Encina COLUMNS

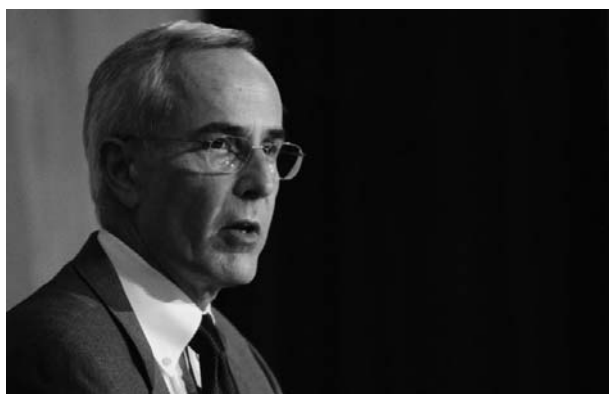
WINTER ISSUE
2007
STANFORD UNIVERSITY

A WORLD AT RISK

Freeman Spogli Institute's Second Annual International Conference and Dinner

"What has changed is not the risk, but the number and complexity of problems that face the world today. The challenges of the 21st century require that universities change. We must move beyond traditional academic boundaries and embrace new ways of doing research." – STANFORD PROVOST JOHN W. ETCHEMENDY

"As Stanford University's primary forum for the consideration of the major international issues of our time, we at FSI are dedicated to interdisciplinary research and teaching on some of the most pressing and complex problems facing the global community today." – COIT D. "CHIP" BLACKER, DIRECTOR, FREEMAN SPOGLI INSTITUTE



On November 16, 2006, FSI convened its annual international conference, *A World at Risk*, devoted to systemic and human risk confronting the global community. Remarks by Stanford Provost John Etchemendy, FSI Director Coit Blacker, former Secretary of State Warren Christopher, former Secretary of Defense William Perry, and former Secretary of State George Shultz set the stage for stimulating discussions. Interactive panel sessions encouraged in-depth exploration of major issues with Stanford faculty, outside experts, and policymakers.

HERE, AND ON PAGES 8 AND 9, ARE CONFERENCE HIGHLIGHTS

"The Middle East has descended into hate, violence, and chaos. The U.S. remains the most influential foreign power in the region. We have to return to old-fashioned diplomacy with all its frustrations and delays." – FORMER SECRETARY OF STATE WARREN CHRISTOPHER

"We are facing new dangers and we must adjust our thinking accordingly. As President Lincoln said, 'The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew, and act anew.'" – FORMER SECRETARY OF DEFENSE WILLIAM J. PERRY

"The world has never been at a more promising moment than it is today. All across the world economic expansion is taking place. Poverty is being reduced dramatically as China and India expand, along with Brazil." – FORMER SECRETARY OF STATE GEORGE SHULTZ

CHP/PCOR and CDDRL: Collaborating to Improve Health and Governance

BY SARA SELIS

MODERN MEDICINE HAS PRODUCED INTERVENTIONS that seem almost miraculous in their ability to prevent and treat deadly diseases. The use of chemically treated mosquito nets can drastically reduce malaria infections, for example, while powerful antiretroviral drugs can give HIV/AIDS patients added years of life.

While these advances are cause for great optimism, they're not necessarily enough to bring about promised health improvements, particularly in developing countries. Experience has shown that good governance—stable, accountable political systems that can manage resources responsibly and take care of their citizens' needs—may be crucial to the success of disease-fighting efforts. Health programs run by incompetent, corrupt, or illegitimate governments will likely falter, no matter how well-equipped or well-intended they may be. In 2002, for example, the World Health Organization launched its "3x5 campaign" to get 3 million HIV/AIDS patients in developing countries on antiretroviral treatments by 2005. While the initiative made significant headway, it fell far short of its goal, due in part to some nations' ineffective management and weak health-care infrastructure.

To explore this issue in depth and to improve developing nations' responses to infectious diseases, FSI's Center for Health Policy/Center for Primary Care Outcomes Research (CHP/PCOR) is collaborating with the Center on Democracy, Development, and the Rule of Law (CDDRL) on a new Health and Governance Project involving physicians, economists, political scientists, engineers, and nongovernmental organizations (NGOs). The researchers, supported by a generous private donation, are examining these key questions: What are the limitations of providing technical health-care solutions in developing countries? How do governments help or hinder the implementation of these solutions? When governments fail to help, how and when should NGOs step in? When are NGOs effective, when are they ineffective, and what lessons can be learned from their experiences?

COMMUNITY NUTRITION ORGANIZER (CNO) SPEAKING TO VILLAGE WOMEN ABOUT HYGIENE, NUTRITION, AND SEXUAL HEALTH, BANGLADESH (PHOTO CREDIT: SHEHZAD NOORANI).

The project—believed to be the first multidisciplinary scholarly examination of the relationship between governance, development, and health—is important because "medical discoveries can produce wonderful interventions, but if you can't get them to the people who need them, it's not worth much," said CHP/PCOR core faculty member Paul Wise, a lead investigator for the project.

Wise explained that while some simple interventions, such as giving a one-dose vaccination, can succeed without much government help, other interventions, such as administering complex multi-drug regimens over several months, seem to depend much more on elements of good governance, including well-trained health workers, government financial support, and a network of clinics that serve people even in remote areas.

In an extreme example of what happens when supportive governance is lacking, government officials in South Africa have at times undermined NGOs' efforts to administer antiretroviral therapies to AIDS patients there, by failing to provide financial support and by spreading dangerous rumors that the drugs actually cause AIDS.

In cases like these, Wise said, however dysfunctional or corrupt a country's government may be, "lack of adequate governance is no excuse for inaction. You can't sit around and wait for good governance while people are dying—you've got to struggle through it and demand appropriate government action."

For the Health and Governance Project, researchers will gather and analyze data from case studies focused on various diseases and interventions in different parts of the world. Potential case studies include malaria and HIV/AIDS in Africa, air pollution in China, and tuberculosis and HIV/AIDS in Russia. Details were reviewed at a planning workshop at Stanford in November 2006, which brought together faculty from several Stanford departments, including medicine, political science, economics, and engineering. Additional conferences will be held this spring and summer, featuring outside experts and NGO leaders as well as the Stanford investigators.

From their analyses, the researchers aim to uncover general lessons and develop policy recommendations on how best to combat disease in the developing world. They will present their findings in workshops and white papers, and by next fall they plan to pursue a major grant from the Bill and Melinda Gates Foundation, to continue the work on a larger scale.

The Health and Governance Project grew out of discussions between faculty at CHP/PCOR and CDDRL over the last year and a half. Kathryn Stoner-Weiss—CDDRL's associate director for research, senior research scholar, and a lead investigator on the project—became interested in a possible collaboration when she attended CHP/PCOR's 2004 annual retreat and heard Wise speak about his work on health disparities among different socioeconomic and racial groups and the question of whether new medical technologies narrow or widen those gaps.

"A lot of the problems Paul was talking about had to do with politics and government, not just health care," Stoner-Weiss said. "I realized that fit in very well with much of what we do at CDDRL," studying how and why states fail and what the consequences are for their citizens.

After further contact between Stoner-Weiss, Wise, CHP/PCOR executive director Kathryn McDonald, and Jeremy Weinstein, an assistant professor of political science, who has studied insurgent violence in Africa and Latin America, the four began discussing the idea of a research proposal focused on the intersection of governance and health. The project became a reality late last spring when Howard and Karin Evans, Stanford alumni interested in improving health in developing countries, had a similar interest and offered to support the effort with a seed grant.

"Who better to do a project like this?" Wise said. "We have world-class health policy experts at CHP working with world-class experts on governance and democracy. It's a no-brainer." ■

New Program on Global Justice

BY JOSHUA COHEN

BEGINNING THIS FALL, I have initiated a Program on Global Justice at FSI. We are just getting started, so it strikes me as a good time to explain the fundamental ideas.

I am a philosopher by training and sensibility, and as a philosopher, I take my orientation from Immanuel Kant. Kant said that philosophy addresses three basic questions: What can we know? What should we do? And what may we hope for?

The question about hope is the most important. Philosophy is not about what will be, but about what could be: It is an exploration of possibilities guided by the hope that our world can be made more just by our common efforts.

In our world, 1 billion people are destitute. They live on less than a dollar a day. They are not imprisoned in destitution because of their crimes; they are imprisoned in destitution despite their innocence.

Another 1.5 billion people live only slightly better, on $1–2 a day. They are able to meet their basic needs, but they lack fundamental goods. They, too, are not in poverty because of their crimes. They are in poverty despite their innocence.

That is how 40 percent of our world lives now.

For some of the poor and destitute, things are improving. But the extraordinary global distance between wealthy and poor is growing. The richest 5 percent in the world make 114 times as much as the bottom 5 percent; 1 percent of the world's people make as much as the poorest 57 percent. So the gap grows and many are left behind. That is morally unacceptable.

The problem of global injustice is not only economic. Billions of people are deprived of basic human rights.

And new forms of global governance, through organizations like the World Trade Organization (WTO), are making decisions with large consequences for human welfare. Whether their decisions are good or bad, they remain largely unaccountable. That, too, is unacceptable.

Some people say that we should not worry so much because there is no such thing as global justice. Some of these skeptics say that justice is an issue only inside a state. Until there is a global state, they say, there is no global justice.

Other skeptics are communitarians. They say that justice only makes sense among people who share a culture. They say that our diverse global society lacks the common culture needed to sustain a commitment to justice.

These statist and communitarian views are misguided in a world of globalization.

Economically, globalization has made the global economy a substantial presence in the economic lives of virtually everyone in the world.

Politically, there are new forms of governance that operate outside the state. These new forms are especially important in the arena of economic regulation, but also have a role in areas of security, labor and product standards, the environment, and human rights. So we have new forms of global politics, with important consequences for human well-being.

Moreover, these new settings of global governance are the focus of an emerging global civil society of movements and nongovernmental organizations. In areas ranging from human rights, to labor standards, to environmental protection these groups contest the activities of states and global rule-making bodies.

FROM TOP: A CLASSROOM IN HONDURAS (ALFREDO SRUR/WORLD BANK), WOMAN AND CHILD IN BURKINA FASO (CURT CARNEMARK/ WORLD BANK), CHARCOAL MERCHANT IN RURAL CHINA (CURT CARNEMARK/WORLD BANK), AFRICA'S FUTURE, MASAI CHILDREN IN TANZANIA (PETR PAVLICEK/IAEA), AGRICULTURAL WORKERS IN INDIA (CURT CARNEMARK/ WORLD BANK).

The skeptical views may have made sense in a world with more national economic independence, less governance beyond the state, and more self-contained national communities. But that is not our world.

What, then, does the project of global justice mean? In general, it has three elements.

First, we need to ensure the protection of human rights, and we need a generous understanding of the scope of human rights. Human rights are about torture and arbitrary imprisonment, but also about health, education, and political participation. The point of human rights is not simply to protect against threats, but to ensure social membership, to ensure that all people count for something.

Second, new global rule-making bodies operating beyond the state raise questions of justice. These bodies, like the WTO, make rules with important consequences for human welfare. Global justice is about ensuring that governance by such bodies is accountable, that people who are affected are represented, that rule-making is transparent. When an organization makes policies with large consequences for human welfare, it needs to be held accountable through a fair process.

Third, global justice is about ensuring that everyone has access to the basic goods—food, health care, education, clean water, shelter—required for a decent human life and that when the global economy is moving forward, no one is left behind.

These three elements of global justice all start from the idea that each person matters. In short, global justice is about inclusion: about making sure that no one is left out.

Some people will say that global justice is a nice idea, but that it has no real practical importance. They say that globalization leaves no room for political choices, that it requires every country to follow the same path. We must reject this false assertion of necessity.

Some people say that the right choice for global justice is to increase levels of foreign assistance; some people say that the right choice is to provide credit for poor farmers; some people say that right choice is to empower poor women; some people say that right choice is to reduce disgusting levels of overconsumption and agricultural subsidies in rich countries; some people say that the right choice is to promote a more vibrant civil society so that people can become agents in creating their history rather than its victims and supplicants.

Many things are possible. And once we accept that global justice is a fundamental imperative, and that political choices are possible, then we come back to the political tasks in more developed countries. Many citizens in the advanced economies now experience globalization as a threat. Many fear that a better life for billions who are now destitute may mean a worse life for them.

So global justice is not simply an abstract moral imperative. Global justice is connected to greater justice at home. If we leave everything to the market at home, if we don't fight for social insurance, education and health, employment and income, then we can be sure of an economic nationalist resurgence with all of its terrible consequences. So the political project of global justice requires a political project of a more just society at home.

This unity of justice—this unity of the national and the global: That is our answer to Kant's question. That is what we may hope for. That is what we should strive to achieve. ■

Bright Young Stars Pursue Democracy and Development, at Home and Abroad

BY HEATHER BOYNTON

IN A 1999 ARTICLE PROFILING SIX OF "CHINA'S BRIGHT YOUNG STARS," the *New York Times* described Junning Liu as "one of China's most influential liberal political thinkers." Today, sitting in a delegate-style conference room, Liu wants to add a point to Tom Heller's discussion of risk assessment and the role of law in doing business. If assets are not protected by legal institutions, Heller argues, foreign direct investment becomes a riskier prospect and economic growth suffers as a result. Except, he points out, in China. The legal system doesn't manage risk but China is growing extremely fast.

"There are more businesspeople in Chinese prisons than dissidents," Liu says evenly, with a suggestion of a smile. "So you see … Chinese people mind the situation more than you [the foreign investors] do."

Liu is one of 26 change-makers from developing democracies who were selected from more than 800 applicants to take part in this year's Stanford Summer Fellows on Democracy and Development Program, which is offered by FSI's Center on Democracy, Development, and the Rule of Law (CDDRL). His colleagues in the program are presidential advisors and attorneys general, journalists and civic activists, academics and members of the international development community. They traveled to Stanford from 21 countries in transition, including Iraq, Afghanistan, Iran, Pakistan, China, Russia, Egypt, and Nigeria. And like their academic curriculum during the three-week program, which examines linkages among democracy, economic development, and the rule of law, their professional experiences and fields of study center on these three areas, assuring that each fellow brings a seasoned perspective to the program's discussions.

"For most of the fellows … democracy is seen not as a luxury or an option, but rather as a necessity for achieving broad-based development and a genuine rule of law."

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The curriculum for the first week focused on democracy, with leading comparative democracy scholars Michael McFaul, Larry Diamond, and Kathryn Stoner-Weiss team-teaching the morning seminars. Using selected articles and book chapters as starting points for discussion, McFaul, Diamond, and Stoner-Weiss began the weeklong democracy module with an examination of what democracy is and what definition or definitions might apply to distinguish electoral democracy, liberal democracy, and competitive authoritarianism. Another question discussed was whether there was such a thing as Islamic democracy, Asian democracy, Russian democracy, or American democracy.

As the week progressed, fellows and faculty discussed institutions of democracy, electoral systems, horizontal accountability, development of civil society, democratic transitions, and global trends in democracy promotion. Fellows led sessions themselves in the afternoons, comparing experiences and sharing insights into how well political parties and parliaments constrained executive power and how civil society organizations contributed to democratic consolidation and/or democratic transitions.

In addition to discussing their personal experiences with democracy promotion, fellows met with a broad range of practitioners, including USAID deputy director Maria Rendon, IREX president Mark Pomar, MoveOn.org founder Joan Blades, Freedom House chairman and International Center on Nonviolent Conflict founding chair Peter Ackerman, International Center on Nonviolent Conflict president Jack DuVall, Otpor cofounder Ivan Marovic, *A Force More Powerful* documentary filmmaker Steve York, and Advocacy Institute cofounder David Cohen. Guest speakers talked about their fieldwork, offered practical advice, and answered fellows' questions.

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This component grounded the classroom discussions in a practical context. "It was important for our visiting fellows to interact with American practitioners, both to learn about innovative techniques for improving democracy practices but also to hear about frustrations and failures that Americans also face in working to make democracy and democracy promotion work more effectively," explains McFaul. "We Americans do not have all the answers and have much to learn from interaction with those in the trenches working to improve governance in their countries."

The following two weeks would focus in turn on development and the rule of law, but democracy continued to serve as the intellectual lynchpin of the program, with economies and legal institutions analyzed vis-à-vis their relationship to the development of democratic systems.

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"For most of the fellows, who come from national circumstances which once suffered (or still do suffer) prolonged authoritarian rule, democracy is seen not as a luxury or an option, but rather as a necessity for achieving broad-based development and a genuine rule of law," says Diamond. "Unless people have the ability to turn bad rulers out of office, and to hold rulers accountable in between elections through a free press and civil society, countries stand a poor prospect of controlling corruption, protecting human rights, correcting policy mistakes, and ensuring that government is responsive to the needs and aspirations of the people."

Among the fellows, this idea of democracy as a "necessity," a fundamental platform from which to pursue economic and legal reforms, was widely recognized. "It appears that like-minded people were selected to participate," notes Sani Aliyu, a broadcast journalist and interfaith mediator from Nigeria. "Each of us is interested in the development of humanity, and it appears that we have accepted that democracy seems to be the vehicle through which human development can be accessed reasonably. We share this."

As the program's curriculum shifted to development issues for week two, the all-volunteer assemblage of Stanford faculty expanded to include professors and professional research staff from Stanford Law School, the Graduate School of Business, and the Department of Economics. Avner Greif established the context for the development module with an overview of institutional foundations of politics and markets, followed by discussions of growth restructuring in transitional economies with GSB professor Peter Henry and Stanford Center for International Development deputy director Nicholas Hope. Terry Karl analyzed corruption in developing economies and the "resource curse," and Carl Gershman, president of the National Endowment for Democracy, joined Diamond, McFaul, and Karl in discussing how the spectrum of democratic to autocratic systems of government affected a country's development.

Another salient component of the development module centered on the role of media in promoting democracy and development. The field trip to San Francisco, which included a session with KQED *Forum* host Michael Krasny, a briefing on international reporting at the *San Francisco Chronicle,* and a discussion of media strategies at the Family Violence Prevention Fund, provided particularly rich practical content, as did the fellows' roundtable on maintaining media independence in semi-autocracies.

At KQED Radio, Cuban-born Raul Ramirez, the executive producer of *Forum,* talked with fellows about the concept of "civic journalism" and KQED's goal of creating space for civic discussion. *Forum* host Michael Krasny and Ramirez, who runs workshops on civic journalism at the European Journalism Centre in Maastricht, then fielded a barrage of questions from fellows: How does KQED maintain independence from government and commercial funding? If Rush Limbaugh attacked you, would you respond in your program? Is it possible to have neutral, nonpartisan public radio? How do you manage to deal with political issues, particularly when you start to affect the power structures with your programming? Are there any words, like "terrorist," that you are banned from using on the air?

"Discussion of this kind is of great importance to both media professionals and the audience," notes Anna Sevortian, a journalist and research coordinator at the Center for Development of Democracy and Human Rights in Moscow. "It helps you to clarify how a particular newspaper, TV, or radio station is dealing with matters of public policy or of political controversy."

The third week's curriculum layered rule-of-law issues onto the conceptual modules of democracy promotion and economic development, drawing on the teaching caliber of constitutional scholar and Stanford president emeritus Gerhard Casper, Erik Jensen, Helen Stacy, Allen Weiner, Tom Heller, and Richard Burt. After establishing a theoretical framework through discussions of the role of law, constitutionalism, human rights, transitional justice, the role of law in business and economic development, and strategies for promoting the rule of law, fellows compared experiences defending human rights, met with American immigration and civil liberties lawyers, and had a session with Circuit Court Judge Pamela Rymer on judging in federal courts. Field trips to Silicon Valley-based Google and eBay again put into practical context the free market, rule-of-law components discussed theoretically in the classroom.

Despite the intellectual rigor of the coursework and discussion, and the exploration of practical applicability with guest speakers and field trips, the Stanford Summer Fellows on Democracy and Development Program was designed as much to stimulate connections among field practitioners and to provide a forum in which to exchange ideas. Weekend dinners, stretching late into the evening at the homes of Diamond and Stoner-Weiss, helped to gel the collegiality developing in the classroom. Led by Violet Gonda, a Zimbabwean journalist living in exile in London, and Talan Aouny, director of a major Iraqi civil society development program, the fellows organized a multicultural party, a potluck-style affair in which guests made a dish from their home country to share with their colleagues and friends of the program.

Program directors McFaul and Stoner-Weiss hope this social network will endure well into the weeks and months after the program. "We envision the creation of an international network of emerging political and civic leaders in countries in transition who can share experiences and solutions to the very similar problems they and their countries face," says Stoner-Weiss. To ensure they fulfill their goal of building a small but robust global network of civic activist and policymakers in developing countries, CDDRL recently launched its Summer Fellows Program Alumni Newsletter. The newsletter is based on an interactive website that will allow the center to strengthen its network of leaders and civic activists and facilitate more groundbreaking policy analysis across academic fields and geographic regions, the results of which will be promptly fed back to its activist alumni in a virtual loop of scholarship and policymaking.

Earlier this year, CDDRL also moved to professionalize the Stanford Summer Fellows on Democracy and Development Program by hiring a program manager, Laura Cosovanu, an attorney with experience in foundations and other nonprofit organizations, to oversee its advancement. The logistical acrobatics Cosovanu performed throughout the three weeks quickly became the object of good-natured teasing for some of the fellows, all of whom seemed to realize and appreciate the work required to get fellows and faculty into the same room.

As Kenza Aqertit, a National Democratic Institute for International Affairs field representative from Morocco, told program faculty at the graduation dinner, "You've done a great job and you should be proud of all your efforts. Plus you've won so many friends in so many autocracies and semi-autocracies." ■


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PHOTOS: (1) SUMMER FELLOW GLADWELL OTIENO, KENYA (2) LEFT TO RIGHT: STANFORD PROFESSOR LARRY DIAMOND WITH SUMMER FELLOWS TETIANA SOBOLEVA, UKRAINE; BECHIR EL HASSEN, MAURITANIA; AND OLGA STUZHINSKAYA, BELARUS (3) ADVOCACY INSTITUTE COFOUNDER DAVID COHEN ADDRESSES THE SUMMER FELLOWS DURING THE FIRST WEEK'S DEMOCRACY MODULE. IN THE BACKGROUND, FROM LEFT TO RIGHT: JUNNING LIU, CHINA; TATOUL MANASSERIAN, ARMENIA; BECHIR EL HASSEN, MAURITANIA; AND KENDRA AQERTIT, MOROCCO (4) MICHAEL MCFAUL, CDDRL DIRECTOR (5) LEFT TO RIGHT, TOP ROW: CDDRL VISITING SCHOLAR VITALI SILITSKI; TATOUL MANASSERIAN, ARMENIA; HOLTA KOTHERJA, ALBANIA; SANI ALIYU, NIGERIA; ULVI AKHUNDLI, AZERBAIJAN. SECOND ROW: OLGA STUZHINSKAYA, BELARUS; TETIANA SOBOLEVA, UKRAINE SSFDD PROGRAM MANAGER LAURA COSOVANU. FRONT ROW: VIOLET GONDA, ZIMBABWE; TALAN AOUNY, IRAQ; AND GLADWELL OTIENO, KENYA (6) KATHRYN STONER-WEISS, ASSOCIATE DIRECTOR FOR RESEARCH AND SENIOR RESEARCH SCHOLAR AT CDDRL WITH STANFORD PROFESSOR LARRY DIAMOND (7) SUMMER FELLOWS ANNA SEVORTIAN, RUSSIA; DMITRY VISHNYAKOV, RUSSIA; AND QUANG NGUYEN, VIETNAM (8) SUMMER FELLOW VIOLET GONDA WITH SSFDD PROGRAM MANAGER LAURA COSOVANU.

The Rise of China:
Changing Patterns of Global Innovation and Entrepreneurship

BY MARGUERITE GONG HANCOCK AND GEORGE KROMPACKY



LEFT TO RIGHT: NICK YANG (LEFT), FOUNDER OF KONGZHONG, SPEAKS WITH SPRIE CO-DIRECTOR WILLAM F. MILLER AND ASSOCIATE DIRECTOR MARGUERITE GONG HANCOCK; SPRIE CO-DIRECTOR HARRY S. ROWEN (BOTTOM LEFT) TESTIFIES TO THE U.S.–CHINA ECONOMIC AND SECURITY REVIEW COMMISSION ON CHINA'S RISE IN INFORMATION TECHNOLOGIES; LEONARD LIU (RIGHT), CHAIRMAN AND CEO OF AUGMENTUM, PARTICIPATES ON AN INFORMATION COMMUNICATIONS TECHNOLOGY INDUSTRY PANEL AT THE SPRIE-TSINGHUA WORKSHOP ON INNOVATION.

A NEW ERA is under way for global high-technology innovation and entrepreneurship, marked by the rise of Greater China. During the past several decades, Taiwan, Singapore, and others have developed as centers in key information communications technology (ICT) industries. More recently, from Beijing to the Pearl River Delta, markets for new products are expanding, competencies in new technologies are growing, and a new generation of high-technology regions is emerging. All these signs point toward China as a rising powerhouse, accelerating the shift of locus for the global high-technology arena across the Pacific.

The contours of the nature and pace of this change are already evident in some ICT industries but have yet to be fully analyzed. The Stanford Project on Regions of Innovation and Entrepreneurship (SPRIE) is leading a research program to advance the understanding of the dynamic systems of innovation and entrepreneurship that drive China's ascendance in high technology and its implications for the global knowledge economy.

CHINA'S QUEST FOR INDEPENDENT INNOVATION

No longer satisfied with China's role as the world's factory, Chinese government leaders have declared that *zizhu chuangxin* ("homegrown" innovation) is the watchword for the future. They are sounding an urgent call to reduce dependence on foreign technology and build China into an "innovation-driven economy." As President Hu Jintao said, "homegrown innovation" is the "core of national competitiveness"—the path to sustainable economic prosperity and global leadership.

Last May, SPRIE co-sponsored *Greater China's Innovative Capacities: Progress and Challenges,* a two-day, invitation-only workshop at Tsinghua University in Beijing that attracted scholars from Europe, the U.S., and Asia, as well as Chinese industry leaders and government policymakers. More than 70 participants tackled topics such as indicators of innovative capacity (patent data and journal citations, for example), reforms of Chinese research institutions to spur commercially useful innovation, and the changing roles for innovation of the state, multinational corporations (MNCs), and domestic firms.

A few numbers illustrate China's progress over the past decade. Total R&D spending nearly tripled, reaching 1.3 percent of GDP in 2005, even while GDP doubled. China is now ranked third worldwide in overall R&D spending (after the U.S. and Japan), with targets to increase spending to 2 percent of GDP by 2010. Science and engineering PhDs more than doubled between 1996 and 2005. And China's growth rate of U.S. patents granted has eclipsed Japan, Taiwan, or Korea, with an even steeper trajectory in Chinese-authored science and technical publications in international journals.

Yet, according to SPRIE co-director Henry S. Rowen, "the highest value-added work in China still is done largely in foreign-invested companies and increasingly in firms led by returnees who have been educated and worked abroad. Currently most R&D is focused on incremental improvements of existing products and services. Nevertheless, the key building blocks are in place for increasing technology contributions." At MNC R&D centers like Nokia and Microsoft, top Chinese teams are beginning to contribute to worldwide product design and research. Through interviews at more than 75 firms in Beijing and Shanghai, SPRIE researchers have identified emerging competencies at some of the best domestic research labs and companies, ranging from multimedia chip design to communication equipment.

Huawei, the telecommunications networking giant with 2005 revenues of $5.9 billion, reports consistently spending more than 10 percent of sales on R&D. Boasting more than 10,000 researchers in China plus R&D centers in Bangalore, Silicon Valley, Dallas, Stockholm, and Moscow and 3,600 patent applications in 2005, the company epitomizes China's growing pursuit of low-cost innovation, not just low-cost manufacturing and services.

However, obstacles to China's drive for innovation are not trivial. Many Chinese institutions, though improving, still fail to provide an environment conducive for innovation, including a competitive and open system for R&D funding or effective intellectual property protection. As SPRIE associate director Marguerite Gong Hancock observes, "The current gold rush mentality for quick profits runs counter to breakthrough technology innovation that is typically the result of patient investments in research with long-term and uncertain payoffs. To date, some of the most innovative bright spots are not in disruptive technologies but in processes, services, and business models."

One notable obstacle confronting Chinese high-tech firms is a leadership talent shortage, a problem that is the focus of another SPRIE research initiative.

HIGH-TECHNOLOGY LEADERSHIP IN GREATER CHINA

Since 1999, founders have led 24 Chinese firms to IPOs on NASDAQ. From this unprecedented number of startups to a rising class of billion-dollar giants going global, high-tech companies in China have a dramatically intensifying need for leadership.

To examine how China's high-tech executives are facing this challenge, SPRIE partnered with Heidrick & Struggles, a leading executive search firm, to conduct more than 100 interviews with executives at both domestic and multinational high-tech firms operating in China.

Leaders face what Nick Yang (MS '99), founder of wireless service provider KongZhong, described as "uncharted waters." They must create a cadre of top leaders and managers in the face of an acute shortage of seasoned managers and globally capable executives. As John Deng, founder and CEO of Vimicro (a fabless semiconductor company with $396 million market cap), said, "I don't lack other things, such as funding, infrastructure, or government relations. What I lack now is people."

SPRIE Co-Director William F. Miller commented, "Interestingly, not one interviewee expressed an intention to adopt a management model that diverges significantly from the dominant global model," a model defined by competencies well documented as key among U.S. and European executives. Based on the SPRIE-Heidrick study, some of these competencies currently are both more critical and more difficult to find in China: the ability to drive results, achieve customer orientation, provide visionary leadership, create organizational buy-in, model key values, and delegate and empower. The best leaders not only are seeking these competencies in senior executives but also cascading these attributes throughout their organizations.

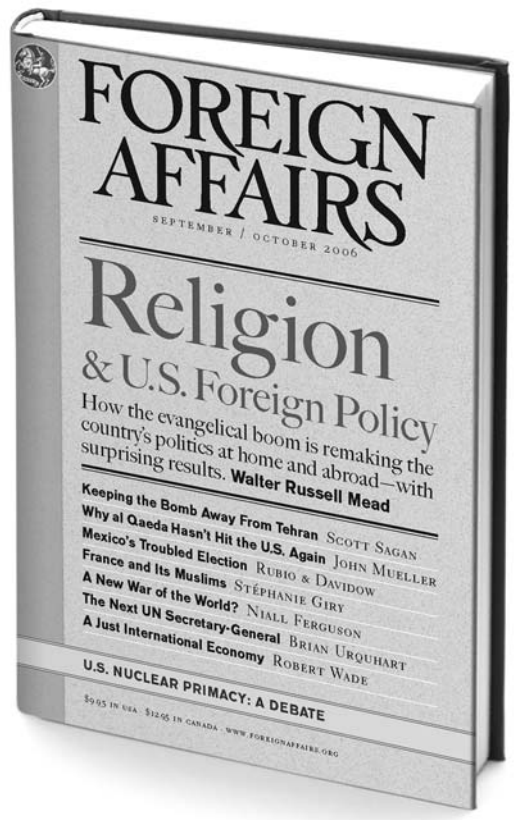
The impact ripples throughout the talent pipeline, from recruiting to retaining to developing key people. High-tech leaders in China are deploying a wide range of new tactics. Miller noted, "To address pressing leadership shortages, executives are devoting an unusually large amount of their time and attention to talent and human resource issues." As Mary Ma, CFO of computer giant Lenovo, stated, "I have become an HR manager. I spend 30 percent of my time on people and succession issues." And the best companies are systematically using their best leaders to mentor and mold the next generation of professionals—the mid-level managers and team leaders, who are mobile, scarce, and frequently lack the full set of skills needed to drive results.

Emerging trends in leadership among China's high-tech executives may be a good harbinger, pointing to how and where this influential generation of China's high-tech leaders are steering their firms—firms that have been charged with the task of leading China's future economic growth. ■

How to Keep the Bomb From Iran EXCERPT

From *Foreign Affairs*, September/October 2006

BY SCOTT D. SAGAN



PREVENTING THE UNTHINKABLE

The ongoing crisis with Tehran is not the first time Washington has faced a hostile government attempting to develop nuclear weapons. Nor is it likely to be the last. Yet the reasoning of U.S. officials now struggling to deal with Iran's nuclear ambitions is clouded by a kind of historical amnesia, which leads to both creeping fatalism about the United States' ability to keep Iran from getting the bomb and excessive optimism about the United States' ability to contain Iran if it does become a nuclear power.

A U.S. official in the executive branch anonymously told the *New York Times* in March 2006, "The reality is that most of us think the Iranians are probably going to get a weapon, or the technology to make one, sooner or later." Military planners and intelligence officers have reportedly been tasked with developing strategies to deter Tehran if negotiations fail.

Both proliferation fatalism and deterrence optimism are wrong-headed, and they reinforce each other in a disturbing way. As nuclear proliferation comes to be seen as inevitable, wishful thinking can make its consequences seem less severe, and if faith in deterrence grows, incentives to combat proliferation diminish.

Deterrence optimism is based on mistaken nostalgia and a faulty analogy. Although deterrence did work with the Soviet Union and China, there were many close calls; maintaining nuclear peace during the Cold War was far more difficult and uncertain than U.S. officials and the American public seem to remember today. Furthermore, a nuclear Iran would look a lot less like the totalitarian Soviet Union and the People's Republic of China and a lot more like Pakistan, Iran's unstable neighbor—a far more frightening prospect.

Fatalism about nuclear proliferation is equally unwarranted. Although the United States did fail to prevent its major Cold War rivals from developing nuclear arsenals, many other countries—including Japan, West Germany, South Korea, and more recently Libya—curbed their own nuclear ambitions.

THE REASONS WHY

The way for Washington to move forward on Iran is to give Tehran good reason to relinquish its pursuit of nuclear weapons. That, in turn, requires understanding why Tehran wants them in the first place.

Iran's nuclear energy program began in the 1960s under the shah, but even he wanted to create a breakout option to get the bomb quickly if necessary. One of his senior energy advisers recalled, "The shah told me that he does not want the bomb yet, but if anyone in the neighborhood has it, we must be ready to have it." At first, Ayatollah Ruhollah Khomeini objected to nuclear weapons on religious grounds, but the mullahs abandoned such restraint after Saddam Hussein ordered chemical attacks on Iranian forces during the Iran-Iraq War.

The end of Saddam's rule in 2003 significantly reduced the security threat to Tehran. But by then the United States had taken Iraq's place. In his January 2002 State of the Union address, President Bush had denounced the governments of Iran, Iraq, and North Korea as members of an "axis of evil" with ties to international terrorism. After the fall of Baghdad, an unidentified senior U.S. official told a *Los Angeles Times* reporter that Tehran should "take a number," hinting that it was next in line for regime change.

Increasingly, Bush administration spokespeople advocated "preemption" to counter proliferation. When asked, in April 2006, whether the Pentagon was considering a potential preventive nuclear strike against Iranian nuclear facilities, President Bush pointedly replied, "All options are on the table."

AGREED FRAMEWORK IN FARSI

A source of inspiration for handling Iran is the 1994 Agreed Framework that the United States struck with North Korea. The Bush administration has severely criticized the deal, but it contained several elements that could prove useful in the Iranian nuclear crisis.

After the North Koreans were caught violating their NPT commitments in early 1993, they threatened to withdraw from the treaty. Declaring that "North Korea cannot be allowed to develop a nuclear bomb," President Clinton threatened an air strike on the Yongbyon reactor site if the North Koreans took further steps to reprocess plutonium. In June 1994, as the Pentagon was reinforcing military units on the Korean Peninsula, Pyongyang froze its plutonium production, agreed to let IAEA inspectors monitor the reactor site, and entered into bilateral negotiations.

The talks produced the October 1994 Agreed Framework, under which North Korea agreed to eventually dismantle its reactors, remain in the NPT, and implement full IAEA safeguards. In exchange, the United States promised to provide it with limited oil supplies, construct two peaceful light-water reactors for energy production, "move toward full normalization of political and economic relations," and extend "formal assurances to [North Korea] against the threat or use of nuclear weapons by the U.S."

By 2002, the Agreed Framework had broken down, not only because Pyongyang was suspected of cheating but also because it believed that the United States, by delaying construction of the light-water reactors and failing to start normalizing relations, had not honored its side of the bargain. When confronted with evidence of its secret uranium program, in November 2002, Pyongyang took advantage of the fact that the U.S. military was tied down in preparations for the invasion of Iraq and withdrew from the NPT, kicked out the inspectors, and started reprocessing plutonium.

"The way for Washington to move forward on Iran is to give Tehran good reason to relinquish its pursuit of nuclear weapons."

President Bush famously promised, in his 2002 State of the Union address, that the United States "will not permit the world's most dangerous regimes to threaten us with the world's most destructive weapons." Yet when North Korea kicked out the IAEA inspectors, Secretary of State Colin Powell proclaimed that the situation was "not a crisis." Bush repeatedly declared that the United States had "no intention of invading North Korea." The point was not lost on Tehran.

If Washington is to offer security assurances to Tehran, it should do so soon (making the assurances contingent on Tehran's not developing nuclear weapons), rather than offering them too late, as it did with North Korea (and thus making them contingent on Tehran's getting rid of any existing nuclear weapons). As with North Korea, any deal with Iran must be structured in a series of steps, each offering a package of economic benefits (light-water reactors, aircraft parts, or status at the World Trade Organization) in exchange for constraints placed on Iran's future nuclear development.

Most important, however, would be a reduction in the security threat that the United States poses to Iran. Given the need for Washington to have a credible deterrent against, say, terrorist attacks sponsored by Iran, a blanket security guarantee would be ill advised. But more limited guarantees, such as a commitment not to use nuclear weapons, could be effective. They would reassure Tehran and pave the way toward the eventual normalization of U.S.–Iranian relations while signaling to other states that nuclear weapons are not the be all and end all of security.

Peaceful coexistence does not require friendly relations, but it does mean exercising mutual restraint. Relinquishing the threat of regime change by force is a necessary and acceptable price for the United States to pay to stop Tehran from getting the bomb. ■

A WORLD AT RISK CONTINUED FROM PAGE 1

Freeman Spogli Institute's Second Annual International Conference and Dinner

BY JUDITH PAULUS

It is "not a matter of *if*, just *when* and *where*" pandemic influenza will strike, warns Michael Osterholm, director of the University of Minnesota's Center for Disease Research and Policy, urging families and communities to get prepared now.

Noting that China accounts for one-third of the rise in global energy demand over the last decade, Edgard Habib and Fred Hu join Stanford Professor Tom Heller to discuss the implications of China's rise for global markets and investment patterns.

Elisabeth Paté-Cornell, Scott Sagan, and Siegfried Hecker examine systemic risk, with a focus on intelligence assessments, challenges to nuclear nonproliferation posed by Iran and North Korea, and keeping fissile materials out of terrorist hands.

Stephen Stedman, Larry Diamond, (and Jeremy Weinstein) discuss governance in failing states and postconflict situations. States Diamond, applying Stedman's criteria for stability to Iraq, "In terms of challenges for postconflict stabilization, this place is just off the charts."

"WHEN I WAS A CHILD, THE WORLD WAS A SIMPLER PLACE," stated Stanford Provost John Etchemendy. "What has changed is not the risk, but the number and complexity of problems that face the world today." The complex challenges of the 21st century require that universities change, as well. The International Initiative, led by FSI, was launched "to identify key challenges of global importance and to contribute to their solutions by leveraging the university's academic strength and international reach."

Invoking Jane and Leland Stanford's desire to educate students to become useful, contributing citizens, Etchemendy said, "We can best serve that mission today by producing graduates well-versed in the complex problems of a world at risk and willing to make the difficult choices that might lead to their solution."

"It has been acutely apparent to us at FSI that we must actively engage a world at risk," stated FSI director Coit D. "Chip" Blacker, "risk posed by the growing number of nuclear issues on the international agenda; the insurgency in Iraq; global poverty, hunger, and environmental degradation; the tensions of nationalism versus regionalism in Asia; infectious diseases; terrorism; and the geopolitical, financial, and ecological risks of the West's current energy policies, especially its voracious appetite for oil."

Introducing three Stanford luminaries, Blacker said, "One of the remarkable things about Stanford is the privilege of working with some of the outstanding intellects and statesmen of our time. Warren Christopher, William Perry, and George Shultz tower among them."

"The Middle East has descended into hate, violence, and chaos," said Warren Christopher, the nation's 63rd secretary of state. "It really is a dangerous mess." Discussing the Israeli incursion into Lebanon, the war in Iraq, and Iran's regional and nuclear ambitions, he said the U.S. has aggravated these threats by "action and inaction." Nonetheless, the U.S. remains the most influential foreign power in the region. "We must not give up on the Middle East," he said. "We have to return to old-fashioned diplomacy with all its frustrations and delays."

"We live in dangerous times," stated William J. Perry, the nation's 19th secretary of defense and an FSI senior fellow. "Last month about 1,000 of our service personnel in Iraq were killed, maimed, or wounded; the Taliban is resurging in Afghanistan; North Korea just tested a nuclear bomb; and Iran is not far behind. China's power is rising and Russia's democracy is falling." As Elie Wiesel wrote, he said, "Peace is not God's gift to its children. Peace is our gift to each other." Comparing major security issues of 1994 to today, Perry assessed the nuclear arms race, North Korea, Iran, and Iraq. He noted that the Clinton administration had eliminated more than 10,000 nuclear weapons and urged that the work continue, because "the danger of terrorists getting a nuclear bomb is very real."

Citing North Korea's 2006 missile and nuclear tests, Perry said he was concerned that a robust North Korean nuclear program will stimulate a "dangerous arms race in the Pacific" and increase "the danger of a terrorist group getting a nuclear bomb." "Iran is moving inexorably toward becoming a nuclear power," Perry said. "We are facing new dangers," he concluded, "and we must adjust our thinking accordingly."

"The world has never been at a more promising moment than it is today," said George Shultz, the nation's 60th secretary of state. "All across the world, economic expansion is taking place. The U.S. is giving fantastic leadership to the global economy." For Shultz, the imperative is to prevent the security challenges "from aborting all these fantastic opportunities."

U.S. leadership should inspire the world, Shultz said, advocating four initiatives. We should aspire to have a world with no nuclear weapons. We should take a different approach to global warning, based on the Montreal Protocols. "This is a gigantic problem we need to do something about and *can* do something about," he said. We should build greater understanding of the world of Islam. We must combat rising protectionism. The postwar system reduced tariffs and quotas, promoting trade and growth. "The best defense is a good offense," Shultz stated. "We need a lot of leadership in that arena."

Plenary I, chaired by Chip Blacker, examined systemic risk. Elisabeth Paté-Cornell, Burton and Deedee McMurtry Professor and Chair of Management Science and Engineering, discussed how scientists measure risk, asking what *can* happen, what are the chances it will, and what are the consequences? "The good news is that the worst is not always the most certain," she noted. Citing challenges of intelligence analysis, she said, "Certainty is rare; signals are imperfect; there is a tendency to focus on one possibility (groupthink) and underestimate others; and it is difficult to assess and communicate uncertainties." "Success is not guessing in the face of uncertainties," she said. "It is describing accurately what is known, what is unknown, and what has changed."

Scott Sagan, professor of political science and director of CISAC, examined "Iran and the Collapse of the Global Non-proliferation Regime?" The crux of the issue, Sagan noted, is the emergence of two dangerous beliefs, "deterrence optimism" and "proliferation fatalism." In Sagan's view, too little attention has been given to *why* Iran seeks a nuclear weapon. Arguing that U.N. sanctions are unlikely to work and military options are problematic, Sagan said a negotiated settlement is still possible if the U.S. offers security guarantees to Iran, contingent on Tehran's agreement to constraints on future nuclear development. As Sagan concluded, "Instead of accepting what appears inevitable, we should work to prevent the unacceptable."

Siegfried Hecker, CISAC co-director, tackled the challenge of "Keeping Fissile Materials out of Terrorist Hands." Although nuclear terrorism is an old problem, today there is easier access to nuclear materials, greater technological sophistication, and a greater proclivity toward violence. The greatest risk, he said, "is an improvised nuclear device built from stolen or diverted fissile materials." "Given a few tens of kilograms of fissile material, essentially a grapefruit-sized chunk of plutonium," he stated, "terrorists will be able to build and detonate an inefficient, but devastating Hiroshima- or Nagasaki-like bomb." The most likely threat is a so-called "dirty bomb," he said, which would be a "weapon of mass disruption, not destruction," but still able to cause panic, contamination, and economic disruption, making risk analysis imperative to mitigate its consequences.

Gi-Wook Shin, shown with Dan Sneider, Xiyu Yang, and Michael Armacost urges the U.S. to talk with North Korea directly, saying the President should "send a high-profile person, whom he really trusts, with the power to negotiate seriously."

Assessing democracy promotion in Russia, Iraq, and Iran (with Michael McFaul and David Patel), Kathryn Stoner-Weiss concludes, "The Russians lost Russia, but democracy assistance could have been better." Advises Milani, "Iran wants democracy, needs democracy, is capable of having democracy."

"These are not the dispossessed," states Peter Bergen, CNN terrorism analyst and profiler of Osama bin Laden. An educated, dedicated network of terrorists remains in place, he warns, capable of bringing down commercial aircraft or detonating a radiological bomb.

Michael McFaul, Stephen Flynn, and David Victor examine threats posed by terrorism and failing infrastructure and potential energy shocks. Says Flynn, the U.S. must switch from a concept of "national security" to "resiliency" to man-made or natural disasters.

Turning to human risk, Michael Osterholm, director of the University of Minnesota's Center for Infectious Disease Research and Policy, addressed "Pandemic Influenza: Harbinger of Things to Come?" "The risk is one that a pandemic is going to happen," he told a riveted audience. Comparing the great influenza of 1918 with the pandemics of 1957 and 1968, he noted that pandemics have differed in season of onset, mortality rates, and number of cases. Avian influenza has a 65 percent mortality rate and could affect 30–60 percent of the world's 6.5 billion people, producing 1.6 billion deaths worldwide and 1.9 million deaths in the U.S. Inevitably, mutation will reduce its lethality.

"It is not a matter of *if*, just *when* and *where*" the pandemic will strike, said Osterholm. Noting that vaccines will not be available in numbers needed, he argued for measures to safeguard families, communities, and essential infrastructure, such as police, firefighters, and health-care workers. Just-in-time inventory practices, he said, have increased vulnerability to disruptions in food supply, transportation, equipment, and communications, making it vital to plan in earnest, now.

Plenary II, chaired by FSI deputy director Michael McFaul, assessed risks to humans from "Natural, National, and International Disasters." Stephen Flynn, Jeane J. Kirkpatrick Senior Fellow at the Council on Foreign Relations and a trade and transportation security expert, decried the "artificial firewalls between homeland and national security." The Hart-Rudman Commission of 1998 warned of a catastrophic attack on U.S. soil, yet we did not rethink national security even after 9/11. We must approach security as a transnational issue, with no clear "domestic" and "international" lines, he urged. More than 65 percent of critical infrastructure is privately owned and has been given inadequate attention by federal authorities. Hurricane Katrina exposed the vulnerabilities. "We face more threats from acts of God than acts of man," Flynn stated. We need to move from a concept of "security" to one of "resiliency," he said, greatly improving our ability to withstand a man-made or natural disaster.

David Victor, FSI senior fellow and professor of law, addressed three faces of energy security: oil, natural gas, and climate change. Oil prices are volatile, future fields are in places difficult to do business, and the global supply infrastructure is vulnerable, posing the risk of a one- to six-month supply disruption. For Victor, who directs FSI's Program on Energy and Sustainable Development, the big threat is less supply than a potential demand-side shock, driven by the U.S. and China. Europe relies on an unreliable Russia for 25–30 percent of its natural gas needs, making it imperative to switch to cheaper, more reliable LNG from North Africa and the Middle East. Oil and gas price volatility has driven further dependence on coal-fired plants, with dire consequences for carbon emissions. New coal plant lifetime emissions, Victor said, are equal to *all* historic coal emissions, making it critical to invest in advanced technology to protect the environment.

Peter Bergen, CNN terrorism analyst and producer of Osama bin Laden's first television interview, offered the dinner keynote, "Successes and Failures of the War on Terrorism Since 9/11." Assessing negatives, Bergen noted that al Qaeda continues to carry on attacks from its base in Pakistan; Afghanistan is beset by instability; more than 20 million Muslims in Europe remain dangerously un-integrated; bin Laden has not been apprehended and continues to inspire followers through terrorist attacks; Iraq is an unstable breeding ground for jihad; and anti-Americanism is on the rise. Enumerating positives, there has been no follow-on attack on the U.S.; the government *has* made the country safer; many Muslims have rejected jihad; plots have been foiled and suspects apprehended across the globe. Weighing whether fighting the terrorists abroad has made the U.S. safer here, Bergen was equivocal: The U.S. can identify and eliminate only so many people and cannot stay in Bagdad forever. A network of educated, dedicated terrorists remains, he warned, capable of bringing down commercial aircraft or deploying a radiological bomb. ■

A WORLD AT RISK

INTERACTIVE PANEL DISCUSSIONS ON CRITICAL ISSUES FACING THE GLOBAL COMMUNITY:

Conference participants engaged in spirited dialogue with Stanford faculty and outside experts on some of the most pressing and problematic issues facing the world today. Please go to the FSI website: http://fsi.stanfordu.edu for audio recordings of the plenary and panel discussions.

FOOD SECURITY AND THE ENVIRONMENT
Rosamond L. Naylor, Kenneth G. Cassman, and Scott Rozelle

PANDEMICS, INFECTIOUS DISEASES, AND BIOTERRORISM
Alan M.Garber, Michael T. Osterholm, Douglas K. Owens, and Lawrence M. Wein

INSURGENCIES, FAILED STATES, AND THE CHALLENGE OF GOVERNANCE
Jeremy M. Weinstein, Larry Diamond, and Stephen J. Stedman

U.S. EFFORTS AT DEMOCRACY PROMOTION IN RUSSIA, IRAQ, AND IRAN
Michael A. McFaul, Abbas Milani, David Patel, and Kathryn Stoner-Weiss

THE EUROPEAN UNION: POLITICS, ECONOMICS, TERRORISM
Amir Eshel, Josef Joffe, Hugo Paemen, and James J. Sheehan

CHINA'S RISE: IMPLICATIONS FOR THE WORLD ECONOMY AND ENERGY MARKETS
Thomas C. Heller, Edgard Habib, and Fred Hu

CROSS CURRENTS: NATIONALISM AND REGIONALISM IN NORTHEAST ASIA
Daniel C. Sneider, Michael H. Armacost, Gi-Wook Shin, and Xiyu Yang

Offshore Aquaculture Legislation

FROM R. NAYLOR, "OFFSHORE AQUACULTURE LEGISLATION," *SCIENCE* 313: 1363 (8 SEPT 2006)

Rosamond Naylor is the Julie Wrigley Senior Fellow at the Freeman Spogli Institute for International Studies and the Woods Institute of the Environment at Stanford University and the director of Stanford's program on Food Security and the Environment.

Offshore Aquaculture Legislation

FISH FARMING IS FLOURISHING ALONG COASTLINES IN MANY COUNTRIES. BUT THE United States is turning instead to the open ocean for aquaculture expansion. The National Oceanic and Atmospheric Administration (NOAA), a unit within the U.S. Department of Commerce, justifies this move on several grounds: America's seafood appetite continues to grow, ocean waters are overfished, and marine fish farming near the shore is limited by state regulations. As a result, the United States faces a large and growing seafood deficit, now around $8 billion annually. With technology such as submersible cages with robotic surveillance becoming available for open-ocean farming, why not move aquaculture into the high seas? After all, the United States has the largest exclusive economic zone (EEZ) in the world, amounting to roughly 1.5 times the landmass of the lower 48 states. Facilitating aquaculture development in federal waters of the EEZ (3 to 200 miles offshore) could result in substantial commercial benefits. But at what cost to sustainable fisheries, wild fish populations, and marine ecosystems remain sticky questions for legislation.

On 8 June 2005, Commerce Committee Co-Chairmen Senators Ted Stevens (R-AK) and Daniel Inouye (D-HI) introduced the National Offshore Aquaculture Act of 2005 (S. 1195). This bill, crafted by NOAA, establishes a permitting process for offshore aquaculture development within the federal waters of the EEZ and encourages private investment in aquaculture operations, demonstrations, and research. It gives the Secretary of Commerce the authority and broad discretion to promote offshore aquaculture—in consultation with other relevant federal agencies, but without firm environmental requirements apart from existing laws. Just how much NOAA should be promoting versus overseeing aquaculture development is debatable, particularly because many of the needed environmental safeguards are missing. Without a clear legal standard for environmental and resource protection within the bill, marine fisheries and ecosystems are vulnerable to further decline.

Ample evidence from near-shore systems indicates major environmental risks from fish farming: The escape of farmed fish from ocean cages can have detrimental effects on wild fish populations through competition and interbreeding, parasites and diseases can spread from farmed to wild fish, there is damaging nutrient and chemical effluent discharge from farms, and the use of wild pelagic fish for feed can deplete the low end of the marine food web in certain locations. Species targeted for offshore systems, such as halibut and cod, are also caught in the wild, so commercial fishing interests worry about the economic as well as ecological consequences. Most existing open-ocean systems are experimental. They experience predator attacks, escapes, and high use of wild fish for feed, and the full ecological impact of commercial-scale offshore aquaculture remains unknown.

Since the introduction of S. 1195, environmental and fishing groups have worked hard to stop the legislation. The bill was roundly criticized before a Senate committee in June 2006 and has yet to reach the House. In the likely event that S. 1195 resurfaces in the next legislative session, stakeholders and the public should be attentive to three points. First, states have an important role to play. For example, California's recent Sustainable Oceans Act (SB 201) sets high environmental standards for marine finfish production in state waters and could help shape national legislation. An amendment to S. 1195 also permits states to opt out of aquaculture development in federal waters off their shores. Second, industry leaders whose business strategy strongly incorporates environmental and social stewardship should contribute to the bill's revision. Positive participation by the industry would help move the legislative process forward. Finally, the revised legislation must permit firms operating in U.S. federal waters to be internationally competitive. This will only happen if the bill is crafted in an international context, with sound environmental standards adopted in all countries with marine aquaculture, whether near shore or offshore. Commerce is eyeing the global picture. So too should the global environmental community.

– Rosamond Naylor

10.1126/science.1134023

CREDIT (RIGHT): MICHAEL POLE/CORBIS

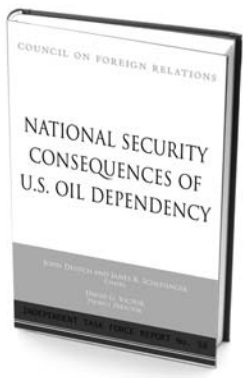
New Frontiers Aquaculture Conference

In May 2006, Roz Naylor hosted a group from academia, key environmental NGOs (Environmental Defense, Monterey Bay Aquarium), the seafood distribution sector, and several progressive producers from the finfish aquaculture sector to discuss ways to produce stronger market presence and awareness for these producers and to encourage others to join the movement and improve sustainability. The group sought to provide constructive input to ongoing efforts to design environmental certification strategies, sustainable purchasing strategies, and aquaculture legislation.

Two points were key. First, there are no ecosystems that exactly mirror each other and no "one-size-fits-all" answer to the challenges for different finfish species, locations, and industry structures. Second, advocacy by the environmental and academic communities to educate and inform buyers and consumers is beginning to bring about mass-market changes that have the potential to impact multinational seafood operations and mainstream retail activity. Companies like PanFish, Whole Foods Market, and Wal-Mart are now indicating a willingness to shift practices and protocols. Attention is focused on the restorative actions of innovators, led by smaller-scale producers and distributors, pushing forward a frontier designed for markets that now recognize the benefits of commercial operations that take seriously their responsibility for ensuring environmental sustainability.

In the absence of widely accepted certification programs for aquaculture, the participants outlined stewardship principles to serve as a guide for seafood purchasers to identify finfish producers committed to the highest environmental and health standards. The principles outlined are now being practiced by commercially viable operations in the absence of required certification programs for finfish aquaculture. The driving philosophy is an active one, demonstrating how to take more conscious, practical steps toward the realizable ideal that environmental, health, and social commitments also make the best economic sense in real market terms.

National Security Consequences of U.S. Oil Dependency



NATIONAL SECURITY CONSEQUENCES OF U.S. OIL DEPENDENCY, a report by the Council on Foreign Relations Independent Task Force on Energy, directed by David Victor, director of FSI's Program on Energy and Sustainable Development (PESD), concludes that the "lack of sustained attention to energy issues is undercutting U.S. foreign policy and U.S. national security." The report goes on to examine how America's dependence on imported oil—which currently comprises 60 percent of consumption—increasingly puts it into competition with other energy importers, notably the rapidly growing economies of China and India.

The task force was chaired jointly by James R. Schlesinger, a former secretary of defense and secretary of energy, and John Deutch, former director of Central Intelligence and undersecretary of energy, and drew from industry, academia, government, and NGOs. FSI senior fellow by courtesy James Sweeney, director of Stanford's new Precourt Institute for Energy Efficiency, served as a member of the task force.

The task force unanimously concluded that incentives are needed to slow and eventually reverse the growth in petroleum consumption, particularly in the transportation sector, but was unable to agree on which specific incentives—such as gasoline tax-funded energy technology R&D, more stringent and broadly applied Corporate Average Fuel Efficiency (CAFE) standards, and a cap-and-trade permit system for gasoline—would most effectively achieve this result.

The task force report included additional recommendations regarding the supply and consumption of energy including the following:

- Encourage oil supply from all sources
- Promote better management and governance of oil revenues
- Remove the protectionist tariff on imported ethanol
- Increase the efficiency of oil and gas consumption in the United States and elsewhere
- Switch from oil-derived products to alternatives such as biofuels
- Make the oil and gas infrastructure more efficient and secure
- Increase investment in energy technology R&D
- Promote the proper functioning and efficiency of energy markets
- Revitalize international institutions such as the International Energy Agency (IEA)

The report stressed that the U.S. government must reorganize to integrate energy issues with foreign policy to address the threats to national security created by energy dependence. The task force offered a number of recommendations to better promote energy issues in foreign policy deliberations as follows:

- Establish an energy security directorate at the National Security Council to lead an interagency process to influence the discussion and thinking of the NSC principals
- Fully inform and engage the secretary of energy on all foreign policy matters with an important energy aspect
- Include energy security issues in the terms of reference of all planning studies at the NSC, Defense, State, and the intelligence community

The task force restricted its inquiry to the challenges of managing U.S. and global dependence on imported oil and gas and did not address other important energy security issues such as nuclear proliferation and global warming.

A link to the report is available on PESD's website: http://pesd.stanford.edu. ■

Forum on Contemporary Europe (FCE):

Multiyear Study of the Challenges to European Union Integration and Crisis Intervention

BY ROLAND HSU

THE FORUM ON CONTEMPORARY EUROPE continues a multiyear study of the challenges facing European Union integration and global crisis intervention. The increasingly complex demands straining Europe and its trans-Atlantic relations—labor migration, spending on welfare economies, globalized cultures, and threats of terrorism, coupled with Europe's struggle to ratify a single constitution—underline the need to measure prospects for unification and the EU's ability to function as a coordinated international actor. This year, FCE is broadening its work to assess the role an integrated EU can play in addressing the world's most troubling crises.

EU INTEGRATION: THE CASE OF TURKEY

The forum has explored the question of Turkey's EU membership with Stanford scholars, European leaders, and the public. In spring 2006, former German foreign minister Joschka Fischer and author Christopher Hitchens offered candid analyses of EU expansion. Hitchens challenged commonplace descriptions of "Christian Old Europe" antagonized by "Islamicized" secular Turkey. Europe and Islam are not newly in contention, he said, but are playing out a centuries-old relationship grounded in the European and Ottoman empires in the Eastern Mediterranean. For Hitchens, the portrait of clashing civilizations obscures the crises facing minority Kurdish and neighboring societies whose survival is at stake in EU expansion.

Delivering the Payne lecture, Fischer noted the dilemma of seeking to achieve popular ratification of a European constitution at a time when public attention is galvanized by the Turkish candidacy. Fischer rejected common comparisons between European state rulings on Islamic traditions and models of U.S. multiculturalism. Fischer found admirable aspects of the U.S. inspiration but questioned its relevance for mediating myriad EU interests. For Fischer, the EU as a supra-state actor holds the promise to democratize conflict resolution in the deliberative model of the European Parliament and legitimate its role as a peacekeeping actor.

EUFOR PEACEKEEPERS SERVING IN THE DEMOCRATIC REPUBLIC OF CONGO (PHOTO CREDIT: REFUGEES INTERNATIONAL).

EU INTERVENTION: CRISIS MANAGEMENT AND COMBATING INTERNATIONAL TERRORISM

The forum's new focus on EU crisis intervention began with addresses by Sir Richard Dearlove, former head of Britain's Security Services (MI-6), and Alain Bauer, former vice president of the University of Paris – Sorbonne and director of France's National Institute for Higher Studies in Security, who discussed EU counter-intelligence and international early-warning protocols. Greek Ambassador Alexandros Mallias spoke on the Eastern Mediterranean context that frames the Turkish candidacy, the economics of EU integration, and prospects for responding to the tensions in Cyprus. Austrian Ambassador Eva Novotny spoke on Austria's immediate past EU presidency, evaluating the impact of the EU Council's intervention in the Israel-Lebanon crisis. Professor Josef Joffe spoke on his new book, *Uberpower: The Imperial Temptation of America,* and the prospects for U.S.–EU interaction in global affairs.

The forum's fall series brought public acclaim when Daniel Cohn-Bendit, co-president of the European Parliament Greens/New Alliance Parties, delivered FCE's 2006–2007 "Europe Now" address, cosponsored by Stanford's Abbasi Program in Islamic Studies and the Woods Institute for the Environment. Speaking to an overflow crowd, and meeting separately with faculty and researchers, Cohn-Bendit focused his public remarks on *European Integration: Society, Politics, and Islam*. A European Parliament leader, Cohn-Bendit spoke on his party's proposal to deploy Joschka Fischer as the EU representative to Middle East peace negotiations. Expanding and integrating the EU, Cohn-Bendit argued, is the most reasonable strategy for strengthening Europe's role in international relations and crisis intervention.

The Forum on Contemporary Europe continues to deepen scholarly and public understanding of the EU promise to achieve democratic governance, economic growth, security, and social integration among its member states and in its foreign engagements.

A listing of FCE events is available at http://fce.stanford.edu. ■

Improving Teacher Preparation and Professional Development in Chile:

Stanford's International Outreach Program

BY REINHOLD STEINBECK

THE INTERNATIONAL OUTREACH PROGRAM at Stanford University (IOP) began as a pilot joint venture between FSI and the Stanford Center for Innovations in Learning (SCIL), under the auspices of the Stanford International Initiative. IOP was designed to serve as a bridge between Stanford University and international universities and educational institutions, especially in Africa, South America, and Asia. The program's mission is to facilitate teaching and other outreach collaborations in each of the three primary themes of the International Initiative—security, governance, and human well-being—and international collaborations in other relevant areas. During the initial startup phase, IOP facilitated collaborations between Stanford and universities in South Africa (ELISA—eLearning Initiative in South Africa, focusing on using mobile devices to support Stanford courses on International Security and the Environment) as well as in China (adapting innovative computer-based learning materials to teach biology to undergraduate students).

RURAL ELEMENTARY SCHOOL IN TEMUCO, CHILE (PHOTO CREDIT: REINHOLD STEINBECK).

A third collaboration facilitated by IOP brings together Stanford experts from the School of Education with professors and researchers from the Universidad Católica de Chile (UC) in Santiago to address the issue of teacher education. While Chile has enacted wide-ranging social and economic reforms to improve the well-being of its citizens, and has been a leader across Latin America in improving educational quality and access, the country still faces challenges with its teacher training institutions and professional development activities.

UC is collaborating with IOP on a proposed $10 million, five-year program to allow Stanford experts and graduate students to work with their Chilean counterparts to design and test new mechanisms to deliver state-of-the-art teacher professional development programs in literacy and mathematics. The group of Stanford experts include Coit Blacker, Guadalupe Valdes, Shelley Goldman, Rachel Lotan, Aki Murata, Duarte Silva, and Martin Carnoy.

Another project between Stanford and UC explores the joint development of new models for initial teacher education. In July 2006, Rachel Lotan, director of the Stanford Teacher Education Program (STEP), joined Reinhold Steinbeck, IOP co-director, to meet with members of UC's School of Education in Santiago. UC is particularly interested in working with STEP on addressing some key issues confronting initial teacher education—pedagogic content knowledge; linkages between theoretical and practical dimensions of teacher training; and the strategic character of university-schools linkages for providing contexts for teacher training. The planned collaboration would include training sessions of teacher educators and program administrators from Universidad Católica at Stanford and in Santiago and would also utilize distance-learning technologies.

IOP is exploring a new collaboration between Stanford and UC's new center for international studies led by Dr. Juan Emilio Cheyre, a noted reformer of the Chilean Army. Michael McFaul, deputy director of FSI, and Katherine Kuhns, director of FSI's Initiative on Distance Learning (IDL), met with Cheyre and other university leaders in July 2006.

IOP is enthused about facilitating this potential collaboration, which would allow Stanford to make a major contribution toward capacity building in teacher education and international studies at UC and across Chile. ■

IDL Offers Simulation on Iran's Nuclear Program

BY KATHERINE KUHNS

NATASHA PARFENOVA, HEAD OF THE CHINA DELEGATION, DURING FINAL NEGOTIATIONS WITH OTHER U.N. SECURITY COUNCIL DELEGATES (PHOTO CREDIT: KATHERINE KUHNS).

DISCUSSIONS BEGAN, tentatively at first, as the delegates slipped into the roles they had been assigned and for which they had prepared for several months. The tension mounted as they anticipated meeting with their heads of state, to whom they would propose their country's goals for the upcoming U.N. Security Council meeting.

Thus began the Third Annual IDL Student Conference in International Security, sponsored by the Initiative on Distance Learning (IDL). IDL offers Stanford courses in international security to nine Russian universities via distance-learning technologies. Its annual conference brings together top students and instructors from each of the participating universities with students and faculty from Stanford. This was the first year that the conference centered on an international security simulation, led by political science professor Scott Sagan, director of CISAC, and Coit Blacker, director of FSI. Sagan has been conducting such security simulations for eight years at Stanford and other U.S. universities.

This year's simulation scenario was the referral of Iran to the U.N. Security Council by the International Atomic Energy Agency (IAEA) for failure to fully disclose its nuclear activities. Council delegates convened in the Russian provincial capital of Yaroslavl, 150 miles northeast of Moscow, due to "security concerns"—as they were informed—about U.N. headquarters in New York.

Delegates' opening statements reflected a wide range of views on Iran's status with the IAEA. The U.S. delegation called for sanctions and showed little interest in negotiation. "We find the Iranian regime corrupt and repressive," said Oleg Borisov, head U.S. delegate and a student at Petrozavodsk State University. He added, rather menacingly, "The United States is not intending to use military force unless Iran keeps up its nuclear capability and continues to support terrorism."

At the other end of the spectrum, Venezuela, Pakistan, and Iraq indicated no willingness to consider sanctioning Iran. China urged delegates to "choose the only right option—diplomacy."

By the end of the two-day session, delegates had overcome seemingly intractable differences during four intensive legal drafting sessions. The council's resolution gave Iran three months to comply with IAEA demands and provided for Iran to obtain enriched uranium from Russia, with the production, transport, and waste disposal to occur on Russian soil under IAEA controls.

As a learning experience, the simulation is well matched to the IDL program's goal of fostering critical analysis among a new generation of students in post-Soviet Russia. FSI director Coit Blacker wants to develop future generations of diplomats and policymakers whose worldview is shaped "by how they think, not what they're told to think."

After the session ended, students reflected on what they had learned. Putting themselves in others' shoes seemed the most valuable aspect for many. Natasha Pereira-Klamath, one of the Stanford undergraduates who participated in the Yaroslavl simulation as a representative of the Russian Federation, said she was surprised at the "extent to which people reflected the views of their (assigned) countries." This was echoed by other students, who expressed their surprise at how easy it was to begin thinking as a representative of another country, although their official position might be very different from their own.

"I'm glad to see the resolution passed today," said Homkosol Bheraya, an exchange student from Thailand who attends Ural State University. "I hope that in the real world this can happen someday." Perhaps she will be in a position to advance that goal. "My dream," she said, "is to one day work for the IAEA." ■

Susan Ford Dorsey Endows International Policy Studies Program

BY NEIL PENICK

IPS DIRECTOR STEPHEN J. STEDMAN

TODAY'S INCREASINGLY COMPLEX INTERNATIONAL POLICY problems call for Stanford to better prepare students to become effective actors in the international arena. A remarkable gift from Susan Ford Dorsey will establish the Ford Dorsey International Policy Studies Program (IPS) with an endowment of $15 million, permitting Stanford to enhance and broaden its longstanding IPS master's program.

The IPS program will undergo a major overhaul beginning in September 2007. Susan Ford Dorsey's gift to the School of Humanities and Sciences and the Freeman Spogli Institute will fund the expansion of IPS to a two-year program. Her gift will also provide permanent funding for Stanford faculty to teach new courses in core public policy and international relations and to lead special new seminars on writing and rhetoric for policy audiences. Ford Dorsey's gift fulfills one of the priorities of the International Initiative of The Stanford Challenge, to address global problems by leveraging Stanford's cross-disciplinary and collaborative research and teaching.

The Ford Dorsey International Policy Studies Program will also add new policy specializations that will link IPS students more closely with Stanford's international policy research centers and programs in FSI and provide a group-based practicum involving real world problem solving. According to IPS director Stephen J. Stedman, "These changes will further enhance the quality of the program while maintaining a dynamic, intimate student learning experience."

A longtime Stanford supporter, Susan Ford Dorsey serves as chair of the Humanities and Sciences Council and has served on the Stanford Athletic Board. She and her husband, Mike, are active volunteers and serve on key volunteer committees for The Stanford Challenge.

With input from Ford, IPS alumni, students, and faculty, Stedman and the IPS faculty have given shape to the new curriculum. In past surveys of the program, students and alumni asked for greater teaching by full-time Stanford faculty, better integration of the program into Stanford's international policy research centers, and more opportunities to take courses in Stanford's other professional programs, such as law and business.

Stedman says he is "happy that the changes to the IPS program will address each of these concerns." According to Stedman, at present between 40 and 50 percent of IPS courses are taught by full-time faculty, but when the new changes are implemented next year, about 90 percent of Ford Dorsey IPS courses will be taught by full-time faculty. He says that the remaining 10 percent will be taught by lecturers and visiting faculty and practitioners.

These changes will provide Ford Dorsey program students with greater exposure to Stanford's cutting-edge research on global problems by building close relationships between IPS policy specializations and Stanford's research centers at FSI. IPS students will also have greater access to courses taught in the schools of law, medicine, and business.

Despite all these changes, some things will remain the same. The Ford Dorsey IPS program will continue to be small, with a yearly cohort of approximately 30 students. The program will also retain a strong focus on international students, with a third to a half of the students coming from outside the United States.

With her gift, Ford Dorsey has made a magnificent investment in training future policymakers at Stanford. Her gift will make possible the intense and rigorous contact between faculty and students that is the hallmark of graduate studies at Stanford. ■

Examining Global Pandemics

Division of Infectious Diseases, Stanford University School of Medicine, and SPICE

BY DAVID KATZENSTEIN, MD; SEBLE GETACHEW KASSAYE, MD; AND LUCY THAIRU, PHD

EPIDEMIC INFECTIOUS DISEASES have shaped many aspects of ancient and modern history. In an interdependent world, well-known pathogens and new, emerging infectious diseases continue to pose a global threat. At the same time, the biomedical and social sciences have been making incredible progress in the diagnosis, prevention, and treatment of communicable diseases.

LEFT TO RIGHT: SEBLE KASSAYE, MD; DAVID KATZENSTEIN, MD; LUCY THAIRU, PHD (DIVISION OF INFECTIOUS DISEASES) PICTURED WITH GARY MUKAI, SPICE DIRECTOR.

Recent events highlight the importance of emerging infectious agents, including HIV/AIDS in the early 1980s, the introduction of West-Nile Virus in the western hemisphere in the late 1990s, and SARS (Severe Acute Respiratory Syndrome) in 2003, and draw attention to the role of increased travel and global connections in facilitating the rapid spread of infectious diseases.

HIV/AIDS is now the world's greatest pandemic. It has claimed more lives than the Black Plague of the 14th century. With an estimated 16,000 new infections daily, more than 40 million people worldwide are infected with Human Immunodeficiency Virus (HIV). More than seven out of 10 of the world's HIV-infected people live in sub-Saharan Africa. The impact of HIV/AIDS on local economies, its potential to contribute to regional instability due to loss of human life, and the moral imperative to address the pandemic has brought prevention and treatment of HIV/AIDS to the forefront. Increasingly, it is clear that a multidisciplinary team approach including social scientists, behavioral specialists, clinicians, researchers, and policymakers is essential to address this global pandemic.

Advances in epidemiology, molecular diagnostics, bio-informatics, and genomics have enriched our understanding of ancient and emerging pathogens and offer new avenues for addressing infectious diseases. Vaccines, pharmaceuticals, and new paradigms of public health have increased our ability to control and even eradicate infectious agents. The control of many formerly common childhood diseases has been effectively achieved through the development of vaccines. Smallpox and measles provide examples of diseases that have been eradicated by the culmination of modern innovative public health approaches and widespread vaccination. In the news today, the potential for a viral antigenic shift resulting in a more transmissible form of the deadly H5N1 influenza virus has led to extensive media coverage and disaster planning at local, state, and federal levels of government, as well as international public health bodies.

Teachers and students need a strong foundation in the biologic and social sciences to place these events and responses in context and to allow transfer of vital information and understanding to the community at large. There have been few initiatives to provide high school teachers with accurate, up-to-date knowledge on infectious diseases. U.S. high school students continue to be exposed to global infectious diseases through sensationalized media coverage including popular films and television.

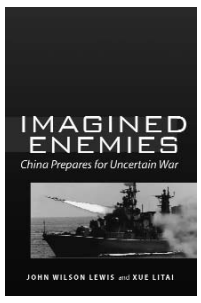
We have been developing a high school curriculum unit with Stanford students Robin Lee, Michelle Silver, Piya Sorcar, and Jessica Zhang and Gary Mukai of SPICE to allow teachers and students to place news concerning infectious diseases in perspective; appreciate diverse social and economic responses to infectious diseases; and understand infectious diseases in the context of a global, interdependent world. The curriculum will also encourage students to consider issues related to epidemic and pandemic infectious diseases and their own personal risk.

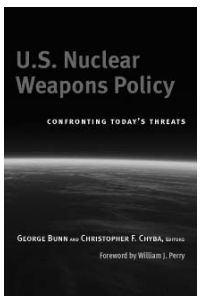
The proposed five-module unit is as follows, with the first module having been completed this summer:

I: Introduction to Virology and Infectious Diseases
II: The Epidemiology of HIV/AIDS in the United States and around the World
III: Science, Economics, and Business in Infectious Diseases
IV: Local and International Politics and Policy in Infectious Diseases
V: Community and Personal Health

CISAC — BOOKS, RESEARCHERS, HONORS

New Books From CISAC Authors





Imagined Enemies: China Prepares for Uncertain War (Stanford University, July 2006) by John W. Lewis, William Haas Professor of Chinese Politics, emeritus, and FSI senior fellow, and Litai Xue, CISAC research associate.

This fourth and final volume in a pioneering series shows how the transformation of China's military strategy is being tested in military exercises with Taiwan and the United States as "imagined enemies." It examines Chinese military culture and history, with special attention to the transition from Mao Zedong's revolutionary doctrine and the conflict with Moscow to Beijing's preoccupation with Taiwanese separatism and preparations for war to thwart it. Because such a war might involve the U.S., the Chinese have concentrated on measures to deter American intervention. Based in part on interviews, the book takes an unprecedented look at the history, operational structure, modernization, and strategy of China's strategic rocket forces.

U.S. Nuclear Weapons Policy: Confronting Today's Threats (Brookings Institution and CISAC, September 2006) edited by George Bunn, CISAC consulting professor, and Christopher F. Chyba, director of the Program on Science and Global Security at the Woodrow Wilson School, Princeton University, and former CISAC co-director. Foreword by William J. Perry, co-director of the Preventive Defense Project at CISAC.

What role should nuclear weapons play in today's world? How can the United States promote international security and safeguard its own interests? Nine authors with policy, industry, and research expertise examine the significance of changes in U.S. nuclear weapon policy since the Cold War. The book suggests a way forward for U.S. nuclear weapons policy, emphasizing stronger security of nuclear weapons and materials, full compliance with nonproliferation obligations, attention to the demand and supply side of nuclear proliferation, and reducing the salience of nuclear weapons in foreign affairs.

Paul Stockton Joins CISAC, Researches Homeland Security Policy

Paul Stockton joined CISAC this fall as a senior research scholar, bringing academic and political experience in homeland security policy issues. His research and teaching focus on how U.S. institutions respond to changing threats—especially the rise of terrorism.

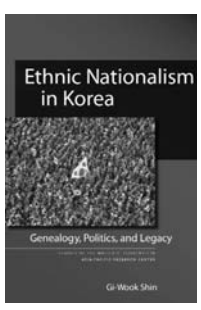
The first researcher CISAC has hired who specializes in homeland security, Stockton will help build the center's research in this area, which is gaining scholarly and public interest.

Award Supports CISAC Scholar's Study of Chernobyl Disaster and Nuclear Decision Making

The Society for the History of Technology has awarded its 2006 Brooke Hindle Fellowship to Sonja Schmid, a CISAC social science research associate and lecturer in the Program on Science, Technology, and Society.

Schmid will use the award to support additional research in Russia for a book she is completing on the effects of the Chernobyl disaster on the Soviet and Russian nuclear power industry.

NEW TITLES FROM SHORENSTEIN APARC AND STANFORD UNIVERSITY PRESS



Together with Stanford University Press, Shorenstein APARC regularly produces "Studies of the Walter H. Shorenstein Center," a monograph series featuring the interdisciplinary work of the center's faculty, researchers, and fellows. Shorenstein APARC director emeritus Andrew Walder oversees the series.

Published in spring 2006, *Ethnic Nationalism in Korea,* by Shorenstein APARC director Gi-Wook Shin, explains the roots, politics, and legacy of Korean ethnic nationalism, which is based on the sense of a shared bloodline and ancestry. Belief in a racially distinct and ethnically homogeneous nation is widely shared on both sides of the Korean peninsula, although some scholars claim it is a myth with little historical basis. Finding both positions problematic and treating identity formation as a social and historical construct that has crucial behavioral consequences, this book examines how such a blood-based notion has become a dominant source of Korean identity in the modern era. It also looks at how the politics of national identity in Korea have influenced anticolonialism, civil war, authoritarianism, democratization, territorial division, and globalization.

The second book, published in fall 2006 and edited by Shorenstein APARC director emeritus Henry S. Rowen, Marguerite Gong Hancock, and William F. Miller, is titled *Making IT: The Rise of Asia in High Tech*. The continued and indisputable rise of Asian IT innovation poses a challenge to the eminence of traditional IT centers, notably Silicon Valley. *Making IT* examines the causes and consequences of Asia's dramatic rise in this industry. The book analyzes each country's policies and results, on both a national level and in the regions that have developed in each country. Innovation hot spots include Japan's excellence in technology and manufacturing skills; Bangalore, India's late start and sudden explosion; Taiwan's Hsinchu Science-based Park's entrepreneurship and growth; Korea's Teheran Valley's development of large companies; Singapore's initial reliance on multinational firms and its more recent switch to a home-developed strategy; and China's Zhongguancun Science Park's encouragement of both foreign and domestic investment in IT. The editors of *Making IT* also collaborated on *The Silicon Valley Edge*—a 2000 Shorenstein APARC monograph—which is one of Stanford University Press' top-selling business books.

CESP — BOOKS, PUBLICATIONS, HONORS

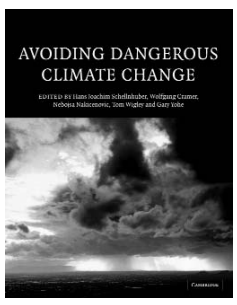
Honors

Donald Kennedy received the 2006 Association of Neuroscience Departments and Programs (ANDP) Education Award. The award honors the positive influence he's had in teaching undergraduate and graduate courses in neuroscience, his influential role as the mentor of a large cadre of successful neuroscientists, and his many contributions to public education and awareness of science through his work at the FDA and as editor-in-chief of *Science*.

□

Woods Institute for the Environment awarded CESP senior fellow Karen Seto one of five Environmental Venture Program grants. Established in 2004, the grant program is designed to provide seed money for interdisciplinary projects. Seto's project, From Bangalore to the Bay Area, looks at comparative urban growth patterns across the Pacific Rim. She is conducting the study alongside Margaret O'Mara, acting assistant professor of history and deputy director of the Bill Lane Center for the Study of the North American West at Stanford.

Publications



CESP co-director Steve Schneider and research fellow Janica Lane contributed an overview chapter in a book recently published by Cambridge University Press titled *Avoiding Dangerous Climate Change*. This volume presents the most recent findings from leading international scientists that attended a 2005 U.K. government-hosted conference on *Avoiding Dangerous Climate Change*. The chapter outlines the basic science of climate change, as well as the IPCC assessments on emissions scenarios and climate impacts, to evaluate key vulnerabilities to climate change. A conceptual overview of "dangerous" climate change and the roles of scientists and policymakers in this complex scientific and policy arena is presented. Also featured is a chapter by Schneider and postdoctoral scholar Michael Mastrandrea titled "Probabilistic Assessment of 'Dangerous' Climate Change and Emissions Pathways."

□

PESD — POLICY AND PUBLICATIONS

Policy

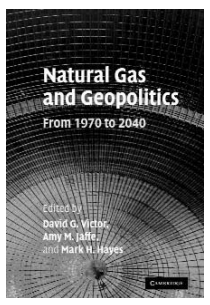
The India Nuclear Deal: Implications for Global Climate Change

The debate over the India nuclear deal has been too one-dimensional. Nearly all commentary has focused on whether it would undermine efforts to contain the proliferation of nuclear weapons. The singular focus on proliferation has allowed the debate to lose sight of other ways that this deal is in the interests of the United States and India alike.

Chief among those other reasons is environmental. The fuller use of commercial nuclear power, if done to exacting standards of safety and protection against proliferation, can contribute to a larger strategy to slow growth in emissions of the gases that cause global warming. That's because nuclear power emits essentially no carbon dioxide (CO^2), the most prevalent of these so-called "greenhouse gases." While this benefit is hardly the chief reason for initiating this deal, it can become one of the main benefits of the arrangement. The nuclear deal probably will lead India to emit substantially less CO^2 than it would if the country were not able to build such a large commercial nuclear fleet. The annual reductions by the year 2020 alone will be on the scale of all of the European Union's efforts to meet its Kyoto Protocol commitments. In addition, if successful, this arrangement will offer a model framework for a more effective way to engage developing countries in the global effort to manage the problem of climate change. No arrangement to manage climate change can be adequately successful without these countries' participation; to date the existing schemes for encouraging these countries to make an effort have failed; a better approach is urgently needed.

Excerpt from PESD director David Victor's July 18, 2006, testimony before the U.S. Senate Committee on Energy and Natural Resources.

Publications



In July 2006, *Natural Gas and Geopolitics* was published by Cambridge University Press. Edited by PESD director David Victor, James A. Baker Institute scholar Amy Jaffe, and PESD research fellow Mark Hayes, the text focuses on the political challenges that may accompany the rising international trade in natural gas. By most estimates, global consumption of natural gas—a cleaner-burning alternative to coal and oil—will double by 2030. However, in North America, Europe, and South and East Asia, the areas of highest-expected demand, projected consumption of gas is expected to far outstrip indigenous supplies. Delivering gas from the world's major reserves to the future demand centers will require a major expansion of inter-regional, cross-border gas transport infrastructures. The volume includes seven historical case studies of cross-border trade projects, including pipelines to deliver gas from the former Soviet Union to Europe and ship-borne projects to move gas from Qatar to Japan. Insights from history are combined with advanced economic modeling to examine the interplay between economic and political factors in the development of natural gas resources.

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THE ENCINA PROJECT

Building an International Studies Community at Stanford

Under the auspices of Stanford's International Initiative, FSI is leading a new fundraising effort to complete the renovation of the Encina complex, expanding the home base for Stanford's international studies community. The newly renovated complex will provide space for growing activities of the institute and collaborative international programs with the schools of humanities and sciences, business, law, and medicine. The internal courtyard of the Encina complex will be reconfigured to encourage community and provide a unique outdoor setting for Bechtel Conference Center events.

As with the earlier renovation of Encina Hall, Stephen D. Bechtel Jr. has again provided a lead gift to start the project. Following his inspiration, efforts are now being undertaken to complete renovation funding.

For information about making a gift to FSI in support of this or other objectives of the institute, please contact Evelyn Kelsey, associate director for development and public affairs, at 650-725-4206 or by email at ezkelsey@stanford.edu.

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THE NEWSLETTER OF THE FREEMAN SPOGLI INSTITUTE FOR INTERNATIONAL STUDIES

FSI STANFORD

WINTER 2007

INSIDE:

FREEMAN SPOGLI INSTITUTE FOR INTERNATIONAL STUDIES

WELCOME TO Encina COLUMNS

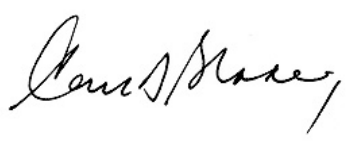
In October 2006, Stanford President John Hennessy announced the $4.3 billion Stanford Challenge, an ambitious campaign to "marshal University resources to address some of the century's great challenges in human health, international peace and security, and the environment." A second, equally important campaign objective, he said, is educating students to become "the next generation of leaders in a world that has been transformed by globalization." Key to success in both is breaking down barriers between departments and disciplines to foster cross-campus collaboration in research and teaching.

As Stanford's primary forum for consideration of major international issues, FSI has long been dedicated to the interdisciplinary research and teaching that lie at the heart of this campaign. As President Hennessy said, "Human society faces an array of challenges of enormous complexity and global proportions." We need to work across disciplines to advance debate, discussion, and the search for effective solutions.

FSI's November 16, 2006, international conference, *A World at Risk*, is just one of the ways the institute is helping Stanford University engage on the great—and often divisive—issues of our time. Once at the heart of the debate on transnational challenges, by the late 1970s many U.S. universities—buffeted by forces ranging from violent student protests to declining resources and escalating costs—had turned inward to contend with problems that could threaten their existence. This retreat was costly. It limited our ability to think creatively about key events and challenges "out there." With The Stanford Challenge, the university has committed to re-enter the fray and actively engage in the great global contest of ideas, a contest that will shape our future and that of generations to come.

As FSI's director, I am pleased to report that the conference and other events have attracted new support for our work. We need the generous support of our friends, old and new, to invest in new faculty positions, pathbreaking research, new courses for our talented students, and a home for Stanford's international studies community.

I am profoundly grateful to the institute's extraordinary faculty, scholars, and staff, and all of our supporters. Motivated by the challenges and opportunities ahead, we dedicate ourselves to seeking solutions to today's problems and educating tomorrow's leaders.



COIT D. BLACKER, DIRECTOR