



ROBIN HOLLAND

Martha Nussbaum

2010 LEVIN FAMILY DEAN'S FORUM

Last spring's Levin Family Dean's Forum featured influential philosopher Martha Nussbaum, the Ernst Freund Distinguished Service Professor of Law and Ethics at the University of Chicago. Nussbaum is the author of several award-winning publications, including *Cultivating Humanity: A Classical Defense of Reform in Liberal Education* and *Sex and Social Justice*. Her most recent book, *From Disgust to Humanity: Sexual Orientation and Constitutional Law*, investigates how the notion of disgust has driven both civil legislation and public opinion supporting discrimination against gay and lesbian citizens. In her talk at the Annenberg Center's Zellerbach Theatre, Nussbaum identified the religious and public arguments condemning same-sex marriage and argued against their validity in influencing legislation on the issue.

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NEW GATES SCHOLARS

Donielle Johnson (left) and Jill Portnoy



MARK DIETRICH

Two members of the class of 2010 received Gates Cambridge Scholarships last spring. Donielle Johnson and Jill Portnoy were awarded the full cost of tuition for graduate study at the University of Cambridge by the Bill & Melinda Gates Foundation. Approximately 100 Gates Scholars are selected each year based on academic achievement, demonstrated leadership and dedication to improving the lives of others. Currently there are 911 Gates Scholars and alumni from 90 countries. Johnson majored in psychology with a minor in the biological basis of behavior. She intends to continue with her study of childhood autism at Cambridge in the fall. Portnoy, a double major in criminology and Hispanic studies, plans to pursue a graduate degree in criminological research. Amanda Marzullo, L'08, G'08, an advocate for indigent defendants in Texas, also was named a 2010 Gates Scholar.

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LAURA VAN NESS MORRIS



Team Land Philadelphia (from left), Daniel Gershwin (Penn Law), Katie Milgrim (Penn Design), Evan Smith (Fels/Temple Law), Timothy Potens (Penn Engineering), Matthew Rader (Wharton)

CHALLENGE CHAMPS

“We are presenting a system that will recycle neglected, tax-delinquent properties to benefit the regional economy,” explained Evan Smith, a grad student in the Fels Institute of Government who is also a law student at Temple University. He wore a dark suit, a white shirt and a red tie. His shoes were polished, but there was a nervous catch to his voice. It was the final round of the Fels Public Policy Challenge. With four teammates, Smith was presenting a land-bank plan that would promote neighborhood development to a panel of six distinguished, battle-hardened public-policy experts.

One panelist, Judge Marjorie Rendell, CW’69, from the U.S. Court of Appeals, fixed him with her best show-me stare. Another scowled over reading glasses, arms folded into an I-dare-you-to-impress-me pose. Smith’s team, Land Philadelphia, apparently did impress the judges, winning first place last March against four teams that presented their own policy proposals.

The Fels Public Policy Challenge is a competition that immerses students into all phases of a “civic campaign,” a political-action model for moving a policy idea to a policy reality. “It’s exactly what Fels brings to the table in terms of

figuring out the realistic politics—what it really takes to get policy done,” says second-year Fels student Jack Higgins, who did most of the heavy lifting to get the Challenge off the ground. Notes Fels Executive Director David Thornburgh, “It’s the research, the execution, the implementation, the organizing and the persistence that separate realities from good ideas.”

The competition began six months earlier when more than 100 graduate and undergraduate applicants from eight Penn schools (and two from Bryn Mawr College) responded to a call for students interested in working with a team on a policy proposal that they were passionate about. Fels organizers chose 50 students from the pool and sorted them into multi-disciplinary teams that would put together plans to accomplish a wide range of objectives: to increase college enrollment and graduation rates in Pennsylvania, to improve senior-citizen access to social services and healthy food, to reduce recidivism with prison-education programs, to attract solar-panel makers to Philadelphia and much more. The teams attended workshops to coach them on all the research, analysis, organization, lobbying and cheerleading that goes into a successful

civic campaign. Another workshop introduced them to the politics and players in the Philadelphia region. At a Round Robin, the 10 teams presented their plans to a jury of policy veterans from the local political scene. The judges listened, offered advice, poked holes and posed tough questions, and then scored the groups, which left half of them to advance to the final five.

“Through the Round Robin and campaign-planning process, we discovered that we really lacked focus and needed a crystal clear idea to communicate to the politicians whose support we needed,” says Matt Rader of team Land Philadelphia. The group made a strategic shift, tying their original idea for a land bank to the problem of tax-delinquent properties. “By targeting this narrower issue,” adds teammate Katie Milgrim, “we were able to create a strategy that would reduce the cycle of decline in neighborhoods, increase city revenues and improve the value of neighboring properties.”

“Politicians don’t vote on ideas,” Thornburgh points out. “I think part of the reason Land Philadelphia was the winning team was that they took their broad idea and kept funneling it into a very specific, actionable, votable proposal. There’s not only no way around this way of doing politics, but this is actually the system we’ve created, and we should embrace that and exercise our rights. This is at the core of what we teach at Fels every day—crafting strategic alliances to develop practical approaches to complex situations. We look forward to continuing and expanding on the success of the first year of the Public Policy Challenge for many years to come.”

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TENTH ANNUAL GOLDSTONE FORUM

Malcolm Gladwell, renowned author of such best sellers as *The Tipping Point*, *Blink* and *Outliers*, spoke at the 2010 Goldstone Forum. More than 1,000 attendees filled Irvine Auditorium on the 10th anniversary of this annual lecture, which was established by Steven F. Goldstone, C'67, and features leading figures in the business, political and academic arenas.

In his talk, "Culture, Community and Laws," Gladwell opined that open conversations defining shared culture are lacking in the United States. To illustrate the point, he compared alcohol consumption in various societies, citing research that shows that the more culturally ritualized drinking is the less it leads to social pathology. In the United States, Gladwell explained, we attempt to curb alcohol abuse through legislation and medicine when we should first be establishing good cultural examples of responsible drinking. He then made the larger point that an "honest cultural accounting of who we are" is a necessary precursor to achieving success in any type of social reform.

— PR



Malcolm Gladwell



DAVID McDONALD

Timothy Powell, Sheyla Medina and Larry Aitken

BRIDGE BUILDER

"People are not just bodies," declares health and societies major Sheyla Medina. "Patients are more than their disease. When we think about health and well-being, we cannot forget that a person's values and spiritual beliefs are also very important."

That sensitivity to the cultural and personal dimensions of health led Medina from a Native American literature course on Penn's campus to a research project at Cass Lake Indian Health Services Hospital on the Leech Lake Ojibwe Reservation in Minnesota. "I wanted to learn about other worldviews," she says, "other cultures that are often overlooked."

With Timothy Powell, research project director at the Penn Museum and director of the Digital Partnerships with Indian Communities Website, Medina traveled to the reservation. Her plan was to video record interviews with tribal leaders and hospital officials for a case study of traditional medicine. "I wanted to learn not only about the perspectives that members of the Cass Lake Hospital had, but I wanted to learn about myself and how I could see through their eyes," she says.

Medina first met with Larry Aitken, the reservation's tribal historian, who is also Professor of American Indian Studies at Itasca Community College and founder of the Leech Lake Tribal College. "If you work with us," he counseled, "bizindan (listen)."

Medina spent considerable time observing Aitken and his family, and listening to their stories. "This is the unspoken part of collaborative research," she points out. "It builds the framework on which research with the community can flourish." The approach is called community-based participatory research. Her aim was to understand what traditional medicine means for the Ojibwe

and to work out with them the practical applications of any findings.

Powell, who had been working with the Ojibwe for a decade, was surprised by how responsive they were. “You don’t see native people talking that openly the first time they meet someone,” he remarks. “They recognized in Sheyla a deep-seated respect—she came asking for their help, not telling them how she’s going to help them.”

Medina recorded video interviews with Aitken as well as Norine Smith, CEO of Cass Lake Hospital, and Debra Meness, a physician and the hospital’s clinical director. Both women are Ojibwe. “It was great talking with these powerful, confident women,” Medina reports. “They shared stories about their lives and their contributions to the movement for health-care reform among Native Americans.”

Meness combines osteopathic and traditional medicine in her practice. Smith has worked in health-care administration for years. Earlier in her career, she had brought Jimmy Jackson, a distinguished Ojibwe medicine man, into an Indian Health Service program in Minneapolis. Every day there was a long line of people seeking his help and guidance. Currently, both women are working to integrate traditional medicine into the Western-style biomedical services offered by the hospital at Cass Lake.

The final product of Medina’s research project, “Traditional Medicine,” is a montage of descriptive text and interview videos posted on the Digital Partnerships with Indian Communities Website, a digital exhibition space for student research conducted in consultation with Indian communities. Her exhibit outlines Ojibwe cosmology and explores how this outlook informs the practice of healing. The video excerpts featuring Aitken, Smith and Meness literally give the Ojibwe a voice in the research, which also preserves the tribe’s oral tradition.

In part, Medina probes how the sustained grief of “historical trauma” affects reservation health. “This historical trauma,” Meness explains, “creates diseases like diabetes and

cancer and alcoholism.” She says it’s a “soul wounding” that stems from conquest and forceful assimilation and gets passed down from generation to generation. The ongoing disruption of the tribe’s way of life unbalances the well-being of individuals and community alike.

“The healing of these losses demands a bridge between the patient, the community and sacred Ojibwe customs,” Medina comments. In the Ojibwe belief system, community extends beyond space and time into realms where ancestors dwell. Meness will often treat those who come to her by drawing on biomedical expertise as well as spiritual knowledge, calling on ancestral forces to restore imbalances within the patient and the community. “Spirituality is deeply rooted in the respect of ancestral history and cannot be disassociated from the healing that Dr. Meness channels,” says Medina. “She talks about transcending time in traditional medicine, about restoring balance in the patient’s body and within the community. We acknowledge the authority of these traditional practices because the patient and the healer know that they’re important.”

Aitken, Smith and Meness were impressed with the interview videos Medina produced and expect to use them in developing a cultural-competence curriculum, possibly in partnership with the Leech Lake Tribal College. The program would help doctors, nurses and health-care workers at the reservation hospital become more attuned to the culture of the Ojibwe whom they serve. “Most of the medical professionals are not native,” Medina observes, “so we’re trying to bridge that by increasing awareness of Ojibwe traditions and spirituality.”

“THE STORIES THEMSELVES ARE MEDICINE.”

In her project, Medina has helped to throw a bridge across the chasms that divide scholarship from practical application, Western from traditional medicine, the Cass Lake Hospital staff from their patients and scholars on Penn’s campus from native peoples living on the reservation. “The stories themselves are medicine,” Medina stresses. “To hear them, to experience them—even if only digitally—that’s something that cannot be encapsulated in a paper.”

Powell senses a new openness and trust in Ojibwe leaders that just might be a bridge reconnecting peoples estranged by the traumas of violence and misunderstanding. Its foundations rest on the simple expedient of listening, which informs Medina’s community-based participatory research. “Students like Sheyla are so polite and so humble and so respectful,” he says. “Native people like Larry Aitken and Dr. Meness feel that the historical moment has come when they can tell their stories in order to heal historical wounds.”

Visit the *Digital Partnerships with Indian Communities* website at www.sas.upenn.edu/dpic/.

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A DATABASE FOR ALL

Even for medical researchers, a lot of information can sometimes be too much of a good thing. “As in so many aspects of life, biomedical research is increasingly dominated by data,” observes David Roos, the E. Otis Kendall Professor of Biology, “more and more, larger- and larger- scale datasets.” The average person looking for everyday sorts of information has online resources like Google and Wikipedia to narrow things down. But what about the microbiologist trying to create a vaccine against a new variety of tropical disease?

Now, thanks to Roos and his collaborators at Penn and the University of Georgia, scientists from all over the world can turn to the Eukaryotic Pathogen Genome Database Resource, a sophisticated bioinformatics resource accessed through the Internet. The database (EuPathDB for short) is the result of an investment of more than \$20 million from the National Institutes of Health, the Bill & Melinda Gates Foundation, the Burroughs Wellcome Fund and others. The team of genomics scientists responsible for this resource was

recently awarded an additional five-year, \$14.6 million NIH contract to expand and extend their database activities.

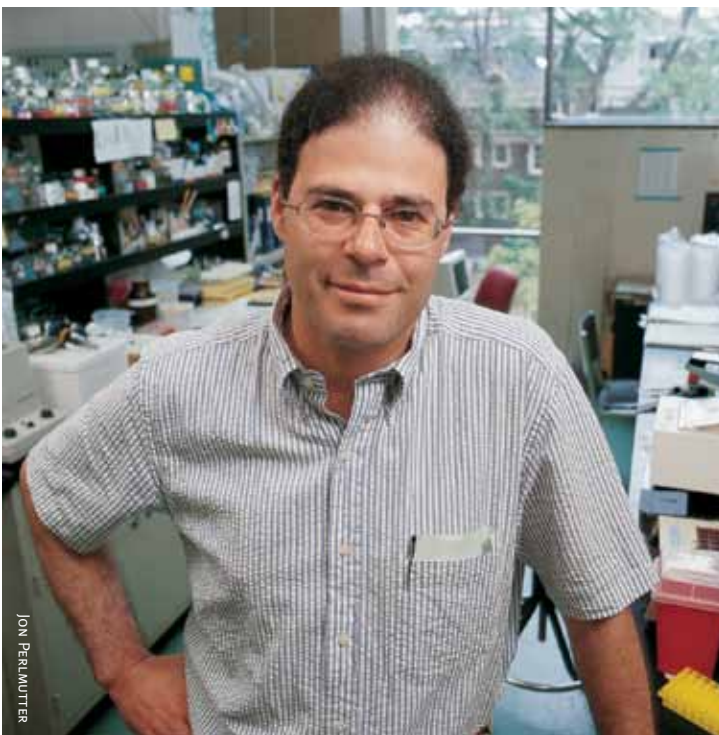
Genomic data on a disease organism is of crucial importance to scientists. The expression of various genes of the organism at different times in its development can provide vital clues to how it causes disease and how it might be stopped. But the fully sequenced genome of even a single strain of a pathogen is a vast amount of information, much of which may be irrelevant to a researcher who’s concerned only with, for example, the interactions of the pathogen with a certain drug.

Because it’s not merely an encyclopedia or catalog but a full-fledged database, EuPathDB allows scientists to query the genomic data according to their particular needs. Roos explains, “I might want to, say, find plant-like genes in malaria parasites that are turned on at a particular time, and somebody else might want to find genes involved in sugar metabolism in tuberculosis bacteria that are expressed only in the lungs of infected patients.” EuPathDB is based on the idea that, as Roos puts it, “The same tools could be used by people who might want to ask completely different questions.”

Roos and his research team began developing the database in 1995 to support their study of the parasites that cause toxoplasmosis, but they soon realized the concept could be expanded to encompass information on other pathogens. That led to a pilot project to integrate genomic datasets for malaria parasites, which was later expanded to create several other bioinformatics data-resource centers. Last year, Penn won the contract for EuPathDB, which Roos directs. “We proposed expanding this still further to support all eukaryotic pathogens, that is, all single-celled nucleated organisms including organisms as diverse as the parasites that cause malaria, toxoplasmosis, sleeping sickness and so on.”

Open to all researchers, the database receives at least 7,000 hits a month from over 100 countries worldwide. Currently, EuPathDB contains data for almost 30 different organisms, with more being added. “It’s to everyone’s benefit to have all of this information available,” Roos states. That total accessibility will allow EuPathDB to fulfill its promise as an important tool in the fight against the world’s infectious diseases.

—Mark Wolverton



David Roos

JON PERLUTTER



MARK DETERICH

ECONOMICS OF PEER PRESSURE

With teen pregnancy up for the first time in a decade and the Obama administration eliminating federal funding for abstinence-only sex-education programs, intense debates abound over how to delay and reduce teen sexual activity. Economics doctoral student Seth Richards is bringing a new perspective to how teen peers influence sexual activity with research that defines these social interactions in terms of supply and demand.

Richards identifies demand as the decision to search for a sexual partner as influenced by peer norms—or the fraction of a student’s same-sex, same-grade peers who are sexually active. Supply is the availability of opposite-sex partners—or opposite-sex members in a student’s school who are seeking to become sexually active. Using the economics framework of search and matching, Richards has developed a model that can quantify the distinct impacts supply and demand have on teen sexual activity.

Using this model, he analyzed data on teen sexual activity from the National Longitudinal Study of Adolescent Health, which provides a nationally representative sample of U.S. high school students from the mid-1990s. He found that peer norms have a large effect on the timing of sexual initiation for both male and female students but that the effect is 50 percent greater for boys than for girls. Richards

also discovered that increases and decreases in partner availability respectively increase and decrease the rate of sexual initiation for boys. However, availability does not significantly impact the sexual initiation rate for girls.

“One conclusion,” Richards says, “is that boys seem to be more susceptible to these social mechanisms, whether it’s the norms among their same-gender peers or the availability of partners. To the extent that people are thinking about interventions that work through social mechanisms, they should consider specifically how they’re targeting boys.”

Disciplines like psychology and sociology are best equipped to delve into how and why social interactions work the way they do, but Richards believes that the tools of economics are particularly good at isolating and measuring the impact of specific factors on social issues. “The clarity that comes from trying to have a formal model for the behavior you’re studying forces you to be clear about the factors you think are involved,” he says. “It also encourages you to limit the number of factors you’re examining. Because you want to articulate mathematically how they work, you have to become very clear about what they do.”

Richards, who will join the Heinz College at Carnegie Mellon University as an assistant professor this fall, is currently examining the impact of social norms on teen contraceptive use. His future research plans include studying network influences on medical decision making among both patients and doctors.

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COMPASS POINTS TO NEW DIRECTIONS

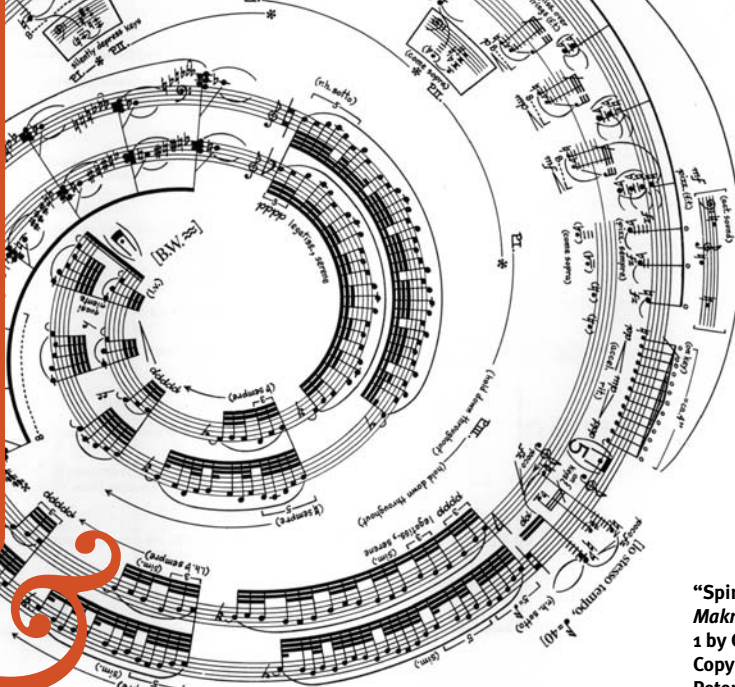
Penn's Laboratory for Research on the Structure of Matter (LRSM) has launched a one-of-a-kind research alliance with leading scientists in the field of soft condensed matter. Called COMPASS (Complex Assemblies of Soft Matter), the partnership will bring together the resources of LRSM with the international chemical producer Rhodia and the French National Center for Scientific Research.

"The COMPASS collaboration initiates a symbiotic relationship among some of the very best soft-materials people worldwide in academia, industry and government," says Arjun Yodh, the James M. Skinner Professor of Science and LRSM director. Soft condensed matter is a science that draws on chemistry, biology, physics and nanotechnology to study materials like colloids, polymers, foams and gels, which exhibit properties that lie between hard solids and traditional liquids. The COMPASS network will bring together up to 20 world-class scientists with complementary expertise for understanding, manipulating and creating new soft materials. "At the LRSM," Yodh continues, "faculty will be presented with new opportunities to connect our fundamental, cutting-edge research to problems of commercial and global importance." He also expects that students and postdocs will benefit from this unique association of researchers.

Initial projects will explore renewable and sustainable ingredients for consumer products in home and personal-care markets. COMPASS scientists will also work on sustainable technologies for lubricants, novel printable-electronics solutions, materials for water retention in agriculture and more.

"Our research collaborations have always benefited from a multidisciplinary approach," says Yodh. "I am not aware of any similar programs among universities, the commercial sector and government. We are creating a new research paradigm that others may follow."

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"Spiral Galaxy" from *Makrokosmos*, volume 1 by George Crumb. Copyright 1974 by C.F. Peters Corporation.

MAKE YOUR OWN KIND OF MUSIC

Faculty and alumni composers from the Department of Music were singled out for a number of prestigious awards last spring. James Primosch, G'80, the Robert Weiss Professor of Music, was honored for outstanding artistic achievement with an Academy Award in Music from the American Academy of Arts and Letters. Composer Pierre Jalbert, G'92, Gr'93, a graduate of Penn's composition program who teaches at Rice University, also received an Academy Award. Alumna Jennifer Higdon, G'92, Gr'94, one of America's most frequently performed composers, was recognized for distinguished musical composition with a Pulitzer Prize and a Grammy. The Pulitzer was awarded for "Violin Concerto" and the Grammy for "Percussion Concerto." Legendary composer and Penn music professor emeritus George Crumb was a Grammy finalist along with Higdon for the best classical contemporary composition.

Pulitzers and Grammys and other prizes are nothing new for the music department. "I don't think it signals any kind of high-water mark," observes Primosch. "It's more part of an ongoing tradition of excellence here." His most recent composition, "Songs for Adam," was performed last fall by the Chicago Symphony Orchestra.

A leading 20th-century composer, George Rochberg became department chair in the 1960s. He recruited faculty and shaped a program that formed a generation of composers. "When Rochberg got the modern Penn music department going, he hired wisely when he hired future Pulitzer winners George Crumb and Richard Wernick to join him on the composition faculty," says Primosch. "We had these three extraordinarily strong composers, and they attracted strong students." As a Penn grad student himself, Primosch studied composition under Crumb. Jalbert and Higdon also learned from Crumb and were among Primosch's first students when he moved onto the faculty.

"The long, distinguished history of composition at Penn is studded with successes like those enjoyed this year by Jalbert, Higdon and Primosch," notes department chair Jeffrey Kallberg. "We've seen so many gifted young artists take the training they receive from our faculty and excel in the wider world. And our faculty repeatedly finds new ways to craft deeply moving works of music that compellingly speak to contemporary aesthetic issues."

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TRAINING THE TROOPS

Twenty years ago, when researchers in what is now the Positive Psychology Center created a course to help school children bounce back from adversity, they weren't envisioning a military audience. But since 2009, the U.S. Army has sent soldiers here each month to learn how to cope with the mental challenges of armed conflict—and how to share these coping skills with others.

This resilience training program is a cornerstone of the Army's new Comprehensive Soldier Fitness initiative to help soldiers and their families weather the financial, emotional and psychological stresses of repeated deployment. It uses principles of cognitive-behavioral therapy, which involves challenging one's inaccurate thinking, to help participants make better decisions, communicate more effectively and deal with difficult situations.

The training is modeled on the Penn Resiliency Project, a ground-breaking intervention for middle schoolers susceptible to depression spearheaded by psychology research associates Karen Reivich, C'88, G'92, Gr'96, and Jane Gillham, G'90, Gr'94, and funded by \$10 million in grants from the National Institute of Mental Health since 1990. Working from the then-revolutionary premise that psychology could prevent disorders rather than merely treat them, they developed a resilience course that taught students to identify inaccurate thoughts, dispute negative beliefs and solve problems. They found participants experienced significantly less depression and anxiety and fewer conduct problems. Subsequent studies have shown the effects to be long-lasting.



Army Chief of Staff General George W. Casey Jr. has called CSF “one of the most important programs the Army has introduced in a long time.” The initiative stems from a 2008 meeting during which Casey asked center director Martin Seligman, the Zellerbach Family Professor of Psychology, how the Army could help the growing number of soldiers struggling with depression, substance abuse, marital difficulties, posttraumatic stress disorder and suicide. “I thought that was the tail wagging the dog,” says Seligman, the principal investigator for the NIMH grants. He instead encouraged the general to help soldiers become psychologically stronger before they could develop these conditions, comparing it to sending troops into a malaria-ridden area. “You wouldn't wait for them to get malaria and then treat them,” he says. “You'd clear the swamps, provide mosquito-netting.”

The soldiers, many initially skeptical, have found the training useful. Seligman says one participant told him, “If I had known this stuff three years ago I would not be divorced right now.”

Lead trainer Reivich worked with the Army for months to tailor the training for soldiers and their families and calls it the most gratifying teaching she's done. “Although this program is for soldiers,” she says, “the bottom line is that what we teach ... are life skills that should help anyone cope with stress, have strong relationships and maintain their resilience throughout difficult times.”

Approximately 1,000 have received the training. With the center's help, the Army opened a master resilience training school at Fort Jackson, S.C., in April and aims to have a resilience trainer in every battalion by the end of 2010 and eventually to train its entire force of 1.1 million.

—Tracey Quinlan Dougherty