its migrant citizens coupled with the rejection and dehumanization of Mexicans living in the U.S. by all levels of American government may mean that this time these immigrants will not “truly integrate into the U.S. mainstream.” In such case, both countries will lose.

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Mexico and the United States have a lot in common, but the two countries also have many differences that need to be taken into consideration if we are to improve our relationship and forge a brighter future.

The North American Free Trade Agreement (Nafta) has made our economies more intertwined than ever before. Mexico is the United States’ third largest trading partner, as evidenced by the fact that according to figures released by the Banco de México, 82 percent of Mexico’s exports go to the U.S. and more than 50 percent of Mexico’s imports come from the U.S. Remittances also form a critical connection between the two nations: Mexico received $24 billion in remittances in 2007, most of which came from the approximately 5.7 million Mexican immigrants living in the United States and sending funds to their families back home. On the tourism front, about 85 percent of Mexico’s visitors come from the U.S. and Canada.

Commodities are another important source of trade. The majority of Mexico’s oil exports are destined for the U.S. market. In turn, Mexico imports approximately 12 million tons of grain annually from its northern neighbor. Mexico’s financial and capital markets are also completely globalized and linked closely to the dollar. The country now has more than $90 billion U.S. dollars in reserve — an historic high.

Unfortunately drugs and arms also have become part of the cross-border traffic. Whatever we do or fail to do to stem these flows will have a tremendous bearing on our common future. Drug cartels and criminal organizations regularly purchase arms in the U.S. — not just handguns but automatic machine guns, grenades and rocket-propelled grenades — and smuggle them into Mexico. According to official statistics from the Mexican government, between January 2007 and March 2008 an estimated 14,000 weapons were sized from the drug cartels — most of which entered the country from the U.S. — enough to equip a small army.

In light of these facts, where is the Mexican economy? A quick review of the year 2007 tells us that gross domestic product (GDP) growth was 3.2 percent with fiscal balance. Although consumer prices rose 3.8 percent, Mexico’s public debt was less than 26 percent of GDP, and the commercial trade deficit was small. The country could also boast of a well-capitalized financial system, which experienced 26 percent growth in banking credit in real terms last year. In terms of absolute numbers, in 2007 foreign direct investment totaled $23.2 billion, and GDP was close to $1 trillion. These figures make Mexico the 13th largest economy in the world. However, income disparity is still a problem: despite important advances over the last decade, over 40 percent of

Forecast bus tours in San Diego, California.
Mexico’s population continues to live in poverty.

Originally, estimates for 2008 predicted that growth would be just under 3 percent, with inflation hovering around 4 percent. However, the recent crash of the U.S. housing market and losses in the U.S. financial system combined with supply and demand shocks in the commodities markets have caused us to reexamine these figures. The debate is now centered on how deep the economic downturn will be and how long it will last. Obviously, due to the close economic ties between the two countries, a recession in the U.S. will mean a slowdown for Mexico. It is still very difficult to estimate how severely the Mexican economy will be affected; inevitably, there will be a strong impact. Analysts are now estimating that U.S. GDP will grow by only 1 percent this year, in which case Mexico will probably grow a little over 2 percent.

On the bright side, Mexico’s economy is stronger than ever, a fact which should help mitigate the effects of a U.S. recession. There are a number of elements that contribute to this strength. First of all, the price of Mexican oil is nearing $100 a barrel and continues to rise, leading to high dollar revenues for the country despite the downward trend in export volumes. While the growth of remittances has slowed, they remain at historically high levels. The economy is stable and inflation is low due to fiscal and monetary discipline on the part of financial authorities. Foreign exchange reserves are high, and the weak U.S. dollar has encouraged Mexican exports to Europe in recent months. With exports up, the demand for intermediate goods and raw materials is also high.

On the domestic front, conservative financing policies have enabled the Mexican housing market to soar: government-sponsored mortgages between 2002 and 2007 reached 2.2 million, nearly equaling the total for the previous 30 years, 2.1 million. European tourists continue to flock to the nation’s beaches and historic sites. An ambitious infrastructure investment program has been announced by the Mexican government that will amount to more than $40 billion over the next five years. In addition, the Calderón administration is paving the way for higher and more stable growth rates by taking on the structural reform agenda. Two recently approved reforms, of the fiscal and pension systems, will strengthen the economic and political environment, especially if they are combined with energy sector reform, which is currently under discussion in Congress.

Another factor which has built confidence in Mexico’s political leadership is the high priority President Calderón has placed on fighting organized crime and the drug cartels.

Looking to the future in this election year, Mexicans are hoping for a U.S. president who can get the economy back on track. The U.S. economy is 25 times as large as Mexico’s, and even though both are highly integrated, the well-known saying “When the U.S. catches a cold, Mexico ends up with pneumonia,” might not hold true this time. With structural reforms in place, no domestic imbalances and stronger internal demand, perhaps the popular saying should be rephrased as “When the U.S. catches a cold, Mexico ends up with a cold as well.” There is also the hope in Mexico that the U.S. will follow the European Union model and invest heavily in its southern neighbor. Europeans channeled resources to less-developed member countries like Spain and Ireland, and the economic and political transformation has been enormous. A similar degree of U.S. investment in Mexico would help guarantee a more prosperous and secure region, an outcome which is undoubtedly in the interest of both partners.

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Can the world afford to solve climate change as the global economy slows? According to renowned physicist and inventor Stanford Ovshinsky, alternative energy that addresses climate change is not just an environmental imperative, it’s also the best path to revive the global economy and refashion it to better serve people. Such energy technologies hold promise for both development and the environment in Latin America.

In a wide-ranging talk before a packed audience in the Morrison Room of Doe Library, Ovshinsky emphasized that a great many energy solutions are no longer far-fetched ideas but rather proven options, lacking only political will to go to scale. “Forget a new Manhattan Project,” he urged, “there [are] solutions… and they are not 20 years away. They are here now.”

Ovshinsky ought to know. He has spent more than five decades pioneering the science and inventing the technologies needed to carry out an energy revolution. This may explain why he calls his revolution a conservative one: he’s been carefully building and testing it for half a century. It is, he argued, rooted in proven technologies, not an abstruse, hopeful vision. “In God we trust,” he quipped, “everyone else must show data.”

For the uninitiated, the data on Ovshinsky is mind-boggling. He is a renowned scientist with over 300 peer-reviewed publications, most of which are in physics, a field he began mastering in the Akron, Ohio Public Library. And though he has lectured in universities throughout the world and counts Nobel Prize winners among his friends and collaborators, Ovshinsky’s own formal education ended when he started working as a machinist in Akron right out of high school and trade school.

Best known as an inventor, Ovshinsky holds over 350 patents. The company he founded, Energy Conversion Devices, Inc., currently runs four thin-film solar manufacturing facilities able to produce miles of solar panels a year. Resembling enclosed printing presses a football field long, the four Michigan plants will be able to produce enough solar panels to move 50,000 houses a year off the electricity grid. These plants are likely just the beginning.

Greening the auto industry has long been one of Ovshinsky’s goals. After inventing the nickel metal hydride battery, which powers the Toyota Prius and almost all hybrids sold today, he went one better than Toyota by modifying a stock Prius to run entirely on hydrogen. The fuel tank is filled with a solid material Ovshinsky atomically engineered to absorb hydrogen delivered from a fueling station he also designed. The car handles like a conventional Prius — with possibly more spirited acceleration — and provides range comparable to many contemporary vehicles. Most importantly, Ovshinsky’s hydrogen vehicle is straightforward to manufacture. The hydrogen itself can be generated from renewable sources such as solar or wind or from conventional power plants during off-peak hours at night.

The hydrogen Prius and the rest of Ovshinsky’s opus are the product of a plan he and his late wife Iris devised almost 50 years ago. In the energy sciences there is a concept called “well to wheels” that refers to the entire scope of an energy system: generation, storage, infrastructure and use. In 1960 the Ovshinskys resolved to fill each of these niches with technologies that use what Stan calls “the ultimate fuel” — hydrogen. Now their plan is a reality. Their solar

Stan Ovshinsky at UC Berkeley.
Solar flares.

Photo courtesy of NASA.
panels harvest the sun’s photons, a byproduct of the fusion of hydrogen and the sun; their innovative materials restore the energy as hydrogen; and their modified Prius runs on this hydrogen in a process Ovshinsky calls “the hydrogen loop.”

“When you use hydrogen and the sun you’re completely decoupled from fossil fuel,” Ovshinsky said in his presentation. “You’re coupled to the big bang and the most common element in the universe.”

These inventions are all built on a backbone of innovative materials called Ovonics that Ovshinsky began experimenting with in the 1950s, a time when the “experts” at Bell Labs said there was no future in the field of amorphous and disordered materials.

In a glowing introduction to the Ovshinsky talk, former vice provost and dean of research and graduate policy at Stanford University and American Physical Society president Dr. Arthur Bienenstock explained that both literally and figuratively Ovonics “brought disorder to the field” of materials science.
In the mid-1960s, Stan had an enormous impact on physics with the announcement of two types of devices. Both involved conductors with a thin sheet of amorphous material in between. By applying pulses of one sort, he could transform that thin sheet from a highly resistant material to a highly conducting material. It was known as the threshold switch. It would have a very high resistance until a certain voltage was reached, and then it would switch to a highly conductive state.

The second device was a memory device. Again, it involved switching from a high-resistance state to a lower resistance state, but this time, you could keep it in either the high- or the low-resistance state without the application of an electric voltage. Those two devices got the field of amorphous semiconductors going. At first, no one believed that you could go back and forth between a high- and low-resistance state as rapidly as Stan was claiming. And Stan was also claiming that it was a transition back and forth between a crystalline state, in which the atoms are highly ordered, and an amorphous state, in which the atoms are ordered pretty much like a liquid. Stan was subsequently proven to be right, however, and the field progressed.

Soon after, Stan showed that you could switch these materials with the application of light and, in particular, lasers. This technology is the basis of the CD-RWs and the DVD-RWs used in computers. They’re all based on the type of memory materials that Stan developed.

At the same time, Stan was making fundamental contributions to the field of amorphous materials, throwing ideas out just left and right. I can recall being on a plane with the Nobel Laureate Sir Nevill Mott, who got his Nobel Prize for working in this field; he said, “A lot of my best ideas came from Stan. He just gave them away to me.” And all of us in the field have had that experience.

Stan’s next project was using amorphous silicon to make photovoltaics. He made fundamental contributions that converted it from a lab phenomenon to something that became commercial, ending with production plants that manufacture photovoltaic sheets about a yard wide and a mile or so long that you can slice up to put on roofs and the walls of buildings. This development dramatically changed the photovoltaic field from something that powered little calculators to something that could produce lots of power.

I think it was in the 1980s that Stan developed the electrodes for the nickel metal hydride battery. Before that, people were trying to make pure, single-phase electrodes; Stan brought disorder to the field, putting many elements into the battery so that the crystals were very small. This allowed the capacity of the batteries to become so high that they could be used for all of the nickel metal hydride cells that you have in your computers and also in hybrid automobiles. He used the same ideas to advance hydrogen storage — in solids, not in gas tanks — and in fuel cells.

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The literal disorder is that Ovshinsky’s materials are amorphous or seemingly disorganized as opposed to the regimented crystalline patterns favored by many competitors. The figurative disorder is that across a broad array of applications, from recordable CDs to Prius batteries, Ovonics outperform their crystalline competitors. Ovonics may eventually prove figuratively disordering to the business models of some energy titans as well because their unique physical structures allow them to be cheaply mass produced and, therefore, to compete with conventional sources of energy.

And so the hydrogen loop also carries a powerful political charge. The technologies Ovshinsky has invented can help to prevent climate change, but they may also disrupt livelihoods and business models. This reality has forced Ovshinsky to step carefully. As he explained, “I was quite upset when they crushed the electric cars… but I want to be a resource to them. There are hundreds of thousands of people without jobs.” He has a strong conviction that the auto industry can reinvent itself to once again provide numerous, well-paid jobs and revitalize manufacturing. Ovshinsky remains committed to developing technologies that strike an appropriate balance between decent jobs and environmental stewardship.

The winds of economic change blowing through Detroit are hardly atypical. In a series of columns in The New York Times over the last two years, Thomas Friedman has argued that while climate mitigation technology innovation can begin in the U.S., it can only succeed by finding markets in developing countries where energy demand is growing the fastest. Ovshinsky takes Friedman’s logic one step further, asserting that emerging economies can deploy alternative energy technologies in partnership with industrial economies, propelling development as well as providing energy.

During his talk, Ovshinsky argued that the current boom in global commodity prices is an opportunity for resource-rich nations to strategically invest in energy alternatives. He recounted how, when he was invited to visit Venezuela by the oil industry during the energy crisis of the 1970s, he urged government officials there to invest windfall oil profits wisely. “Those hills are your future,” he said as he pointed to the ranchos (hillside slums), “build new industries; provide jobs for the people that are up in those hills.” Ovshinsky is again calling for nations growing rich through the extraction of natural resources to courageously
invest in innovative ways to break their dependence on fluctuating commodity prices.

Creating the institutions to productively capture the value of resource extraction is, of course, easier said than done. Scholars such as Stanford sociologist Terry Karl argue that an abundance of certain kinds of natural resource wealth can be a curse that may engender corruption and deepen inequality. Designing an energy sector that improves social welfare is a substantial challenge; creating such a sector that also fights climate change will require courage, creativity and collaboration from governments and businesses.

Ovshinsky is acutely aware that his life’s work only just begins to address climate change. He has recently retired from Energy Conversion Devices in order to establish a new firm, Ovshinsky Innovations, so that he can once again focus on breakthrough scientific discoveries. Discoveries he says that the world urgently needs.

He seems delighted to be joined in his work by an emerging generation of clean energy scientists. During the question and answer session following his talk, he enthusiastically fielded questions from several students doing basic research on emerging energy alternatives, as he once again is doing. While he put their science and technologies through his exacting paces, he encouraged the students to keep to their visions. “No one should be prevented from trying anything, not even by me. I may be a revolutionary, but I’ve always been a fairly conservative revolutionary.”

In a lunchtime discussion with eminent scholars during his visit to UC Berkeley, Ovshinsky made clear that despite his unconventional path to discovery and acclaim, he firmly believes in the promise of formal education. But, he cautioned, only when creativity is allowed to flourish and a little disorder is allowed to creep in will the academy be a key contributor to the energy revolution he has begun.

Stanford R. Ovshinsky has been at the forefront of alternative energy innovation for almost 50 years. He has recently founded Ovshinsky Innovations LLC to develop breakthrough technologies to mitigate climate change. He spoke at CLAS on April 8, 2008.

Avery Cohn is a graduate student in the Department of Environmental Science, Policy and Management.
I first met Stanford Ovshinsky as the Sixties began to unfold. I was 15, and Stan, as he always liked to be called, was the most remarkable person I had ever met. He was a brilliant scientist and inventor who passionately wanted to change the world. And now, almost five decades later, I would not change my assessment about him except to add that he has succeeded in changing the world in remarkable ways.

One can get a sense of Stan by starting at his home, a warm, beautiful place at the edge of a small lake north of Detroit. Among the many photographs throughout the house that chronicle an amazing life, I’d like to focus on three. The first is a photograph of I. I. Rabi, the great Nobel Prize-winning physicist, with a warm inscription to Stan; the second shows Lázaro Cárdenas, modern Mexico’s most beloved president, signing a land reform decree in the 1930s as three peasants look intently over his shoulder; and the third is of Stan having dinner with Rosa Parks, the hero of the civil rights movement. These photographs underscore three themes that run throughout Stan’s life: his scientific brilliance, his social vision and his moral courage.

Stan’s scientific work has been path-breaking. The Nobel-winning Rabi referred to his contribution as “stunning and monumental.” When Rabi was asked if Stan was another Edison, a singular complement on its own, he is said to have replied “He’s an Ovshinsky, and he’s brilliant.” As a 2008 profile in The New York Times Magazine put it, “Ovshinsky is a systems thinker who envisions the future as it should be — and then goes out and invents the scientific tools and technological wizardry needed to bring it to life.”

Stan began his career working on automation. From there, he moved on to do original, highly regarded work on
the treatment of schizophrenia with organic drugs. In the mid-1950s, he again changed his focus and began defining the science and technology of amorphous or disordered materials. Stan’s discoveries were not exactly embraced with open arms. According to the late Dave Adler, a highly-regarded MIT physicist, “Almost all physicists believed that amorphous semiconductors could not even exist.” Stan’s work, however, blazed a new trail, and the field that couldn’t exist is now named Ovonics. It forms the basis for a “solar hydrogen loop” capable of harnessing and storing the sun’s energy and creating a carbon-free energy grid. The result could define our era as the Hydrogen Age.

Energy Conversion Devices, the company Stan and his late wife Iris founded in a store-front in a declining area of Detroit in 1960, drew the best and the brightest from throughout the world. His laboratories became for Hellmut Fritzsche, a close friend and former chair of the physics department at the University of Chicago, “a Mecca for many of us from Stanford, Harvard, MIT, Penn State and Chicago.” Stan was able to translate his scientific advances into impressive technologies, such as machines capable of turning out sheets of flexible, thin-film solar material by the mile; nickel metal hydride batteries that power virtually all commercial hybrid vehicles sold today; solid-state hydrogen storage; and innovative memory chips.

What makes these achievements all the more remarkable is that Stan did this pioneering work without formal credentials. Born and raised in Akron, Ohio, he did what one might call “postgraduate work” at the public library at night. The significance of his work has at last begun to receive wide recognition. The American Chemical Society named him and Iris “Heroes of Chemistry 2000” for their “significant and lasting contributions to global human welfare.” He is a Fellow in the American Physical Society and the American Association for the Advancement of Science and has won innumerable awards for his scientific research and technological accomplishments.

Stan’s technical work is informed by his social vision: he wants to create a better world. The widow of President Lázaro Cárdenas gave Stan the photograph of her husband in recognition of what his work potentially means for Mexico and for Latin America. In fact, Stan often shows a photo of a Mayan woman climbing a hill in the Chiapas rainforest carrying her young child in front and a roll of his solar material on her back. “She is surrounded by the future,” he likes to point out. Stan not only sees what electricity could mean to the villagers of Chiapas, he also envisions dynamic new industries capable of fueling Mexico’s development.

Stan emphasizes the urgency of developing and implementing the
“solar hydrogen loop” for three reasons: the specter of global warming, the geopolitics of fossil fuels and the possibilities of new industries generating employment. He argues that our continued reliance on fossil fuels has edged us toward the brink of irreversible damage to the planet. The economist William Cline points out that under plausible scenarios, “global emissions of carbon dioxide will approximately double by 2050 and quadruple by 2100.” One particularly damaging consequence is that agricultural potential could plummet 20 to 25 percent in Latin America and Africa by the 2080s, issuing in a new era of global hunger and dislocation.

As serious a concern is the geopolitics of fossil fuels: the growing demand and shrinking access to oil fuels conflict and war, hardly an abstract issue in the world today. The abundance of hydrogen removes a particularly volatile flashpoint between nations. “You’re decoupled from fossil fuels,” Stan says, “and coupled to the origins of the universe.” And, finally, the production and installation of the “hydrogen loop” could create millions of jobs. In Latin America, new industries could propel development, and in the United States, they could propel prosperity. The New York Times featured a front-page article in April 2008 about two communities in Michigan, one enduring the trauma of a plant closing and the other looking towards the creation of jobs from new solar energy plants built by the company Stan founded.

The theme of moral courage is highlighted by the photograph of Stan having dinner with Rosa Parks in Detroit. Willing to stand alone to develop scientific and technological principles, Stan has been equally courageous in defending the core values of a democratic society. He stood up when unions were organized in the 1930s; when Rosa Parks refused to give up her seat in the front of the bus, jump-starting the civil rights movement in the 1950s; and when democratic principles were under attack in Latin America in the 1960s and 70s. A commitment to civil liberties and human rights informs him as a person, as a citizen and as a scientist. And he does not draw a distinction between these various roles.

His commitment to working towards a better, more democratic world drove his work on alternative energy in the early 1960s. In retrospect, it took an unusual vision to found a company called Energy Conversion Devices years, if not decades, before the threat of oil shortages and climate change began to shape our lives. Stan says he doesn’t mind
being called a visionary, just don’t call him a dreamer. After all, he has produced the machines and products that have made his vision into something solid and functional.

Throughout his life, Stan has displayed strong optimism, but he’s also realistic. Rather than being crushed by reality, however, he has sought to use his optimism and unique gifts to make a better world. To rephrase the great American labor leader Eugene Debs, “The cross is bending, the midnight is passing and joy cometh with harnessing the sun.”

Harley Shaiken is Class of 1930 Professor of Letters and Sciences and Chair of the Center for Latin American Studies at UC Berkeley.
In 1768, the founder of Dartmouth College, the Reverend Eleazar Wheelock, sent “a small specimen of the produce and manufacture of the American wilderness” — a pipe, tobacco pouch, knife case and several other articles — to the College’s benefactor, the Second Earl of Dartmouth. From its very beginnings, the remote location of this New England College fostered an active commitment to providing students with examples of the “natural and moral world,” as museum and library collections were thought of then.

One of the most notable manifestations of this ongoing commitment is “The Epic of American Civilization,” the mural that, in the spring of 1932, the Mexican artist José Clemente Orozco was commissioned to paint in the lower-level reserve reading room of Dartmouth’s Baker Library. Orozco would take advantage of the division of Baker Library’s reserve reading room into east and west wings to portray what he called America’s “two cultural currents,” the indigenous and the European.

José Clemente Orozco was born in 1883 in Ciudad Guzmán, a provincial city in the Mexican coastal state of Jalisco. When he was 15, his parents sent him to the countryside to become an agricultural engineer, but he contracted rheumatic fever and returned home with a heart condition. He then studied architecture at the National Preparatory School in Mexico City. In 1903 his father died of typhus, and Orozco was forced to leave school and begin a series of odd jobs to support his mother and two siblings. He worked as an architectural draftsman and hand-tinted postmortem portraits. When Orozco was 21, an accident while making fireworks to sell on Mexican Independence Day injured his left hand and eye. Due to the holiday, he was not attended to at hospital for several days. Gangrene set in, and his hand and wrist had to be amputated.

After the accident, Orozco devoted himself to painting, drawing, printmaking and eventually large-scale fresco murals — something that cannot have been easy for an
artist with a weakened heart, damaged eyesight and only one hand. Orozco's injuries did, however, protect him from active engagement in the Mexican Revolution. Instead, he drew political cartoons and caricatures for leftist newspapers. He seemed able to depict his reaction to Mexico's decade of revolution as an artist only after 1920, when he returned from a bleak three-year stay in San Francisco and New York. In 1923, Orozco was one of the founders of the "Union of Revolutionary Painters, Sculptors and Engravers of Mexico," and was commissioned to paint murals in the National Preparatory School in Mexico City.

By 1927 mural commissions had dried up in Mexico, and Orozco moved to New York, where he would live off-and-on for eight years before returning to Mexico in 1934. The last time Orozco returned to the U.S. was in 1945. In the throes of midlife crisis at the relatively late age of 62, he told a friend, "I need to do it to renew myself." But the much-anticipated creative renewal did not materialize, and after months of struggle and soul searching, Orozco returned home. In his final years, Orozco continued to climb the scaffolding, although his heart condition forced him to stop and catch his breath every few steps. He completed his last fresco less than a month before he died in his sleep of heart failure at the age of 65. Today, there are major Orozco frescoes in Mexico City, at Pomona College, at the New School for Social Research in New York, at Dartmouth College and in Guadalajara. His house and studio in Guadalajara are now a museum-workshop under the jurisdiction of Mexico's National Institute of Fine Arts.

A taciturn individualist, highly sensitive and utterly inept at self-promotion, Orozco had a sharp tongue and mordant sense of humor. Described by a contemporary as "the only tragic poet America has produced," Orozco was first and foremost a public artist whose greatest achievements were the murals he created not for individual patrons but for the whole of society. Yet, in comparison with his colleague and rival Diego Rivera, until recently the name of this preeminent public artist was little known to the public. Orozco's work was marginalized as complex and controversial, while Orozco the man has been considered as something of an enigma.

"The Epic of American Civilization" proved to be a pivotal work in the career of one of the most significant artists of the 20th century. Many of the students who witnessed its creation never forgot the experience, and its impact is still palpable 75 years later.

To understand how this inflammatory work by a Mexican artist came to be created at Dartmouth College during the depths of the Great Depression is to understand something both about Dartmouth and about Eleazar Wheelock's successors as stewards of student cultural life. Orozco arrived in New York in December 1927, the start of his second long visit to the United States. The idea of bringing him to Dartmouth to execute a mural seems to have occurred to members of the art faculty around the time their new building, Carpenter Hall, was completed in 1929. The following year, the department's chairman, Artemas Packard, supported by a young member of the art faculty, Churchill Lathrop, began a campaign to realize their vision of obtaining for the college the services of one of the two important Mexican muralists then working in the United States: Diego Rivera or José Clemente Orozco. According to Lathrop, Orozco was their preferred choice from the beginning. Quite aware that the gregarious Rivera had better name recognition, Packard and Lathrop organized several exhibitions of Orozco's prints and drawings in the galleries of Carpenter Hall in order to make his work better known in northern New England.

The persistence of Orozco's New York dealer, Alma Reed, was an important factor that may have helped offset a tendency to favor Rivera among potential supporters of the project. Chief among these was the Rockefeller family, with
their Mexican oil interests. Nelson Rockefeller, Dartmouth Class of 1930, had been a student of Lathrop’s, and a tutorial fund for special educational initiatives set up by Nelson’s mother, Abby Aldrich Rockefeller, would ultimately make the commission possible. Churchill Lathrop later recalled,

Early in 1932, we had a brilliant revelation, an idea that might move the stalled project off dead center. The department had a small lecture budget; so, why not invite Orozco to give a lecture-demonstration on fresco painting? Such an unusual lecture, by a scholarly artist, would attract considerable student and community attention, and it would produce a few square feet of fresco: a small sample mural. Work-in-progress on even a small mural would have educational value. Also, the presence of Orozco would give the community the chance to observe his skill and judge his character.

In March 1932 Orozco finally came to Dartmouth, where he executed a “trial” mural entitled: “Release, or Man Released from the Mechanistic to the Creative Life,” a subject he characterized as “post-war in theme.” During their discussions of the project, Orozco and members of the Art Department became excited at the possibility of a mural in a larger and more accessible location than Carpenter Hall. They set their sights on the reserve reading room on the ground floor of Baker Library, with which Carpenter is linked by a pedestrian passageway.

Once he spotted the reserve room’s long expanses of wall, Orozco abandoned his previous concept of Greek mythology for a theme that would retain the universal implications of mythology, but be more specific to America. Orozco’s excitement is palpable in the prospectus he wrote during a second visit to Dartmouth in early May of 1932:

The American continental races are now becoming aware of their own personality, as it emerges from two cultural currents — the indigenous and the European. The great American myth of Quetzalcoatl is a living one, embracing both elements and pointing clearly, by its prophetic nature, to the responsibility shared equally by the two Americas of creating here an authentic New World civilization. I feel that this subject has a special significance for an institution such as Dartmouth College which has its origin in a continental rather than in a local outlook — the foundation of Dartmouth, I understand, predating the foundation of the United States.

Traditionally, an epic is a long narrative poem on a heroic theme. Early epics, such as the Iliad and the Odyssey, are written versions of national oral legends. The conventions of the modern literary epic include a hero who founds a new civilization in a mythic time that is continuous with known history. This hero performs notable deeds, often including a descent into the underworld. The style of the epic is characterized by extended similes in which apparently different subjects are extensively compared. This format, which would have been familiar to Orozco through his affiliation with Eva Sikelianos’s Delphic Circle in New York, was well-suited to his mural aesthetic, which found its inspiration in heroic, dualistic themes of conflict, self-sacrifice and regeneration. Both parts of the mural cycle contain a prophetic figure — Quetzalcoatl in the west wing, Christ in the east wing — linked by Cortez, the historical anti-hero.

The 26 panels of “The Epic of American Civilization” are not strictly chronological, either internally (in keeping with a historical order of events) or externally (the order in which they were painted). In any consideration of these murals, one must keep in mind Orozco’s frequently reiterated injunctions that no single panel is significant apart from the rest and that any interpretation in words is a restriction of the meaning of the mural to the experience of a single person.

The Dartmouth hero, Quetzalcoatl, is allied thematically with other tragic heroes adopted by the artist during this middle period of his career, such as Pomona College’s “Prometheus” of 1930; and the magnificent “Man of Fire” in the dome of the Hospicio Cabañas in Guadalajara. The fate of the “Man of Fire,” who rises to heaven in flames, is an alternative to that of Dartmouth’s Quetzalcoatl, who departs on a raft of serpents. In another version of the myth, Quetzalcoatl immolates himself, ascending in flames to heaven, where he becomes the Morning Star. Whatever their nominal identities, Orozco’s mythic heroes are united by a common mission of self-sacrifice for the sake of the enlightenment and liberation of humankind. For Orozco, whose aesthetic was imprinted by the experience of the Mexican Revolution, this liberation is a painful and tragic process whose outcome is far from secure.

Across from the reserve desk, on the south wall at the center of the room, is a depiction of contemporary American life in five compositions on three panels collectively entitled “Modern Industrial Man.” The International Style architecture depicted in these panels is intended to signify a harmony of function and beauty that is no longer dependent on cultural ornament. The “International Style” in architecture was first celebrated as such at the Museum of Modern Art in a 1932 exhibition that Orozco may well have seen. In the American skyscraper, Orozco saw a totally new cultural expression that could serve as a model for the art of the future:

Already, the architecture of Manhattan is a new value, something that has nothing to do with Egyptian

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‘The Epic of American Civilization’

“Cortez and the Cross”

The Orozco works on this and the subsequent pages were commissioned by the Trustees of Dartmouth College, Hanover, New Hampshire. 
(c) 2008 Artists Rights Society (ARS), New York / SOMAAP, Mexico City.
“The Departure of Quetzalcoatl”
“Gods of the Modern World”
pyramids, with the Paris Opera... or with Saint Sofia, any more than it has to do with the Maya palaces of Chichen Itzá or with the “pueblos” of Arizona... The architecture of Manhattan is the first step. Painting and sculpture must certainly follow as inevitable second steps.

We know from drawings that the model for the central, reading figure in Orozco’s “Modern Industrial Man” was a Dartmouth student. In the finished mural, he is not only obviously a worker; he also appears to be African American. Orozco offers here a similar ideal to the dark-eyed young man, seemingly of mixed race with both European and Indian ancestry, who appears in the “Release” panel that Orozco painted in the adjacent corridor 18 months earlier. The young man in “Release” rises from the confusion of post-war machinery to reach for the light. The worker in “Modern Industrial Man” rests from his labor to nourish his spirit. Alma Reed relayed Orozco’s sense of the future of his own country, the future of the Rebel, who was his model of change: “We have had enough of revolution. We want time now to work and to rest. The people are learning to think.”

Orozco signed and dated his last Dartmouth panel on February 13, 1934. Six days later he, his wife, Margarita, and their three children returned to New York and thence to Mexico. The artist’s final statement about his accomplishment was published in The Dartmouth on February 17:

Each panel has been a new experience, it has presented new problems. I have experimented with color, and organization of material. I am just beginning to realize what I have done and what all this has done to me.

Orozco was 50 years old when he left Dartmouth. Even greater artistic achievements lay ahead, but his Dartmouth mural remains one of the most developed summaries of his philosophy. It is also, in the opinion of many critics, the greatest mural cycle in the United States.

Jacquelynn Baas is Director Emeritus of the UC Berkeley Art Museum and Pacific Film Archive and an independent scholar. She spoke for CLAS on February 25, 2008.
Mexico’s most important drug problem is not the sale and transport of illegal substances. It is the byproducts of the drug trade — violence and corruption — that plague the nation. What is important to understand is that violence and corruption in Mexican drug transit zones are contingent, variable and indigenous.

Let me begin with the first term: contingent. Between 1975 and 1980, the United States had high use problems with every drug, including the biggest illegally trafficked drugs: heroin, cocaine and cannabis. Australia also had the highest usage level for both heroin and cannabis, but smaller levels of cocaine availability and use. While both Sydney, Australia and Los Angeles, California continued to have extensive illegal drug markets in 1990, their levels of violence were radically different. Despite having the same population as Sydney — 3.7 million — Los Angeles had 30 times the number of criminal homicides. During that same year, Los Angeles police reported 119 drug-related homicides. The Sydney police reported that two of their 55 killings were drug-related. This means that cities with similar illegal drug problems can have rates of lethal drug violence that vary by 50 to one.

The amount of drug violence is contingent on the violence in the culture of drug criminality, among other elements. There is no fixed formula determining that x kilos of drug sales equals y number of killings.

That is one reason for the extraordinary variability of violence and corruption over time and between different Mexican drug-trafficking zones. Drug transit zone deaths go up and down by a factor of four or more without any real change in drug volume.

This variability in drug violence can be good news as well as bad news. Deaths can go down even if the drug volume does not.

The final key term for Mexican drug violence and corruption is indigenous. The drugs come from South America and go to the United States, but the crime problem and the criminals and the corruption are home grown.

If the corruption and terror of drug transport are variable and contingent, it is possible to use policy incentives and deterrents to reduce these debilitating byproducts of the drug trade.

Choosing Priorities
Prioritizing policy goals is critical given Mexico’s very limited resources for law enforcement and prosecution and...
the serious set of problem the national government faces in several states and localities. The struggle against violence and corruption is a high-cost enterprise in each zone, and targets must be carefully chosen.

Identifying priority concerns helps lawmakers reach appropriate decisions. For example, if City A has twice as many drug-related killings as City B, but City B is responsible for twice as much cocaine and heroin transport, which city should receive limited federal attention? The answer depends on which problem is determined to be most important. I would choose the city with the high homicide rate.

A similar set of priority concerns should influence decisions made in the prosecution of drug-related cases. Here’s another example: An investigation leads to serious drug charges against three mid-level drug cartel employees and three corrupt police officers who cooperated with the cartel. The prosecutor must decide whether to offer concessions to the police so that they will testify against the cartel staff or to the cartel employees so that they will testify against the corrupt police officers. If corruption is given higher priority than drug volume, the concessions go to the drug soldiers and the harsher punishments go to the police. But what if the cartel employees are killers? If violence is the key priority, then the concessions should go to the police.

Choosing high violence areas for special enforcement may have some general deterrent value because it provides an incentive for drug traffickers and those who work with them to minimize violence to avoid priority targeting. When single organizations control drug trafficking in a locality, these general deterrent effects might be substantial. Where violence is the product of contests for power at the local level, the prospect for deterrence is less promising.

It would be wise for Mexico to reserve its largest enforcement efforts and harshest penalties for the deadly and the corrupting, making the reduction of drug volume a secondary goal. This might mean that the U.S. and Mexico have different priorities: the United States’ main concern is reducing drug flow, while Mexico should focus on deterring violence and reducing corruption.

The U.S. drug problem is chronic and not measurably worse than 10 or 15 years ago. The Mexican epidemic of drug violence and corruption is acute; it is a crisis that threatens civil society in several parts of the country. I would hope that the U.S. would come to appreciate Mexico’s problems and priorities. But the first order of business is for Mexico to focus on its most pressing concerns.

Franklin E. Zimring is a professor of law and the Wolfen Distinguished Scholar at UC Berkeley. This article was adapted from a transcript of Professor Zimring’s presentation at the 2008 U.S.–Mexico Futures Forum.
Alfredo Corchado’s call, at close to midnight in the fall of 2004, convinced me we had been right in our reporting of a troublesome spike in violence by drug traffickers along the U.S.–Mexico border. And his description of an encounter with a mysterious man inside a honky-tonk bar in Laredo, Texas, was evidence that we’d touched a dangerous nerve.

I was nearly asleep in my Mexico City home when Alfredo phoned to report he had just been face to face with an unidentified man who bought him a drink, wrapped an arm around his shoulders, smiled and finished a soliloquy on media coverage of drug violence with a calm warning: “Remember, the FBI can’t protect everyone.”

It was not the first threat Alfredo had received since we launched a probe for The Dallas Morning News that began with a close look at who was killing women in Ciudad Juárez, a lawless sprawl of improvised suburbs and industrial maquiladoras on the west Texas border with Mexico. On more than one occasion in the last four years, Alfredo has found himself scrambling to get out of public view and backing away from the front lines of coverage of the tumultuous border.

But as Alfredo says, it’s been worth it to shine a light on a region once ignored, a region once written off as little more than a colorful amalgamation of people who lived and worked on either side of a political fence.

Alfredo has spearheaded work that’s yielded evidence of drug dealers and corrupt Mexican police kidnapping women to be abused at traffickers’ parties. The articles led to revelations that an informant, paid by U.S. intelligence agents, had infiltrated the highest ranks of the ruthless Juárez Cartel, worked with police officials in the kidnapping gang and orchestrated murders of rival traffickers, including at least one U.S. citizen. The border crime beat then led Alfredo to Nuevo Laredo, where a group of ex-soldiers known as The
Zetas — some trained by U.S. Special Forces — had switched sides and launched a bloody assault on drug territory ruled by Mexico’s dominant cartels. At its apex, Alfredo’s work attracted an important accolade — the Maria Moises Cabot Award for career contributions to coverage of Latin America. It also drew him attention, again, from drug traffickers. They were, perhaps, upset he had obtained a video showing the confession of a man who’d crossed the Zetas. The interrogation ended with the man’s on-camera execution.

On our journeys back and forth across the border, Alfredo and I learned some hard lessons about how to report from the outer reaches of the border and not get jailed, kidnapped or killed.

“Drug violence has killed more than 300 people this year [in Mexico]. Eighty in Ciudad Juárez alone, and more than 5,000 in the last two years,” Alfredo said at the start of our discussion on border journalism at UC Berkeley in February.

“Nearly 40 of those victims were journalists, making the job of border correspondent one of the most dangerous anywhere in the world. Still, it’s not just lives at stake; it’s the very existence of what we do. As a journalist, I can think of no other time when news gathering has been so threatened and difficult to do.”

Alfredo’s work on the border for The Morning News has been stunning in its revelations and for underscoring an important message: Just south of us, across a porous border that only nominally separates the United States from Mexico, there is a cancerous growth of violence and corruption, fed by billions of dollars collected from North America’s insatiable hunger for illegal drugs. Lurking under that lawlessness are the drug-trafficking cartels, was made clear in its most tragic dimension in 2006, when there were nine assassinations of media workers in Mexico alone.”


Our work on the border for The Morning News got a jump start after a conversation I had in Dallas in early 2004 with the paper’s inquisitive editor, Robert Mong. At the end of a chat on our overall coverage of Mexico and Latin America, I asked Mong if there was one story he thought we ought to pursue to greater depth.

“Well, I keep thinking we ought to do more on the women of Juárez …”

I suggested it would make a great project for Alfredo, whose own family roots are imbedded in the desert soil along the Tex-Mex border.

I returned to Mexico City and didn’t think much more of that conversation until a few weeks later, when Alfredo called to tell me he was bound for El Paso. It was an impromptu trip, ordered by Dallas, to see if he could match what our editors had thought was an imminent story on the Juárez murders in The New York Times.

I knew this was a big opportunity. I admonished Alfredo that he had to break new ground on a story that until then had only been told, in fits and starts, by regional and local reporters.

“You have to either really show the reader what it’s like to live with fear in Juárez or solve one of these crimes,” I said.

And dang it, Alfredo did both.

The story of a possible serial killer or killers had intrigued me since 1998, when I interviewed the distraught mother of a young girl who had long been missing and presumed dead. I was with Esther Chávez, a diminutive super-hero of a woman who forced authorities early on to look at the hundreds of deaths and disappearances of women as an important criminal phenomenon. We were in the tiny living room of Irene Pérez’s particleboard home in a desert swath outside Juárez.

“What makes you believe there is a serial killer working here?” I asked.

“One thing,” Pérez replied, coldly and stiffly, having obvious difficulty disguising her sorrow. “One day the police told me they had found my daughter. They said to come over and identify her body. I went, but when I saw the body I told them it was not my daughter, but it was my daughter’s clothes,” on some other girl.

Today, I’m safely behind an editor’s desk at The Sacramento Bee. But that day with Pérez and Chávez in...
Juárez remains a vivid memory among the many important events I witnessed in a decade as a correspondent in Latin America. It’s rendered starker by the knowledge that the activist women, and the reporters who work with them, still live under a cloud of narco-violence along the border.

Meeting Chávez and Pérez led me to interviews in Juárez with many more grieving mothers, outraged activists, befuddled investigators and, on more than one occasion, men who may have had a hand in some of the violence against women.

The first of such encounters, in 1998, was punctuated by a deep chill moving up from my toes. The sensation was born from a long interview, in a state prison in Juárez, with a man known simply as “El Diablo,” The Devil. His black eyes unblinking, El Diablo calmly protested his innocence of charges he led a street gang, The Rebels, that stood accused of being paid to kill women.

“You seem like you understand me and my plight,” El Diablo said near the end of the interview. “Give me your number and address in Mexico City, and I’ll contact you to continue our conversation.”

I knew that prison, in Mexico, was only a physical barrier to guys intent on continuing to do business like they did when they were on the street.

I managed a nervous smile before thanking El Diablo. I said I’d call him later.

Alfredo, too, remains tied to Ciudad Juárez. He’s back there now, reporting on the discoveries of dozens of bodies, sometimes buried in mass graves, of victims of Mexico’s as-yet unchecked war among drug traffickers, Mexican army units and police.

This time around, however, Alfredo is noticing a significant muzzle on once-proud local journalists. “I’m in Ciudad Juárez with another journalist, who in hushed tones told me they are being censored,” Alfredo said during the UC Berkeley talk. “Two of his reporters were sent to the El Paso side of the border to hide out after being threatened by narcos. I had come full circle, back to where this dark journey had begun for me.”

Ricardo Sandoval is Assistant City Editor at The Sacramento Bee and was a foreign correspondent in Latin America from 1997 to 2005. He gave a talk for CLAS with Alfredo Corchado on February 28, 2008.
He explained that for the project to succeed, the conversion to alternative energy has to be attractive to these companies and cited as examples the state-affiliated oil companies in Norway and Denmark. New ground rules will be necessary, he added, to motivate reinvestment, with a price for carbon being the likely initial step. At all levels — from Pemex’s defining role in the Mexican economy, to its role as a supplier of oil to the U.S., to its possible role as a leader in the development of alternative energy — the comments at the Futures Forum identified strong relationships between the future of Pemex and alternative energy.

The Immigration Quandary

In the wake of the 2007 immigration reform meltdown in the U.S. Congress, Futures Forum participants analyzed the defeat and debated the best strategies to regain momentum. Evidence of the deepening divides over immigration suffused the presentations. Tamar Jacoby, president of ImmigrationWorks USA, described increased federal and state enforcement efforts as “tearing at the social fabric and destroying our ability to remain a nation of immigrants.” Maria Echaveste, former Deputy Chief of Staff to President Clinton and current political consultant and lecturer at the UC Berkeley School of Law, observed that U.S. policies have long oscillated between two contradictory tendencies, one exclusionary and the other inclusionary. While acknowledging that the U.S. has a relatively generous immigration policy compared to the rest of the world, Echaveste argued that, at a deeper level, “this country has never, ever welcomed immigrants.”

Although the possibilities for short-term positive change may be slim, the discussion was not without hope or proposals for concrete action. Jacoby shared a “cautious optimism” and proposed that the debate could be moved forward by mobilizing the business community and Latino voters behind pragmatic solutions. Although her vision
overlapped somewhat with Jacoby’s, Echaveste called instead for a center-left coalition that would include Latino voters among its key constituencies, formed around an agenda that would address the deeper emotional issues underlying “who gets to be an American,” such as racism and the fear of change. The agenda would have to address the real costs of providing services to immigrants, including education and health care. Echaveste’s point was picked up by Karen Nussbaum, executive director of the AFL-CIO’s Working America program, who maintained that hostility to immigration among U.S.-born workers stems in part from their declining wages and benefits over the past 40 years. Nussbaum contended that any successful path towards immigration reform would also have to include labor law reform and universal health care.

Much of the conversation about policy initiatives centered on the changing nature of Mexican migration patterns, including the implications of the fact that, due to increased border enforcement, Mexican migrants are more frequently coming to the U.S. to stay, a subject on which participants agreed further research was needed. The diverse comments from the group also included some discussion of the nearly half million Central American transmigrants who pass through Mexico, a topic not often raised in the U.S. but one that encompasses concerns about human rights and border security.

The themes of division and integration were highlighted during the lively and intense reactions to the description of how Mexico plans to help its citizens in the United States, which was presented by Rafael Fernández de Castro, a co-convener of the Forum and the chair of ITAM’s Department of International Relations. Fernández de Castro had accompanied Mexican President Felipe Calderón in a series of meetings with Mexican migrants in several U.S. cities, where the ideas for these programs were generated. Mexicans are registering more frequently at their consulates in an effort to help keep their families united in case of deportation, he noted, and they have also requested that the consulates begin offering social services such as health-care referrals, education programs and community centers.

It was as though Fernández de Castro’s report sounded an alarm bell. Jacoby declared that the need for the provision of social services by a foreign government was the “worst possible development;” Echaveste said it gave her “the chills.” While this project clearly reveals the failure of U.S. policies, to these experts it also presented the specter of a situation similar to the “Turks in Germany.” California State Senator Gil Cedillo expressed similar distress at the suggestion that
a “separate nation within a nation” is forming and expressed grave concern that U.S. citizens, including children, could be deported without respect for their rights, as happened in the 1930s.

But Mexico’s initiatives also reflect the reality, as Fernández de Castro indicated, that “there really is a Mexico in the United States.” He added, “Domestic policies in the U.S. — fiscal, health and education policies, which are created for domestic purposes — are affecting Mexicans in the U.S., and therefore they are affecting Mexico.”

Addressing Drugs and Violence

Like other topics addressed by the Forum, the issue of drug-related violence is complex and increasingly important in both countries, although the problems are different for each. It is also one of the few areas in which there is a prospect of active bilateral cooperation, through the $1.4 billion, jointly developed Merida Initiative. President Calderón has made security one of his national priorities and has found allies in the Bush administration.

Whether this binational executive branch proposal will be accepted at other levels of government remains to be seen, but it is clear that the scope of the violence is horrific and persistent: Mexico faces a real danger of becoming a narco-state. In his presentation, Alfredo Corchado of The Dallas Morning News reported that more than 4,000 people have died from executions linked to drug trafficking since Calderón took office, over 700 between January and April of 2008 alone. Every state in Mexico is affected, with the possible exception of Colima. Among the victims are ordinary Mexican citizens as well as politicians, judges, police officers and journalists.

This drug-related violence has cross-border dimensions. There is evidence that the Mexican cartels seek to corrupt U.S. officials and that they organize their activities in the United States as well. The northern nation also plays a role in driving the problem: the bulk of the demand for narcotics comes from the United States, as do the weapons that fuel the violence.

Sergio Aguayo, professor of International Studies at El Colegio de México, recently completed a study on drug-related violence in Mexico. He observed that the problem fundamentally reflects the weakness of the Mexican state, including the collapse of the presidency and the failure to build deeply accountable, democratic institutions after the transition to democracy. According to Aguayo, the issue of the drug cartels is not only inseparable from Mexican politics but also from economic issues: the total volume of the drug business may approach $25 billion, when both international and domestic markets are considered, and drug-related activities provide employment for a significant (if still uncertain) number of Mexicans — perhaps as many as a quarter million.

To confront this crisis, Frank Zimring, professor at the UC Berkeley School of Law, offered a unified set of clear recommendations. Zimring argued that Mexico should focus on violence and corruption rather than on the volume of the drug trade because research has demonstrated that these are separable issues and that the former can be addressed successfully. This insight, if accepted, indicates that U.S. priorities (drug trafficking) are different than Mexican priorities (violence and corruption), which in turn could lead Mexico to policies that do not necessarily meet U.S. interests. For example, Mexico might consider granting immunity to drug mules in return for their testimony against violent and corrupt police officers. Moreover, Zimring suggested that while all of Mexico may be affected, the program should begin with a pilot project in a single border city, as the problem is too big to tackle all at once. Zimring’s presentation sparked numerous specific questions and observations, including some by experienced political actors, touching on such subjects as the potential unintended consequences of giving prosecutors greater power, past difficulties with attempting similar policies and potential locations for the pilot project.
The most well-rounded reflection on Zimring’s recommendations came from Professor Aguayo, who deemed the proposals “challenging” and clearly thought provoking. Aguayo agreed that Mexico lacks an integrated strategy based on an analysis of country-specific realities and needs. He further observed that the assumptions underlying Mexican policies need deep review and expressed dismay that U.S. security interests were likely to prevail at the current moment, while larger questions about development and democracy in Mexico would likely remain unaddressed.

In sum, while a comprehensive strategy and its successful implementation may be far off, the problems are pressing and severe. Progress toward solutions will require an analysis that takes into account diverse Mexican and U.S. points of view, such as those exchanged at the Forum.

The Future of U.S.–Mexico Relations

Over the seven years since the Futures Forum was first convened, prospects for transformative initiatives between the United States and Mexico have followed a roller-coaster trajectory of promise and disappointment. Today, no one expects fundamental transformation in binational relations in the short-term, even with the upcoming U.S. presidential election. As Christopher Edley, dean of the UC Berkeley School of Law, commented during a discussion of the potential impact of those elections, whoever wins in November will be faced with a “to-do list that is unbelievably scary.” Drawing on his experience in the transition periods of two U.S. presidential administrations, Edley observed that the president will have the ability to address personally only a few of the many daunting issues presented before the congressional midterm elections; the other issues will be left to the cabinet and other administration members. Making a list of potential top-five priorities, Edley identified the economy and the budget; Iraq, Iran, Afghanistan and other national security issues; terrorism and homeland security; climate change and energy policy; and health care. Whether or not the new president follows this list, it is clear that Mexico has fierce competition for top priority status, as do immigration, labor rights, trade, education and many other topics of concern.

Nevertheless, the degree of integration between our two nations is such that U.S. domestic issues also affect Mexico, becoming what Fernández de Castro called “inter-mestic issues.” In this vein, many participants were struck by a comment made the first night by Héctor Rangel, chairman of the board of directors of BBVA Bancomer, who stated that the most important outcome of the election for Mexico will be what happens to the United States economy.
The “facts on the ground,” therefore, will continue to drive U.S. and Mexican leaders to exchange perspectives and explore the possibilities for a renewed bilateral relationship. These stakeholders recognize that the U.S. and Mexico are increasingly interdependent: the two countries share a 2,000-mile-long physical border across which people, goods and ideas flow constantly. It is thus inevitable that the U.S. and Mexico will interact over common issues; the questions are how and on what terms. In this context, the Futures Forum continues to provide an important vehicle for the open exchange of diverse points of view, contributing to a redefinition of U.S.–Mexico relations around our shared interests and interdependence.

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Leadership is not just about making a calculation of how to adopt the best possible policy within the envelope of the politics of the moment. Leadership is also about trying to influence the way the public understands and empathizes, so that you can change that political envelope and make different solutions possible.

Now the “to-do list,” the inbox awaiting the next president of the United States, is unbelievably scary. It is unlike what we faced when Clinton took over in 1993 and unlike what Carter faced when he took over in 1977. I was involved in both of those transitions, and this is just scary. And it seems to me that if the next president is to address our current problems and repair the damage of the last few years it will require an ability to change the politics of those problems.

However, having worked in the White House under two presidents and having worked on a number of presidential campaigns, I’m painfully aware of how limited a period of time the next president will have to actually prosecute an agenda and how little time there is for the president to focus on key priorities. So I made a list. My top five priorities for the next president are: 1) the economy and the budget; 2) Iran, Afghanistan and security generally; 3) terrorism and homeland security; 4) climate change, energy and the environment; and 5) health care.

That’s a lot to try to get done before congressional midterm elections start to consume all of the available oxygen in Washington. But look what I’ve left off the list: immigration, global development, infrastructure investments, labor and workers’ rights, veterans issues, trade and trade-related matters, education and more. And all of this must happen against the backdrop of a broken Washington, where partisanship is crippling and policy must be communicated through the flawed transmission mechanism that is the media, in which even the best of leaders has difficulty communicating with the public. I think that the next president is going to face mountainous expectations that will be very tough to meet.

Christopher Edley Jr. is Dean and Orrick Professor at the UC Berkeley School of Law. This article was adapted from Dean Edley’s comments at the 2008 U.S.–Mexico Futures Forum.
Salt collection in Peru.
Photo by Dave Lansley.
Recent years have brought remarkably steady economic growth to Latin America, but this growth has not translated into a significant reduction in poverty or inequality. For former Peruvian president Alejandro Toledo, this outcome is more than just a policy puzzle; it is a recipe for potential political instability.

In his address given at UC Berkeley’s International House, Toledo noted that the 40 percent of Latin Americans who live on less than $2 a day are increasingly connected to the rest of the world through television, radio and information technology. This exposure to first-world lifestyles has served to increase impoverished Latin Americans’ discontent with their own economic status and fuel impatience for broad economic gains to reach them in their daily lives, thus posing a potential threat to democracy in the region.

Issues of marginalization, exclusion and poverty are not mere abstractions to Toledo. He was born into a poor family of 16 children in the mountains of Peru’s Ancash region. Toledo described himself as “a simple Indian that after 500 years finally became president,” adding that his path from poverty to the presidency was “the result of an accident” in a country where state institutions do not encourage upward mobility. It was with the help of two Peace Corps volunteers that he came to the United States in 1965 to pursue a bachelor’s degree at the University of San Francisco. He was able to build on this initial break out of poverty, receiving a Ph.D. in Education from Stanford University in 1993 and going on to work at institutions such as the World Bank, the Inter-American Development Bank and the United Nations. During a stint as a visiting scholar at Harvard University, he decided to return to Peru to enter politics. In 1996 he led the opposition to President Alberto Fujimori despite the administration’s reputation for discouraging, and even repressing, anti-government mobilizing. In 2001...
Toledo won the presidential election, taking office in July of that year.

During his administration, Peru experienced an economic recovery, yet poverty and inequality remained stagnant. Between 2001 and 2006, Peru’s annual exports tripled, and growth in annual GDP was at 7.5 percent, by far the highest rate since the country’s 1980 democratic transition. According to Peru’s national statistics bureau (INEI), between 2002 and 2006 Peru’s accumulative growth in GDP was 30.1 percent, as compared with Belaúnde’s 1980–85 government (-12.6 percent), García’s 1985–90 government (-18.4 percent), and Fujimori’s first and second terms during the 1990s (19.5 percent and 12.7 percent, respectively). Peru’s central bank records show that net international reserves were also higher under Toledo’s government than during the other presidencies.

Within this context of economic prosperity, Toledo’s administration implemented various social policy programs in an attempt to combat the country’s poverty. Over 110,000 houses were constructed for the poor during 2006, a dramatic increase from the 4,722 built in 2001. Toledo also increased the national health and education budgets, and teacher’s salaries were greatly improved in real terms. In part, this effort worked: poverty in Peru decreased from 54.2 percent in 2001 to 44.5 percent in 2006, and extreme poverty, from 26 percent to 18 percent (World Bank, INEI). However, Toledo soberly described this decrease as unacceptable given the nation’s high level of economic growth.

Contrary to what he referred to as “this mysterious theory of trickle-down,” in which it is assumed that overall economic growth will be sufficient to reduce poverty, Toledo presented an alternative, inverse depiction of the relationship between economic growth and poverty. Not only can poor people not afford to wait for prosperity to trickle down, high rates of poverty and inequality can actually prevent sustained economic growth because people who are dissatisfied are more likely to protest against the government. As Toledo stated, “when you have economic growth and there is noise in the street, that’s not a very good means to attract capital investment.” For this reason, fighting poverty is an essential component of ensuring both economic and political stability.

In order to alleviate poverty in Latin America, Toledo recommended careful investment in small businesses, especially those run by impoverished women. He elicited applause and cheers when he recounted a recent conversation with a former prime minister of Norway, in which he asked, “When are you going to give a Nobel Prize in economics to the poor women of the world?” Toledo admitted that in and of itself, microcredit can be counterproductive.
However, he proposed two ways to ensure that microcredit programs have a greater chance of success. First, prior to giving microcredit, he advocated training women in work such as weaving or crafts, without moving them out of their familiar settings. Then, following the distribution of the microcredit, he said it was important to help women bring their wares to the marketplace.

Toledo also identified four trends which suggest that Peru is in a position to make a “qualitative jump” to a strong position in the world economy in 15 years, thereby allowing for long-term investment in human capital. First, he predicts continued economic growth, for both the region as a whole and Peru in particular. Peru is also diversifying the composition of its exports, moving beyond mining into products such as textiles, asparagus and paprika. In addition, Peru is opening up its markets through agreements with the European Union and the United States. Finally, Peru has the potential to increase human capital by luring home citizens who have studied internationally.

In closing, Toledo urged Latin American politicians to have the courage to invest in human capital, particularly education. Economic growth represents a perfect context for capitalizing on the resources, talents and skills of the people of the region. Instead of waiting for economic growth to “trickle down,” this is the perfect time to provide a few stepping stones, so that all of Latin America’s people have an opportunity to realize their potential.

Alejandro Toledo, President of Peru (2001–06), is President of the Global Center for Development and Democracy; Stanford University’s Payne Distinguished Visiting Lecturer with the Freeman Spogli Institute for International Studies’ Center on Democracy, Development and the Rule of Law; and Distinguished Fellow at Stanford’s Center for Advanced Studies in the Behavioral Sciences. He spoke for CLAS and the Blum Center for Developing Economies on March 10, 2008.

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Hugo Chávez’s Venezuela is a hybrid state: it combines the anatomy of a democratic regime with the physiology of an authoritarian one. While possessing democratic institutions such as political parties and labor unions, its actual functioning departs starkly from the democratic ideal. Yet, argued leftist critic Teodoro Petkoff, the narrow defeat of a referendum on constitutional reform in December 2007 thwarted an even more drastic potential outcome, the institution of a de facto totalitarian state.

Petkoff, a former guerrilla leader, two-time presidential candidate and planning minister under Chávez’s predecessor, Rafael Caldera, began his talk at CLAS by analyzing the “Copernican change” in Latin American politics that has resulted in the left’s recent electoral success. The demise of the Soviet Union in 1991, he maintained, brought an end to the United States’ Cold War strategy of preventing leftists from coming to power in its sphere of influence. In the 1990s, Latin America’s left-of-center political parties not only were able to govern without fear of U.S. military intervention, they also no longer had to define themselves in terms of the Soviet Union or Cuba merely because their ideological stances differed from that of the United States.

This newfound freedom has led to the emergence of a broad array of leftist governments in Latin America, which Petkoff grouped into two general categories. The leaders of the first group, the “democratic and modern” left, learned from the Cold War and the region’s military dictatorships and have fully embraced democratic methods and goals. The second group, in which Petkoff placed Hugo Chávez, views democracy in purely instrumental terms. Its leaders may seek power through elections, but they do not respect democratic norms in the exercise of power once in office.

Chávez’s rise to power in Venezuela occurred at a moment in which the country’s two traditional political parties, Acción Democrática (AD) and the Christian Democratic Party (COPEI), had been severely discredited by their inability to respond to deepening social and economic problems. The first sign of political crisis was the “Caracazo” of 1989, in which thousands of people took to the streets to protest economic austerity measures, and at least 300 civilians were killed by security forces. Three years later, left-leaning military officers launched two coups

Venezuela’s Prospects for Democracy

by Taylor Boas
against President Carlos Andrés Pérez, the first of which was led by Chávez. The traditional parties’ loss of legitimacy was confirmed in 1993, when corruption charges drove Pérez from office and Rafael Caldera was elected president as the head of a coalition of small, leftist and center-right parties — including the Movimiento al Socialismo (MAS), which Petkoff helped found in 1971. Several of these parties, including MAS, went on to support Chávez in his successful 1998 bid for the presidency, prompting Petkoff to break from the party.

Since taking office in 1999, Chávez has withstood both legal and extralegal efforts to unseat him. Petkoff cited four particularly strong bases of political support as central to the president’s hold on power. The “spinal column” of his regime is the sector from which he originated: the armed forces. A second key constituency is the “boli-bourgeoisie,” the nouveau riche who have profited under Chávez’s rule, many through corrupt business dealings. The Venezuelan state bureaucracy — which has doubled in size during the Chávez administration — constitutes a third power base. Finally, Chávez retains strong popular support. Through his misiones, social programs targeting the poor, the president has helped bring about major improvements in the lives of millions of long-neglected Venezuelan citizens.

While Chávez’s oil-fueled social spending has gained him a large following among the poor, Petkoff questioned its long-term sustainability as well as the general health of the Venezuelan economy. The current boom in oil prices has facilitated economic growth on the order of 10 percent per year from 2005 to 2007, but, Petkoff argued, the nature of this growth has created a number of economic problems. With so much money pouring into the economy, inflation has soared to three times the Latin American average, while price controls on basic goods such as milk, beans and sugar have led to shortages. The country’s economic problems are exacerbated by an overvalued currency: the official rate has been fixed at 2,150 bolívars to the dollar since 2005 while the black market rate is more than twice as high, at over 5,000 bolívars to the dollar. This discrepancy makes non-oil exports expensive and imports cheap, discouraging domestic investment. While Venezuela earned $60 billion in oil revenues in 2007, it spent $45 billion on cheap imports, Petkoff maintained. The government’s promotion of imports is “the most important enemy of [Chávez’s] own policy of endogenous development,” he added.

In this context of strong political support combined with a potentially unstable economic situation, Chávez proposed a series of wide-ranging constitutional reforms in a December 2007 referendum. These reforms, Petkoff insisted, would have eliminated the last vestiges of Venezuela’s old democracy. While governors and mayors would continue to be elected under the proposed regime, a superstructure of unelected secondary vice presidents would be created above them, diluting their authority. Although the president would have enjoyed potentially unlimited reelection, governors and mayors would still have been subject to term limits. The reforms also proposed “ambiguous” changes in the legal status of private property — something that may have alarmed even those with only modest assets.

Finally, the reforms would have changed the structure of the Venezuelan military. In a country where “Bolivarian” is widely understood as a synonym for chavista, the official name of the National Armed Forces would have been changed to the Bolivarian Armed Forces. And Chávez’s personal control over the military would have been more than merely symbolic. While the president currently oversees promotions to the rank of general, the proposed reform would have given Chávez direct authority over the career advancement of all officers. According to Petkoff, such changes would ensure that “cadets at the academy understand immediately that to be promoted you must lick the soil of the boots of the president.”

In the narrow defeat of the proposed constitutional reforms by a margin of 51 percent to 49 percent, Petkoff
Why is there so much uncritical admiration for Hugo Chávez and his policies in international circles among intellectuals and the left? Many of these people are quick to criticize governments on the right but give Chávez their unconditional support. How do you explain this phenomenon?

Teodoro Petkoff: Mark Lilla, an American, wrote an important book called The Reckless Mind: Intellectuals in Politics. I recommend it because he examines the fascination of 20th century intellectuals with strongmen and totalitarianism. Lilla draws on the examples of Heidegger, who was a member of the Nazi party; Carl Schmitt, the theoretician of Nazism; and the politics of the Frenchman Jacques Derrida, to examine the attraction of some intellectuals to totalitarianism.

I know my own country’s intellectuals very well. The majority of Venezuelan intellectuals are against Chávez. This is a revolution without intellectuals.

Outside Venezuela, there is a different perception. David Viñas is a very well-known Argentine writer. He told me once, “I must support Chávez — he is giving cheap oil to Fidel!” Regardless of what is happening in Venezuela, all Viñas cares about is Chávez giving cheap oil to Cuba.

We saw the same tendency with the Soviet Union and Stalin. Around the world, well-known intellectuals, poets and writers — Louis Aragon in France; Rafael Alberti, in Spain; Pablo Neruda, Gabriel García Márquez and, for some time, Mario Vargas Llosa in Latin America; and many others — supported Soviet communism uncritically. Having only a superficial understanding of the character of totalitarian societies, what they espoused to their audiences was an irresponsible abuse of their role.

How can you explain Sartre’s Maoist politics? How can a Frenchman, living in France, understand Maoist realities? When an intellectual of the French Communist Party denounced the Soviet gulags, Sartre called it an “imperialist lie.” How do we understand this? The relationship between intellectuals and totalitarianism is not reflexive. At the same time that Sartre was apologizing for the gulag, Albert Camus was identifying the murky history Sartre and some others had with Nazism in France. Camus, however, was consistently anti-totalitarian. During the occupation, Camus was the editor of Combat, the underground newspaper. He was against the gulag and the Soviet model from the beginning.

We can also consider the Polish poet Czeslaw Milosz’s The Captive Mind. In the novel, Milosz tries to explain the behavior of four nameless intellectuals who consciously accept a totalitarian regime. He describes what happens in the minds of these people, the fascination they have with totalitarian solutions.

Perhaps the fascination comes from Rousseau’s conception of the common will of the people. Maybe it comes from Saint-Just, Robespierre’s right-hand, who once said, “What constitutes a republic is the total destruction of everything that stands in opposition to it.” Well, that philosophy is the birth certificate of totalitarianism. Years later, it is Fidel’s same phrase: “Inside the Revolution, everything; outside the Revolution, nothing.” But, who says who or what is inside the Revolution? Fidel.

In hindsight, it’s surprising that some of the most prominent intellectuals of the 20th century supported Stalinism. They were blind to clearly presented evidence of excesses. I should say that when I was a member of the Communist Party, I was the same way. But I was in Venezuela. When the Soviet Union invaded Hungary, we didn’t think about Hungary — we had our hands full opposing the Pérez Jiménez dictatorship.

In 1968, however, when the Soviet Union invaded Czechoslovakia we were older, more mature, and we could read the coverage with open eyes. We saw it for what it was.

This article was adapted from Teodoro Petkoff’s response to a question from a member of the audience at his CLAS talk on January 25, 2008.
found reason to be cautiously optimistic about Venezuela's political future. Chávez miscalculated, Petkoff argued, by trying to turn the constitutional referendum into a vote for or against his own political movement. The president not only suffered his first electoral defeat since winning office in 1998, he also garnered 3 million fewer votes than in December 2006, when 7.3 million people (63 percent) voted for his reelection. Many of those voting “No” in the 2007 referendum did so because they disagreed with the proposed changes, not necessarily because they opposed Chávez. But the referendum's defeat has damaged Chávez's aura of invincibility, in part because he put so much political capital into the campaign. If the president's charismatic authority is seen as declining, Petkoff suggested, the loyalty of his supporters in the military, state apparatus and “boli-bourgeoisie” may begin to waver.

For Petkoff, the most promising aspect of the constitutional reform referendum was the emergence of a new opposition movement committed to democratic tactics. In the first stage of opposition to the Chávez administration, from 1999 to 2003, opponents sought the president's ouster through an attempted coup, open criticism by the military and a 62-day-long oil sector strike. In addition to being anti-democratic, these efforts were counterproductive, as they ended up strengthening Chávez’s political position. The second stage of opposition, beginning with the 2004 recall referendum, was also a miscalculation, in Petkoff’s view. The president's opponents alleged electoral fraud, despite the absence of confirming evidence, and then went on to boycott the 2005 municipal elections, facilitating chavista victories.

In the third, most recent stage of opposition, Petkoff characterized anti-Chávez forces as being both more democratic and more prudent. Most importantly, the emerging protest movement, led by middle-class university students, has learned from the tactical mistakes of earlier efforts. Rather than advocating Chávez's ouster, the student movement opposes the president’s most controversial policies, such as the proposed constitutional reform and the closing of Radio Caracas Televisión in May 2007. The current Venezuelan opposition movement, Petkoff concluded, “is married [to] the idea of a democratic strategy, and from my point of view, it is the only field in which we can confront Chávez with possibilities of success.”

Teodoro Petkoff, founder of the Venezuelan newspaper Tal Cual, is a prominent critic of President Hugo Chávez as well as a former guerrilla leader, two-time presidential candidate and planning minister under Chávez’s predecessor Rafael Caldera. He gave a talk for CLAS on January 25, 2008.

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A line forms for milk rations in Venezuela.
Latin America is going through a period of internal cultural change and regional fragmentation. The first process, a product of newfound democratic empowerment combined with continued economic marginalization, has led to increasing demands for the reduction of poverty and inequality. This outpouring of political participation has showcased the strength of democracy in Latin America but has also led to a crisis of representation, with many existing political parties and politicians finding it difficult to respond to popular aspirations. Simultaneously, the strong support for hemispheric integration that characterized much of the 1990s has given way to an ambivalent stance toward free trade, both in Latin America and the United States. Rifts between Latin American countries have also begun to expose new fault lines in the region.

Ambassador Juan Gabriel Valdés, director of public diplomacy for the government of Michelle Bachelet and Chile’s former Permanent Representative to the United Nations, began his analysis of the current situation in Latin America with a discussion of the economic difficulties facing the region. Forty percent of Latin America’s people live in poverty, and the region’s per capita economic growth rates — 4.2 percent in 2007 and an expected 4.5 percent in 2008 — are not enough to fund bold social programs. Even in countries such as Chile that have substantially reduced poverty, high levels of inequality remain. The media and communications revolutions have exacerbated perceptions...
of these problems; thanks to television, cellular phones and the Internet, young people in Latin America are increasingly aware of their social and economic marginalization. The gap between the haves and have-nots often takes on a geographical dimension, which is becoming visible in voting patterns. Mexican presidential candidate Andrés Manuel López Obrador won overwhelmingly in the country’s impoverished southern states but lost to Felipe Calderón in the more prosperous north. Likewise, Brazilian president Luiz Inácio Lula da Silva was reelected with strong support in the poor northeast but only a minority of votes in São Paulo, his political birthplace.

Social and economic exclusion in Latin America has generated political activism and demands for change in many countries, a trend that Valdés characterized as generally positive for democracy in the region. People feel empowered by democracy, and they are making use of their newfound ability to challenge governments that are not addressing poverty and inequality. The poor are voting enthusiastically at higher rates than ever before. Marginalized ethnic minorities are asserting themselves at the ballot box rather than through violence. And while 14 presidents have been removed from power by popular mobilizations, democratic institutions were respected in the majority of these cases — the unpopular incumbent resigned, an interim president took over and elections were held to choose a permanent successor. Many electoral campaigns have involved confrontational rhetoric, but losers have respected the results. Even in Mexico’s disputed 2006 presidential election, the country’s institutional framework ultimately prevailed. And while many observers have characterized recent electoral outcomes in Latin America as a shift to the left, Valdés underscored that the region is not relapsing into statism or embracing an anti-market ideology. Recognizing the limitations of the Washington Consensus or taking a realistic view of the costs and benefits of globalization are not the same as rejecting sound principles of economic management.

Despite the democratic nature of recent political trends in Latin America, Valdés argued that the region’s representative institutions are clearly in crisis. Legislatures and parties have proven incapable of responding to new social demands and expectations in many countries. This trend has fueled a surge of populist democracy in Colombia, Ecuador, Peru and Venezuela, where presidents have strengthened their authority by cutting into the mandate of elected parliaments.

Argentines protest a cross-river Uruguayan pulp plant.
and engineering their own reelection. Along with Evo Morales in Bolivia, the presidents of these countries have also convoked assemblies to reform their constitutions in ways that altered the balance of power among different subnational regions. While maintaining that electoral democracy is here to stay in Latin America, Valdés insisted that durability does not equal health. “Electoral democracy is part of our landscape; representative democracy is in evident crisis.”

Latin America’s new political and economic reality also coincides with the United States’ loss of standing in the region. Politicians continue to say that they want cooperation with the U.S., but it is unclear what such cooperation entails beyond maintaining an anti-drug and anti-terrorism stance. In the 1990s, leaders of both the U.S. and Latin American countries talked about the positive aspects of free trade and regional integration, but enthusiasm for such a “hemispheric approach” has dampened in recent years in both the North and the South. The U.S. has abandoned the Free Trade Area of the Americas initiative; Brazil is no longer committed to hemispheric integration as it once was; and there is general disillusionment about the North American Free Trade Agreement (Nafta) as a model for the rest of Latin America. In the aftermath of the 2006 midterm elections in the U.S., and with a Democratic presidential victory possible in 2008, it is hard to envision future trade agreements being approved by Congress. “The wall that... is to be [built] at the Mexican border is the last and almost surreal epitaph for the Nafta of the 1990s,” argued Valdés. Americans appear unconcerned about deteriorating ties with their neighbors to the south; a recent poll found that only 7 percent think relations with Latin America are relevant to the United States.

A reluctant stance toward regional integration affects not only Latin America’s relations with the United States but also its countries’ interactions with one another. Valdés pointed to signs of a return to confrontation in intraregional relations. When Argentina and Uruguay could not resolve a recent disagreement over the construction of paper mills via the dispute resolution mechanisms of Mercosur, Argentina turned instead to the International Court of Justice in The Hague, and King Juan Carlos of Spain ultimately had to step in as a mediator. Similarly, Peru went to the Hague court in an effort to have its maritime borders with Chile redrawn after the two countries failed to resolve the issue through bilateral negotiations. The globalization discourse of the 1990s claimed that geopolitics was
obsolete, but the region is seeing a return to geopolitical struggles over hydrocarbons, with recent disputes about natural gas straining relations among Bolivia, Chile, Argentina and Brazil. Valdés pointed to positive signs in Brazil’s efforts to promote regional integration through infrastructure projects and rapprochement between Mercosur and the Andean Pact. However, he maintained that Brazil and Argentina have yet to put their personal interests aside to work for the betterment of the region by playing a leadership role within Mercosur similar to that of France and Germany in post-war Europe.

In the discussion session following his talk, Valdés took advantage of several opportunities to expound upon issues of hemispheric integration and relations with the United States. In response to a question about a possible trend toward bilateral rather than multilateral trade agreements, Valdés highlighted the increasing interest in trade with China among many South American countries. Sino-Latin American relations are yet another area of growing division among the region’s countries. While Mexico and Central America tend to view China as a low-cost manufacturing competitor, many South American countries see it as a market for their raw material exports. Chile, in particular, is also looking abroad to other countries, such as Ireland, New Zealand and South Africa, as both trading partners and possible models of economic development. Given these trends, Valdés argued, a hemispheric trade deal that would prohibit bilateral agreements with Europe or Asia is clearly off the table.

In response to a question about the potential for improved U.S.–Latin American relations after the 2008 presidential election, Valdés highlighted the importance of a multilateral foreign policy stance regardless of which candidate wins. More often than not, the United States has taken a unilateral approach to foreign policy rather than working with Latin American countries as partners. As Mexico’s former ambassador to the UN, Adolfo Aguilar Zinser, once said, the United States typically wants Latin American countries to prove their loyalty by taking its side in international disputes rather than by solving problems together. This has long been a source of frustration to the United States’ southern neighbors. An approach in which countries are forced to be either enemy or ally of the United States is one of the worst aspects of the current administration, argued Valdés. A multilateral approach to foreign policy would offer the next U.S. president substantial opportunities for improving relations with the rest of the hemisphere.

Juan Gabriel Valdés was Chile’s Permanent Representative to the United Nations (2000-03) and a member of the Security Council during the deliberations prior to the invasion of Iraq. Subsequently, he served as head of the United Nations Stabilization Mission in Haiti, and he is now the director of Chile’s public diplomacy program. He spoke for CLAS on February 6, 2008.

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Brazil is on the march. Poverty rates and inequality have been declining for most of the last decade. The economy is stable and growing robustly. And according to Glauco Arbix, a sociology professor at the Universidade de São Paulo, a small but growing number of innovative Brazilian firms have been able to harness the opportunities provided by an integrated global marketplace.

“This is something totally new,” said Arbix during his CLAS presentation. “It is the first time that a Latin American country is generating a group of companies that are going abroad and that are being successful in competition with other global firms.”

Brazil has long been a major exporter of primary commodities, and agricultural exports such as soybeans continue to be a significant source of economic growth and foreign exchange. But in recent years, Brazilian exports of medium- and high-technology goods — things like Embraer jet aircraft and Marco Polo buses — have begun to account for an increasing share of Brazil’s favorable export performance.

Growing exports are certainly a welcome shot in the arm for a Brazilian economy that, like much of Latin America, is only now beginning to emerge from the instability and economic stagnation of the 1980s and 1990s. And, Arbix contends, Brazil’s growing industrial export prowess is simultaneously challenging conventional wisdom about how firms in developing countries are competing on the new global field.

Arbix should know. From 2003 until 2006, he served...
as president of the Institute of Applied Economic Research (IPEA), the Brazilian government’s most important economic policy think-tank. While there, Arbix and his colleagues carried out what is perhaps the most comprehensive study of Brazilian industry to date, a near census that includes data on some 95 percent of Brazilian industrial sales.

Standard economic narratives tend to stress the comparative advantages of Brazil and similar developing countries in the export of labor- and natural resource-intensive goods rather than capital-intensive, high technology products. But data from the IPEA paints a more nuanced picture, one in which a small but growing number of Brazilian firms are actually increasing the technological intensity of their production processes in order to produce innovative goods and services that fetch premium prices on domestic and international markets.

While they make up less than 2 percent of the total number of firms in Brazil, these roughly 1,200 “A-class” companies are among that nation’s most productive, accounting for over a quarter of Brazil’s total industrial sales. They employ a more educated workforce, have lower turnover rates and pay premium salaries when compared with the rest of Brazilian industry. They are more likely to pursue global export markets, and they invest heavily in domestic research and development (R&D) efforts as well as in partnerships and acquisitions abroad.

Brazilian industry wasn’t always so globally-oriented. For much of the 20th century, Brazil (and much of Latin America) pursued what came to be known as import-substitution industrialization, a set of strategies that aimed primarily to increase manufacturing output for domestic consumption through tariff protections and subsidies for domestic producers. However, trade and capital liberalization in the last several decades have changed the rules of the game, exposing Brazilian firms to increasingly intense international competition.

Arbix’s contention is that globalization has pushed different types of Brazilian firms to innovate and adapt themselves to the rigors of international competition in different and often novel manners. While many do attempt to cut labor costs in order to compete with other low-wage producers from around the world (as standard theory predicts), Brazilian A-class firms are more likely to invest intensively in physical and human capital in an effort to boost their competitiveness in international markets.

“A company doesn’t adjust itself for fun. Looking for new procedures, for reliability, it’s very difficult. It’s very difficult to access new markets. It’s not a matter of power in general or money: it’s a matter of credibility; it’s a matter of skills; it’s a matter of the capacities needed to sustain a continuous movement into another country,” according to Arbix. “There is no doubt that exports foster innovation.”

It is this last point — the link between export competition and innovation — that most clearly distinguishes Arbix’s dynamic analysis of innovation from the comparative statics of standard trade models. Comparative advantage stresses that a country should export those goods and services that it produces most efficiently, given its current endowment of productive factors. Or, to put it slightly differently, comparative advantage is largely about maximizing what a country can get out of trade given its current capabilities.

However, Arbix’s argument is that — at least in the Brazilian case — exposure to fierce international competition has spurred A-class companies to revolutionize their production processes through investments in intangible
assets like R&D and human capital, thereby transforming and improving upon Brazil’s initial endowment of productive capabilities and progressively modifying its comparative advantages in global trade.

While Brazil is the first Latin American country in the recent period to produce such a dynamic set of signature industrial firms, the business strategies that Brazilian A-class companies are using are not without precedent. Indeed, as scholars such as Robert Wade of the London School of Economics pointed out over a decade ago, the successful export-led strategies employed in the post-World War II era by newly industrializing countries such as Japan, Korea and Taiwan were similarly focused on using international trade to spur industrial competitiveness. By progressively increasing firms’ productivity and market access, managed exposure to international trade aided firms in moving up the industrial value-added chain.

Arbix sees a similar pattern in the recent emergence of developing countries such as China, India and Brazil on the global stage. However, changes in the structure of global trade — particularly the growing importance of knowledge-intensive services — have meant that history will not simply repeat itself. Rather, changing circumstances will continue to require innovative new strategies on the part of firms and nation-states.

“The world has changed and knowledge is in a very different position than it used to be,” Arbix said. “Knowledge is the real engine of this new wave of international corporations. Or perhaps not knowledge per se, but the search for knowledge. International corporations need knowledge to survive as we need air to breathe.”

Right now, the air is sweet in Brazil.

Glauco Arbix is Professor of Sociology at the Universidade de Sao Paulo and a member of the Brazilian National Council on Science and Technology. He gave a talk for CLAS on February 25, 2008.

Daniel J. Buch is a Ph.D. candidate in the Department of Sociology at UC Berkeley.
A New ‘Cold War’?

by Mónica González

Most families living in Plaza, a neighborhood flanking the epic Plaza de la Revolución in Havana, will remember August 25, 2007, as the day they had to say good-bye to their cherished General Motors, Westinghouse and Minsk refrigerators which arrived on the island from the U.S. in the 1950s and from the U.S.S.R. in the 1970s.

A megaphone woke me, and I went quickly to the door. The entire neighborhood — children, adults and grandparents — was congregated around an old man shouting: “¡Compañeros! ¡Compañeros! We require that all men in the quarter cooperate with the new mission of our Energy Revolution! In a few minutes trucks will be picking up your old refrigerators so you can get new equipment! Social workers will explain how this equipment works and the cost of each piece! Men: please help your neighbors load the old refrigerators on the trucks! Women: please take care of the children so we can avoid any unnecessary accidents!”

“Who is he?” I asked a woman nearby.

“A delegate of the Communist Party in our district,” she responded.

From that moment on, not a single door closed until late in the evening when the task was done. And everyone was keenly aware of how their friends and acquaintances were responding to the arrival of the new — “Oh, so small!” — Chinese refrigerators. That August Saturday was the end of an era: the spectral presence of the two dominant empires of the 20th century, the U.S. and the U.S.S.R., was pulled out of Havana homes as chatarra.

The Energy Revolution

As I watched men of all ages lift the heavy and rusting refrigerators, I was reminded of my previous trip to Cuba in
2005. That summer the neighborhood ran out of electricity several times: the country’s aged and failing power stations were no longer capable of supplying the whole island with energy. And the ancient electrical devices used by most Cuban families, with their high energy consumption, worsened the problem. The crisis convinced government officials that it would be cheaper, to the tune of $1 billion a year, to subsidize new appliances than to pay the existing energy tab. Cuba’s ambitious plans for energy renewal were formally launched during a ceremony held in the western province of Pinar del Río in January 2006, at which Fidel Castro announced the name of the modernization project: La revolución energética (the Energy Revolution). In keeping with the revolutionary tradition of “naming” each year after historic events, he also announced that 2006 would officially be the “Year of the Energy Revolution.”

Based on an agreement with China, the Cuban Energy Revolution seeks a more efficient and environmentally friendly use of energy by means of renovating power plants and replacing inefficient electrical equipment. The new policy, which has been accompanied by a sustained propaganda campaign promoting energy conservation, began with the replacement of key national power stations and public streetlights. The government then moved to cut domestic energy consumption, delivering halogen bulbs, fans, pressure cookers, stoves, rice cookers, TVs and, more recently, new model Chinese refrigerators. While purchasing the new articles isn’t officially mandatory, it is a strongly encouraged way of supporting the Revolution. The electric devices are sold near or below cost, and payments are made in small monthly increments. Responding to critics who chafed at the replacement program, Fidel proclaimed that the government’s goal was not to collect money but to reach the whole country with the energy conservation plan.

Continuing the tradition of implementing pioneering national policies on the eastern side of the island, in deference to the critical role played by Santiago de Cuba in both the War of Independence and the Cuban Revolution, the Energy Revolution is being executed from east to west. This seemingly peripheral aspect of the plan reveals the extent to which “revolutionary values” continue to shape the daily life of the Cuban population.

**A Difficult Technological Leap**

When Havana families finally began opening the boxes containing their extremely light new Chinese refrigerators, I realized the Energy Revolution was generating another unique social phenomenon. Leaping forward from 1950s
machinery to 21st century technology was not an easy assignment for an island locked in time. Although modern appliances have been available in dollar stores for many years, they were beyond the means of average citizens. The trucks loaded with “vintage” American and Russian refrigerators were proof that most Plaza families were decades behind in adopting new technology. Nearly 50 years of revolution and isolation had led to the rise of experts knowledgeable in the repair of old fashioned products, such as stoves, blenders and cars. Used to the heavy steel of mid-20th century products, Cubans were deeply suspicious of the quality of their new appliances.

In the week following the transfer, it was common to hear adults saying that they were forbidding children from opening the Chinese refrigerators because they doubted the apparently fragile doors would resist prolonged daily use. People automatically compared them to the old, familiar, and indeed beloved, equipment: “American refrigerators...well, in those days, they were made to last forever. They were built solidly enough to withstand the Cold War! Nowadays, technology breaks down right after you buy it. That’s the way business works: you have to buy a new product every other year,” observed Leonor, a neighbor from Basarrate Street.

Another worry among Plaza families was storage space. Accustomed to a diet based on generous portions of rice and beans, Cubans had adapted their food storage habits to Cold War era refrigerators. Households typically stored several gallons of water and multiple pots and pans in the fridge. “Where am I going to keep my beans?” was a common refrain.

**World History in Cuban Private Space**

If 1950s era American cars have become the international icon of a quaint and lagging Cuba, old American and Soviet refrigerators were, until August, the major domestic markers of the 20th century’s most paradigmatic imperial clash. More than mere appliances, they were material proof of Cuba’s deep involvement in the main trends of world history during the last century. In this context, I couldn’t help but wonder what the new Chinese domestic devices portend for the century ahead.

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Testimonio

In early July of 1999, I found myself standing by the side of a highway in Guatemala, waiting for the arrival of a priest I had never met. Our encounter had been arranged by a mutual acquaintance who had told me that I wouldn’t have any trouble recognizing him: he would be the only person by the side of the highway other than me with blue eyes. The priest showed up alone, in a small, run-down car, and walked up to me without hesitation. Instead of trying to speak over the roar of the traffic, he shook my hand and then pointed to the roadside café where he had parked his car.

The priest asked me only a little about myself, and then he began to recount some of the things he’d seen while working in a rural parish. He had arrived soon after the worst period of political violence and had found his parish torn apart by its self-imposed silence. He said he would describe some of the more important things he’d learned in ministering to his congregation. There were certain telltale signs, he explained vaguely, signs that were clear and undeniable, even though their meaning was not. The people who had sat in the café before us had spilled a bowl of sugar on the table, and the priest smoothed out the sugar and drew through it as he spoke, his blue eyes fixed on the granules.

I had no idea, during our long conversation, that I was researching a novel. As far as I knew, I had gone to Guatemala to do research for a master’s thesis on testimonio and oral history. A genre of autobiographical testimonial literature, testimonio had particular significance in Guatemala thanks to Rigoberta Menchú, the Nobel Prize winner who became famous for her autobiographical account published in 1983. Likewise, the broader practice of collecting oral histories had particular significance in Guatemala owing to the investigations of the United Nations’ Historical Clarification Commission and the Catholic Church in Guatemala. In the 1990s, both institutions conducted extensive interviews with survivors of Guatemala’s armed conflict, amassing thousands of testimonies. Their reports, with conclusions heavily critical of the Guatemalan government and military, were inescapably public and politically contentious.

By 1999, collecting oral accounts of recent history was a politically charged but, by the same token, familiar practice to people in Guatemala. Individuals with whom I spoke recognized the nature of my research so immediately that it hardly required explanation. In fact, once the word “testimonio,” had been uttered, their own notion of what my research consisted of was so clear that I had trouble persuading them that my conception was somewhat different. Their well-defined understanding did not involve studying the form and history of testimonio but enacting it: that I listen to and record the conversations myself.
Initially, I resisted. I knew that the widespread recognition of testimonio did not by any means imply an overwhelming enthusiasm to be a part of an oral history “project.” On the contrary, if the armed conflict had left any common legacy to Guatemalans, it was a shared commitment to silence.

**Family History**

I was surprised, however, to find that some people actually were willing to speak with me — despite the political atmosphere and the fact that I was an outsider. Through family members and friends, I managed to arrange several meetings that resulted in lengthy recorded conversations. These conversations were everything testimonio was supposed to be. In fact, they were striking not only in how closely they resembled the archetypal testimonio accounts but how closely they resembled one another. The people who spoke with me were always eyewitnesses of political violence. They were more often than not illiterate and more often than not of Mayan descent. They accounted for themselves in fluid, even polished narratives that took in the scope of their whole lives. They told incredible stories of hardship, survival and, ultimately, salvation.

Encouraged by these conversations but desirous, at the same time, of speaking with people who had experienced the armed conflict differently, I attempted to broaden the pool. However, I immediately found it difficult to persuade anyone who deviated from this profile to speak with me in the same format. People who were literate and educated, or had not witnessed political violence firsthand or had seen only the aftermath of violence were extremely reluctant to talk about their lives. They kept the silence I had originally expected.

When I did succeed in persuading such individuals to speak with me, their accounts were radically different from the classic style of testimonio and from one another. Some, like the priest who met me by the side of the highway, preferred to provide analysis and commentary rather than anything like a life story. Others, who tried to speak more personally, told stories that were remarkably disjointed and incoherent. I found no survival and salvation among these narratives.

With time, I began to realize that what distinguished the fluid testimonios from the other accounts was practice. It was not that literate and educated people were inherently disjointed in their storytelling or that illiterate witnesses spontaneously saw their lives as lucid salvation narratives, but rather that, by some process of selection, more people who fit the illiterate-witness profile had told their story. In fact, by the time I arrived, some of them had told it several times.
times. Regardless of how this selection process had taken place, it had produced a definite and self-reinforcing effect.

Providing an oral account of one's life in Guatemala had come to be associated with a certain demographic, and thus, the practice had acquired a specific cultural connotation. It had become, for some people, subtly demeaning to ask them to recount their life story to a tape recorder.

The nature of this cultural connotation became clearest to me when I spoke with my Guatemalan relatives. Long before traveling to Guatemala in the summer of 1999, I had begun working on a fiction project inspired by our family history. Expansive, intricate and in many places cut tragically short, our family tree had always seemed a promising starting point for a novel. Quite apart from my academic research, I continually attempted to pick up anecdotes and recollections from family members in Guatemala. Understandably, however, the two pursuits seemed to some family members indistinguishable. Having grasped quite clearly that I was researching testimonio, they knew what was at stake when I asked about the past.

For years, I had waited for the opportunity to speak with a relative named Roberto, a man who had served as a high-ranking officer in the Guatemalan armed forces. In the 1960s and 70s, as the Cold War raged and the Guatemalan military took an increasingly hard line against student groups, labor unions and opposition leaders, Roberto was at the height of his career. During much of this time, Roberto's sister, Mélida, was married to one of the leaders of the Communist Party in Guatemala. I had heard secondhand accounts of the uneasy truce between Mélida and Roberto and the attempts Roberto had made to assist, avoid or overlook Mélida's husband before his disappearance in 1972. But I had never been able to speak to Mélida or Roberto about their recollections of that difficult time. That hadn't stopped me from imagining a compelling fictional account inspired by it. When I finally had the occasion to speak with them in 1999, I was looking forward to hearing anything they would be willing to tell me.

What Mélida and Roberto had to say surprised me. After a few minutes of polite conversation, Mélida demurred, claiming that she really had no expertise on the subject. "After all," she said with a smile, "the one you really want to speak with is Roberto." She spoke kindly, as if smoothing over an embarrassing misunderstanding. Roberto took the reins and told me in no uncertain terms that he wouldn't be telling his life story to a tape recorder, if that were my intention. I protested, making some effort to explain the difference between my interest in our family history and my research for the master's thesis. As I went on, I realized my explanation wasn't making much sense. Roberto fixed a stern eye on me and said, "Let me tell you something that will interest you." For the next hour or so, he proceeded to detail the hierarchy of the Guatemalan military, his role within it and the various acquaintances and colleagues who had worked alongside him. He didn't refer even once to his sister or his brother-in-law.

**Fiction**

The silence Guatemalans keep on the past is so formidable that one has to wonder what it means when someone speaks. By saying, in the gentlest way possible, "We are not going to tell you," Roberto and Mélida had gone a long way towards illuminating why people speak — or don't. In talking about the past, people re-situate themselves in the present. The number of times they have articulated their memories, the resonance those memories have with their current circumstances, the immediate context of their unfolding and their relationship to the listener all matter. In other words, the story of how someone tells their past greatly influences — or contaminates — the larger story. The moment of narration is inextricably part of the narrative. And the person who asks to hear the story is, avoidably, part of it.

The researcher of testimonio intends to leave herself out of the story, but like an unreliable narrator in a work of fiction, she ends up making herself the center of it. Her own background, her desires in pursuing the research and her frustrations with the results are supposed to be suppressed, yet they direct the research and its outcome at every turn. She repeats the words of her informants faithfully in her written work, but she edits and frames them, becoming at each step more visible where she intended to be invisible.

As I traced the recent history of Guatemala, the unreliable narrator that I imagined in this light became a fictional character: Nítido Amán. Born of Guatemalan parents and raised in the United States, Nítido returns to the Guatemalan town that he believes is his birthplace. When he arrives, he is mistaken for a priest, but instead of correcting the mistake, Nítido assumes this role and accepts it.

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Church of La Merced, Antigua, Guatemala.

Photo by Doron Derek Laor.
the confessions struck me as only further instances of failed comprehension; but as they began to repeat themselves, not in their specifics but in their general contour, they came to suggest a meaning I couldn't ignore.

Because on that Sunday the first woman who came for confession, Carmen, began by talking about the sermon, I was distracted at the very moment when the nature of the confessions first made itself apparent. Only later, when I considered it in light of other confessions, did I consider the significance of what she'd said. Carmen’s braided white hair coiled over her forehead, giving the impression of a dented crown. She held her hands with her bent and calloused fingers curled in her lap. The dress she wore still bore the stiff creases of the packaging, though it had been ironed; from its pocket she pulled a white handkerchief embroidered with blue flowers.

“Father, I’ll leave this for you,” she said. “You might ask Claudio to tie it around your thumbs.”

“Thank you. I hadn’t thought of that.”

She nodded. “My sister used to be incredibly clumsy. We’d tie her thumbs together. But next time you won’t be as nervous.”

I looked down at my knees. “I hope so.”

“You shouldn’t be. You can’t expect us all to understand it.” She smiled. “I’m so slow, myself.”

I looked at her through the screen. She folded and refolded the handkerchief and then spread it out over her knee. I didn’t know what to say.

She looked up at me briefly and smiled. “You must be very intelligent.”

“Not in the least. I’m sorry; I’m not always as clear as I mean to be.”

“I’ll have to try harder next time,” she said.

I wasn’t listening as she started her confession. I began going over the sermon in my mind, trying to remember certain parts of it. I would have to ask someone about it — perhaps Estrada. And yet I thought I hadn’t made any obvious mistakes. Most of the collected sermons I’d brought with me were of no use: Ralph Waldo Emerson, William Clancy. They were philosophical tracts, and reading them before writing the sermon had evidently not put me in the correct frame of mind. I did have the two John Perry volumes you’d picked up at a garage sale in Oakland. I’d only brought them because you’d made some notes in the margins, but now it seemed worthwhile to read them through. From the little I’d read of Perry, however, it seemed I would be incapable of writing anything like his sermons.

I looked up, hearing Carmen pause. She seemed unable to go on. I hadn’t heard any of her confession. “Go on,” I said.

She put the handkerchief against her mouth and her lips turned faintly white. I was surprised to see tears in her eyes.

“Father,” she said.

“Yes? I’ve been very ill.”

I didn’t say anything for a moment. I had the impression that she’d finished confessing and had gone on to speak of something else. “I’m sorry to hear it,” I said.

She sighed deeply. “I have headaches. They start at the back near my neck. Then they spread out, filling my whole head. I have to close my eyes. If I don’t, I see a blinding light around the edges. Everything I try to look at seems far away. Very far away, and then the light puts them out completely. Sometimes the pain goes on for hours. The longest one lasted two whole days. My daughter puts a cold towel on my head and I sit against the wall. Lying down makes it worse.”

She waited for me to speak. I said the first thing that occurred to me. “How long have you been having them?”

Her voice shook. “For many years.”

“Isn’t there anything you can take?”

She glanced at me, surprised. “I’ve tried everything. Nothing helps.” I waited, hearing in her silence that she expected me to say something else, but I couldn’t think what. After several minutes she spoke again. “Forgive me my sins, Father.”

Sylvia Sellers-García, pictured below, is an author and a Ph.D. candidate in the Department of History at UC Berkeley.
The people who live in Tena, on the Napo River,
Say that the black, viscid stuff the pools in the selva
Is the blood of the rainbow boa curled in the earth’s core.
The great trees in that forest house ten thousands of kinds
Of beetle, reptiles no human eyes has ever seen changing
Color on the hot, green, hardly changing leaves
Whenever a faint breeze stirs them. In the understory
Bromeliads and orchids whose flecked petals and womb-
Or mouth-like flowers are the shapes of desire
In human dreams. And butterflies, larger than her palm
Held up to catch a ball or ward off fear. Along the river
Wide-leaved banyans where flocks of raucous parrots,
Fruit-eaters and seed-eaters, rise in startled flares
Of red and yellow and bright green. It will seem to be poetry
Forgetting its promise of sobriety to say the rosy shinings
In the thick brown current are small dolphins rising
To the surface where gouts of the oil that burns inside
The engine of the car I’m driving oozes from the banks.
Chaitén Volcano, Chile, May 2008.