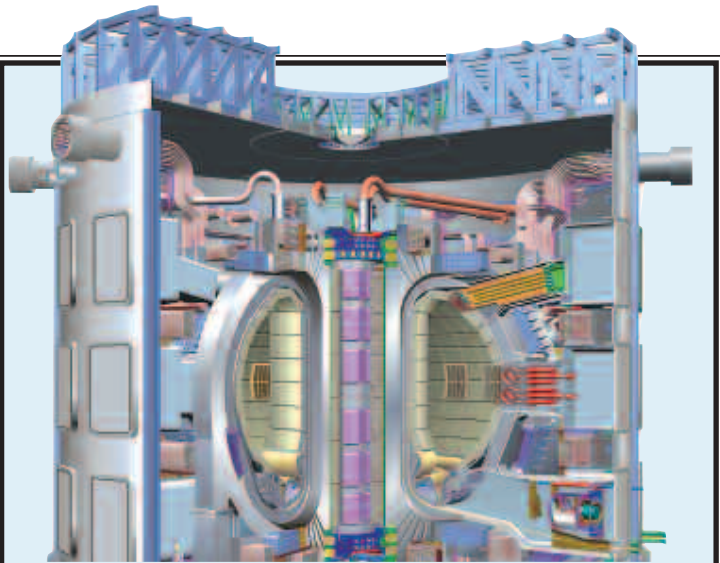


# NYU Research

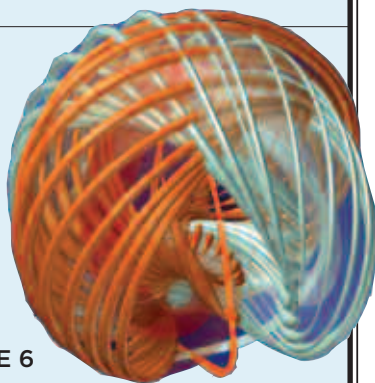


## Courant Scientist Receives DOE's Massive Computing Project Award to Develop Magnetic Fusion Energy

Choong-Seock Chang, a research professor at NYU's Courant Institute of Mathematical Sciences, has received a Department of Energy (DOE) award to carry out ultra large-scale computation using the Cray XT supercomputer at the department's Oak Ridge National Laboratory in Tennessee. **PAGE 3**

## Physics Team Creates Knotted Beams of Light

A team of physicists, which includes William Irvine, a research scientist in NYU's Department of Physics, has shown how to create a new class of knotted beams of light. **PAGE 6**



## Biologist's Research Named Among 15 'Evolutionary Gems' by Nature Magazine

**PAGE 2**

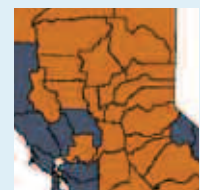


## Obama's Education Reforms Offer Opportunities, Say Policy Experts

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## Public Health: Scholars Examine Effectiveness of Methods for Fighting Obesity

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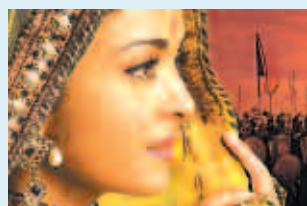


## Study Shows Party, Ideology, Religiosity, and Age Drove Vote on California's Proposition 8

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## Film Festival to Explore Influence of Muslim Cultures on Bombay Cinema

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## Stern School of Business Launches Volatility Institute

**NOBEL LAUREATE ROBERT F. ENGLE LEADS NEW RESEARCH CENTER**

**PAGE 3**

## Presidential Transition Project Offers Insight into New Administration

By Robert Polner

Even before he officially became the 44th president of the United States, it seemed Barack Obama was off to a fast start in making cabinet appointments and filling other transitional roles in his new administration. But then the process slowed considerably, encountering many of the same systemic obstacles his predecessors met, according to research by the Robert F. Wagner Graduate School of Public Service's Presidential Transition Project.

Led by Paul Light, professor of public service at Wagner, the data they have mined gets closer to the truth about just how diffi-



Professor Paul Light created the project to study Barack Obama's (above) transition to power.

cult it is for a new president—or any president—to get a new administration up and running, even in times of crisis. The work of the Presidential Transition Project is one of digging for often hard-to-find data within a huge, less-than-transparent bureaucracy. The findings have been published regularly by *The Washington Post* under an arrangement with Wagner.

Progress began a week before the fall semester, when Light charged Clara Janis, an M.P.A. student at Wagner who is specializing in public policy analysis, with the task of creating, from scratch, a list of every single presidentially appointed position that requires Senate confirmation.

*Continued on page 11*

## Courant Institute's Mikhail Gromov Named Winner of Abel Prize

**Third NYU Professor to take award in five years**

Mikhail Leonidovich Gromov, the Jay Gould Professor of Mathematics at NYU's Courant Institute of Mathematical Sciences, has been awarded the Abel Prize in Mathematics by the Norwegian Academy of Science and Letters for "his revolutionary contributions to geometry." In its late March announcement, the Academy described Gromov as "one of the leading mathematicians of our time" whose work "will continue to be a source of inspiration for many future mathematical discoveries." He is expected to receive the Abel Prize from His Majesty, King Harald V of Norway, in Oslo on May 19. The honor is accompanied by a prize of NOK 6,000,000 or approximately \$950,000.



*Continued on page 10*

Mikhail Leonidovich Gromov

## Steinhardt's Bello Wins NSF Grant to Study "Building Blocks" of Music



Juan Bello

The ability to quickly and easily search a vast catalog of song titles, artists, albums, and genres makes Apple's iTunes software popular with millions of users. But for Juan Bello, assistant professor of music and music education at the Steinhardt School of Culture, Education, and Human Development, the ability to search digital music by its sequential structure opens up exciting possibilities for retrieval, analysis, visualization, and composition. Bello has been awarded a \$500,000 grant from the National Science Foundation to create a system to decode Western music into its component sequences.

"This study will allow us to understand the 'building blocks' of music from the music itself," explains Bello. "It will allow us to find relationships both within and among songs beyond those provided by a song's metadata."

Using computational approaches and tools, Bello aims to break down music into its component parts. Analyzing such structural components as chord sequences, harmonic structure, repetition, and rhythm, Bello will be able to produce a map of how an individual song is organized. These maps can then be used to identify patterns across songs, styles, and composers.

The grant, which covers a five-year period, also allows for Bello to conduct outreach with high school students, exploring the use of music and music technologies in science, technology, engineering, and mathematics (STEM) subjects. Bello envisions using musical equipment that students are familiar with, such as microphones, to illustrate properties of physics.

"By using musical objects with which students have familiarity, you can talk about sophisticated concepts without the burden of using scientific language only," says Bello.

—Timothy Farrell

## College of Dentistry Awarded \$1 Million Grant for Stem Cell Research

The New York State Department of Health recently awarded an NYU dental research team a three-year, \$1 million grant to study the potential use of stem cells to regenerate facial muscles to enable people with traumatic injuries to speak, eat, and smile normally again.

The team, led by Louis Terracio, associate dean for research, plans to extract a small number of stem cells from the facial muscle of a pig, grow the cells into facial muscle on a tissue scaffold to develop a prosthesis, and transplant the prosthesis onto the pig's face to repair damaged muscle.

In an earlier study, Terracio and his team performed a similar stem cell transplant into a rat to correct a defect in an abdominal muscle. Pigs are being used for the new study because their extracellular matrix is similar to that of humans, and because successfully transplanting the stem cells in a large animal model would pave the way for a clinical trial on humans.

The new study is a multidisciplinary collaboration among Terracio, a developmental biologist with nearly 40 years of experience in tissue culture of muscle; David N. Levy, an assistant professor of basic science and craniofacial biology at NYU, who is an expert in flow cytometry and cell sorting of stem cells; and Robert S. Glickman, professor and chair of the Department of Oral & Maxillofacial Surgery, and an authority on facial bone reconstruction, also at NYU. A third co-investigator, Michael Yost, an associate professor of surgery at the University of South Carolina, is a biomedical engineer who developed the tissue scaffold for the study.

—Ami Finkelthal

## Sociologist Richard Sennett Wins Germany's Tessenow Medal

NYU professor Richard Sennett has been awarded the 2009 Heinrich Tessenow Medal for his work in the areas of urban culture and public space. Since its inception in 1963, the medal had been awarded exclusively to architects and designers. Sennett, a sociologist, is the author of several works, including *The Craftsman* (2008), which explore artisans across different historical periods.

The Heinrich Tessenow Society presented Sennett with the medal at a February ceremony in Berlin.

Established by Hamburg's Alfred Toepfer Foundation, the prize honors Heinrich Tessenow (1876-1950), a German architect, professor, and urban planner during the Weimar period. Sennett, also a professor of sociology at the London School of Economics, holds the rank of University Professor at NYU. He is the founding director of the New York Institute for the Humanities at NYU, which was established in 1976.



Richard Sennett

—James Devitt

## Biologist's Research Named Among 15 'Evolutionary Gems' by Nature Magazine

By James Devitt

A study on genetic variation authored by biologists at NYU and the Albert Einstein College of Medicine was cited as one of the 15 "evolutionary gems" by *Nature* magazine. The publication selected 15 studies published by *Nature* over the past decade that "illustrate the breadth, depth, and power of evolutionary thinking" as part of its celebration of the 200th birthday of Charles Darwin, who was born on Feb. 12, 1809.

The study, authored by Mark Siegal, an assistant professor and part of NYU's Center for Genomics and Systems Biology, and Aviv Bergman, a professor at the Albert Einstein College of Medicine, explored a component of "evolutionary capacitance." It asks if species that remain mostly unchanged for millions of years, then change dramatically and suddenly, store the potential for these sudden alterations, unleashing a flood of otherwise hidden variation at times of environmental stress.

Early research modeled evolutionary capacitance by showing, with experiments on fruit flies, that key proteins involved in the regulation of developmental processes are "chaperoned" by a protein



called Hsp90, which is produced more at times of stress. On occasion, Hsp90 is overwhelmed by other processes and the proteins it normally regulates are left to run free, producing a welter of otherwise hidden variation.

In their study, published in 2003, Siegal and Bergman explored whether evolutionary capacitance is particular to Hsp90 or, rather, found more generally. They used numerical

simulations of complex gene networks and genome-wide expression data from yeast strains in which single genes had been deleted. They showed that most, and perhaps all, genes hold variation in reserve that is released only when they are functionally compromised. The findings suggested that evolutionary capacitance goes wider and deeper than a single protein.

## Chemists Create Two-Armed Nanorobotic Device to Maneuver World's Tiniest Particles

By James Devitt

Chemists at NYU and China's Nanjing University have developed a two-armed nanorobotic device that can manipulate molecules within a device built from DNA. The device was first described in the journal *Nature Nanotechnology*.

"The aim of nanotechnology is to put specific atomic and molecular species where we want them and when we want them there," said NYU chemistry professor Nadrian Seeman, one of the co-creators. "This is a programmable unit that allows researchers to capture and maneuver patterns on a scale that is unprecedented."

The device is approximately 150 x 50 x 8 nanometers. A nanometer is one billionth of a meter. Put another way, if a nanometer were scaled to the size of a typical apple (measuring approximately 10 centimeters in diameter), with the apple enlarged proportionally, the apple would become roughly the size of the earth.

The creation enhances Seeman's earlier work—a single nanorobotic arm, completed in 2006, marking the first time scientists had been able to employ a functional nanotechnology device within a DNA array. The new two-armed device employs DNA origami, a method unveiled in 2006 that uses a few hundred short DNA strands to direct a very long DNA strand to form structures that adopt any desired shape. These shapes, approximately 100 nanometers in diameter, are eight times larger and three times more complex than what could be created within a simple crystalline DNA array.

As with Seeman's previous creation, the two-armed nanorobotic device enables the creation of new DNA structures, thereby potentially serving as a factory for assembling the building blocks of new



Nadrian Seeman

materials. With this capability, it has the potential to develop new synthetic fibers, advance the encryption of information, and improve DNA-scaffolded computer assembly.

The researchers note that the device performs with 100 percent accuracy. Earlier trials revealed that it captured targeted molecules only 60 to 80 percent of the time. But by heating the device in the presence of the correct species, they found that the arms captured the targeted molecules 100 percent of the time. They confirmed their results by atomic force microscopy (AFM), which permits features that are a few billionths of a meter to be visualized.

The study's other co-authors were Hongzhou Gu, a graduate student in NYU's Department of Chemistry, and Jie Chao, who had been a visiting graduate student at NYU, and Professor Shou-Jun Xiao, both based at China's Nanjing University.

## Stern School of Business Opens New Volatility Institute

In March, the Stern School of Business announced the launch of a new research center, the Volatility Institute, created under the leadership of the school's Nobel Laureate Robert F. Engle, the Michael Armellino Professor of Finance.

One feature of the institute will be a Volatility Lab, or Vlab, which measures and forecasts financial volatility and correlations in real-time for a wide spectrum of assets, including equities, exchange rates, commodities, and bonds. The Vlab currently produces 300 analyses

each day over numerous financial series using both classic models and some of the latest advances in the financial econometrics literature.

"The economic crisis has put a spotlight on the importance of calculating and managing risk effectively," says Engle. "The forecasts

coming out of our Volatility Lab will provide risk managers and regulators with alternative and independent measures to assess the state of the financial markets on an up-to-the-minute basis."

The mission of the Volatility Institute is to develop and disseminate cutting-edge research on risks in financial markets and in financial econometrics. It hosted its first conference for researchers and the business community on "Volatilities and Correlations in Stressed Markets" in early April. In February, Engle published his latest book, *Anticipating Correlations: A Paradigm for Risk Management* (Princeton University Press), which introduces a new method for estimating correlations for large systems of assets.

"The decision to create the Volatility Institute reflects our commitment to cultivating a scholarly community that will advance the field of risk management while having a direct impact on the financial markets," says Stern Dean Thomas F. Cooley.



## Courant Scientist Receives DOE's Massive Computing Project Award to Develop Magnetic Fusion Energy

By James Devitt

Choong-Seock Chang, a research professor at NYU's Courant Institute of Mathematical Sciences, has received a Department of Energy (DOE) award to carry out ultra large-scale computation using the Cray XT supercomputer at the department's Oak Ridge National Laboratory in Tennessee.

The awarded 20 million hours of computing time—roughly equivalent to running a single-processor desktop computer for more than 2,280 years—is among the largest awards given to a single project. The computation will use more than 100,000 processors at once.

Chang, who is also a professor of physics at Korea Advanced Institute of Science and Technology, heads the multi-institutional Center for Plasma Edge Simulation (CPES), which is supported by DOE's SciDAC program and housed at Courant. He and his research collaborators conduct work in plasma fusion, which seeks to harness energy from the sun to produce environmentally safe electricity.

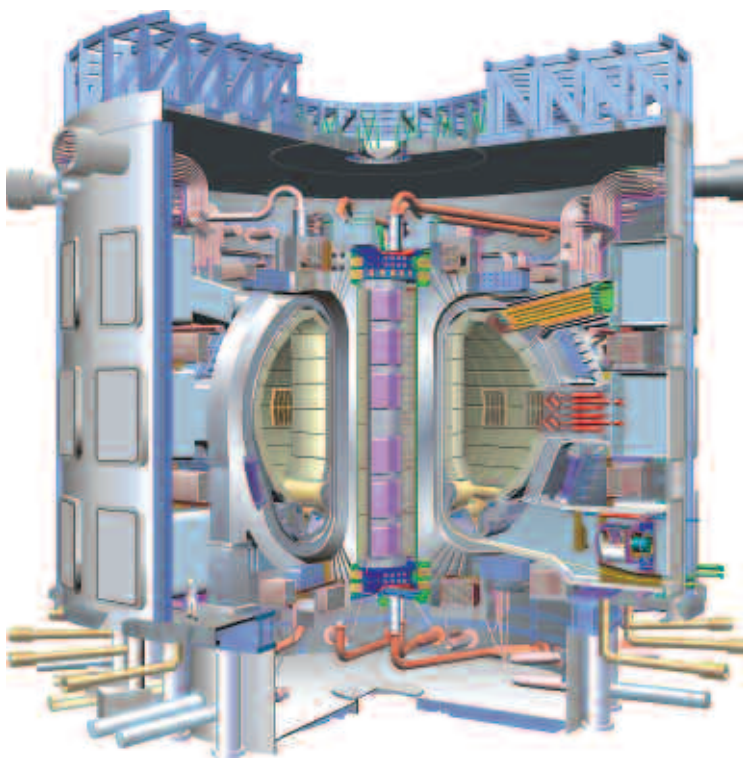


Image courtesy of ITER

"Tokamak," which confines hot charged particles at the energy of more than 100 million degrees.

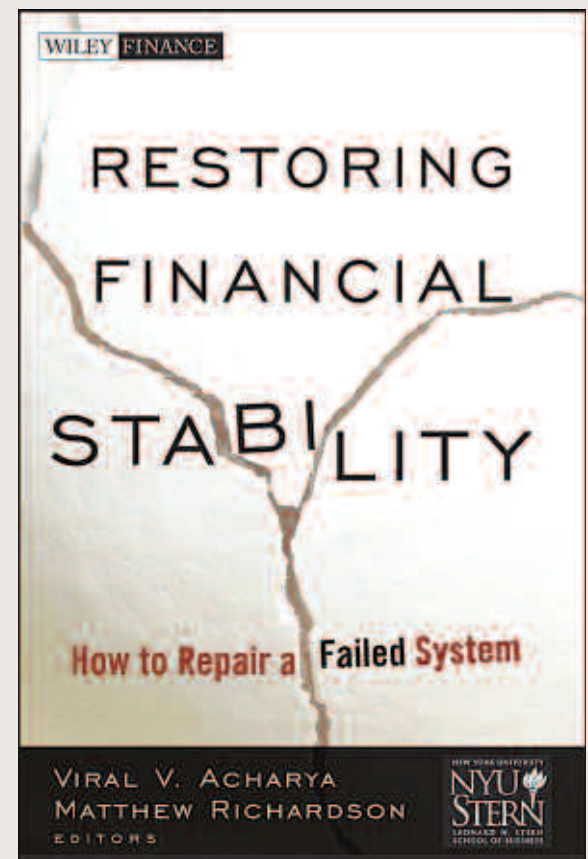
"If successful, plasma fusion energy can provide carbon-free energy to humankind for over a million years," says Chang.

The most advanced plasma fusion device in existence is called "tokamak," a doughnut-shaped magnetized tool that confines hot charged particles (plasma) at the energy of more than 100 million degrees. The international political and research community joined together, under an umbrella organization, ITER, to

build an experimental tokamak reactor in 2001. But in order to maximize tokamak's capability, scientists must first have a greater understanding of the plasma fusion process. This necessity brought about the establishment of CPES.

Chang and his colleagues have been simulating plasma behavior in an effort to shed light on plasma fusion. The DOE's Innovative

Continued on page 12



## New Book by Stern Faculty Proposes How to Restore the Global Financial System

November 1 marked the beginning of an unprecedented collaboration among the Stern School of Business's leading finance and economic scholars. The goal was to harness the collective intellectual strength and expertise at the Stern School in order to influence policy—during and immediately following the transition to the Obama administration—as the repair of the failed financial system

Richardson, and Viral Acharya, the 33 authors identified key topics related to the crisis, including managing systemic risk, evaluating the role of the ratings agencies, and regulating large complex financial institutions. They formed individual teams based on their area of expertise to analyze the nature of the problem, cite where things went wrong, provide a current state of affairs, and recom-

*"With our breadth and depth of faculty, we are well positioned to shape the thinking around these complex and urgent issues."*

got underway. The result was a systematic analysis of the numerous causes of the financial crisis, and a proposal of financial policy alternatives and specific courses of action that aim to restore the global financial system.

By mid-December, 18 white papers authored by 33 Stern faculty members were delivered to 100 policymakers—among them members of Congress and their staff, the Federal Reserve, and financial regulators. The initial reaction was strong, including overtures from Congressional offices, requests from sovereign banks for meetings and dialogue, and panel discussions led by authors Robert Engle and Nouriel Roubini that took place at the World Economic Forum in Davos.

"With our breadth and depth of faculty, we are well positioned to shape the thinking around these complex and urgent issues, and to do so with objectivity, credibility, and speed," says Thomas F. Cooley, Stern's dean and one of the white paper authors.

Under the direction of Stern professors Thomas Cooley, Ingo Walter, Matthew

mend options for restoration. Ongoing, often heated debates and regular forums to exchange ideas produced the first set of executive summaries, which were soon after published in *Financial Markets, Institutions & Instruments*, a professional banking journal. The school subsequently secured a publishing contract from John Wiley & Sons to produce a book, *Restoring Financial Stability: How to Repair a Failed System*, which published on March 4.

This collective effort has not only yielded the book, but also a six-week course offered to MBA students, taught by the white paper authors. The course was oversubscribed within the first few hours, with 450 students registering, and will supplement a series of panel discussions for students that took place throughout the fall and winter. Through Wiley, plans are underway to make the coursework related to the new book more widely available to academic institutions around the world.

For more information, visit <http://whitepapers.stern.nyu.edu/home.html>.

## Discovery of Cosmic Ray Hot Spots Raises Questions

**N**YU physicists and their colleagues have observed for the first time two distinct hot spots that appear to be showering Earth with an excess of cosmic rays. The discovery calls into question nearly a century of understanding about galactic magnetic fields near our solar system because it raises the possibility that an unknown source or magnetic effect is responsible.

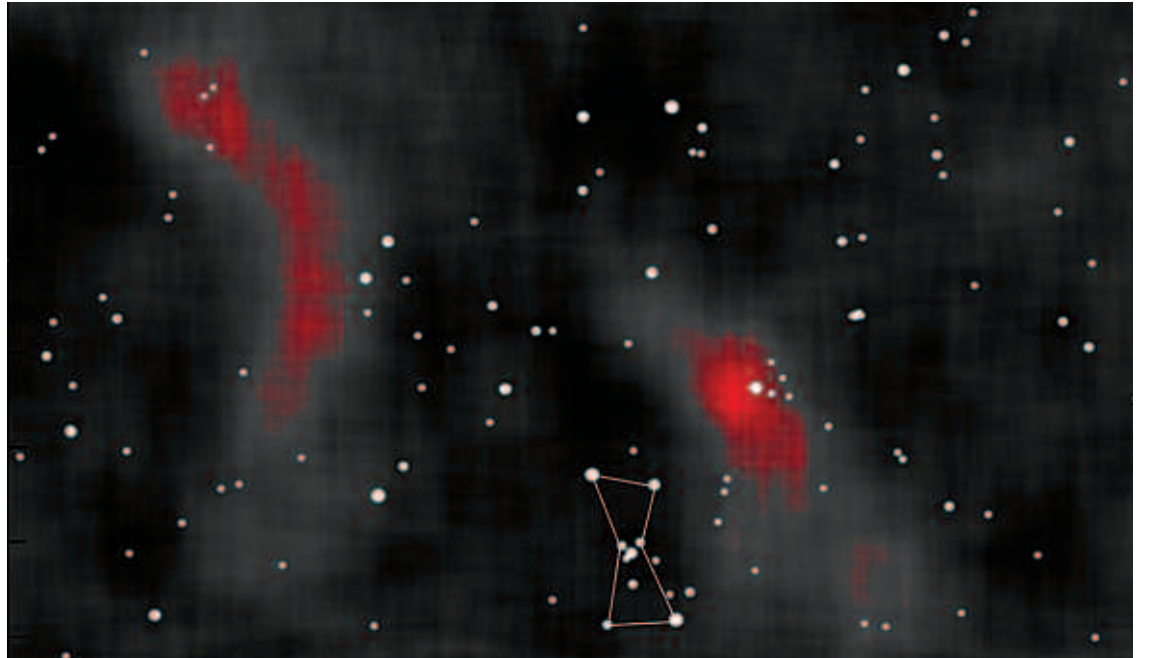
The discovery was included in the top 10 physics stories of the year selected by a panel of science writers and editors at the American Institute of Physics and the American Physical Society. The findings, published in *Physical Review Letters*, were obtained using the Milagro Gamma Ray Observatory, a detector located at Los Alamos National Lab in New Mexico that allows monitoring of the northern sky on a 24-hour, 7-days-per-week basis.

The research team, composed of scientists from more than a dozen institutions, including NYU, used the Milagro cosmic-ray observatory to peer into the sky above the northern hemisphere for nearly seven years starting in July 2000. The observatory is unique in that it monitors the entire sky above the northern hemisphere. Because of its design and field of view, Milagro was able

to record over 200 billion cosmic ray collisions with the Earth's atmosphere.

Cosmic rays are high-energy particles that move through our galaxy from distant sources. Their origins are unknown, but scientists have theorized they might originate from supernovae—massive stars that explode—from quasars, or from less-understood or yet-to-be-discovered sources within the universe. However, because cosmic rays are charged particles, magnetic fields from the Milky Way and our solar system change the flight paths of the particles so much that researchers had not been able to pinpoint their exact origin. Consequently, traditional wisdom has held that no localized area of excess of cosmic rays should appear in the sky.

But because Milagro recorded so many cosmic ray events, researchers for the first time were



Localized regions of excess cosmic rays (in red) observed by the Milagro Gamma Ray Observatory in New Mexico are superimposed on the above map. The Orion constellation is connected by white lines in the lower part of the image.

able to see statistical peaks in the number of such events originating from specific regions of the sky near the constellation Orion. The discovery of these “hot spots” raises the possibility that an unknown source or magnetic effect near our solar system is responsible for these observations.

The NYU collaborators on this work included Roman and

Lazar Fleysher, post-doctoral fellows at the Department of Radiology, in the NYU School of Medicine who conducted the work as doctoral students in NYU's Department of Physics; Brian Kolterman, who earned his doctorate in physics at NYU; and Allen Mincer and Peter Nemethy, professors in NYU's Department of Physics.

Funding for the research came from the U.S. Department of Energy's Office of High-Energy Physics and Office of Nuclear Physics; Los Alamos National Laboratory's Laboratory-Directed Research and Development Fund and the laboratory's Institute for Geophysics and Planetary Physics; and the National Science Foundation.

## NYU Libraries Launches James Beard Oral History Project in Food Studies

By Barbara Jester

**T**he NYU Division of Libraries has received a \$100,000 grant from the Leon Levy Foundation for an oral history project that will help document the transformative impact on American food culture by renowned chef James Beard and his circle.

According to Marvin J. Taylor, head of the Fales Library and curator of its large and growing food studies collection, New York City was at the center of a post-war food revolution, thanks to a group of chefs and writers based here who were among the first to think distinctly about American food and taste. Notables are Beard, whose papers are at Fales, and Cecily Brownstone, whose

8,000 cookbooks, 5,000 pamphlets, and personal correspondence with food writers and authors became the cornerstone of the collection. Others include Clementine Paddleford, Joe Baum, Craig Claiborne, Julia Child, and Pierre Franey.

Today they all are gone, but there is a small group of individuals still alive who knew Beard and his circle and the tastemakers who followed them.

“It is essential to have a thorough grasp of their ideas and experiences in order to understand the development of food culture today,” Taylor says.

To that end, Fales Library has begun a two-year project of interviews with a selected list of New York chefs, restaurateurs, writers, food critics, and farmers market founders. Interview hopefuls include Saul Zabar, Mimi Sheraton, and Lydia Bastianich.

Journalist and former food reporter Judith Weinraub, winner of two James Beard awards for journalism, will conduct the interviews this year and next. These oral histories, says Taylor, will illuminate the changes in food culture made by Beard and other New York food pioneers.

The resulting tapes and transcripts will be a rich source of material for scholars, educators, and writers and will become part of the Fales Food Studies Collection, one of the country's most extensive and important collections of cookbooks, pamphlets, books, and food-related archives and papers. The collection supports the innovative food studies program at the Steinhardt School of Culture, Education, and Human Development.



James Beard, whose papers are housed at the Fales Library.

## Memory Study on Mice Offers New Insights into Understanding Autism

By James Devitt

**R**esearchers at NYU's Center for Neural Science and the Baylor College of Medicine recently identified a protein that, when removed from mice, results in behaviors akin to those with autism and obsessive-compulsive disorders. Their findings, which appeared in the journal *Neuron*, may enhance our understanding of these and other neurological disorders.

The protein FKBP12, found in both humans and mice, is known to regulate mTOR, an enzyme involved in synaptic plasticity, or the ability of the neurons to change the strength of their connections with other neurons. Learning and memory are believed to result from changes in synaptic strength, and mTOR also plays a role in behavioral plasticity—the ability to alter behavior in response to environmental changes.

The researchers eliminated FKBP12 from the brains of mice late in development and examined them for alterations in synaptic plasticity. To test how different types of memory were affected by the absence of FKBP12, the NYU and Baylor scientists ran the mice through a variety of mazes and observed how they responded to certain objects. This produced striking neurological and behavioral changes and showed increased mTOR signaling, which regulates protein translation, indicating that FKBP12 acts to limit mTOR activity. The researchers also found that the mice had enhanced synaptic plasticity and contextual memory, suggesting that FKBP12 negatively regulates these processes.

However, researchers concluded that the brain's inability to properly regulate mTOR activity may have dire consequences. Findings showed that the mice had enhanced “perseveration”—once they learned a task, such as how to navigate a maze, they had difficulty navigating a different version of the maze. They also displayed enhanced repetitive behaviors and were more likely to interact with familiar objects than with novel ones. These are behaviors often found in individuals suffering from autism and other neurological disorders.

“Perseverative and repetitive behaviors associated with these neurological disorders are widely believed to be developmentally established—determined in utero by genetic, hormonal, and environmental factors,” said Eric Klann, an NYU neuroscientist and the lead researcher of the study. “Because our study indicates that postnatal release of mTOR activity can result in certain perseverative behaviors, it challenges the idea that some aspects of these conditions are developmentally predetermined.”

The research was supported by a grant from the National Institutes of Health.

## Wagner Scholars Examine the Financial Portfolios of the Poor

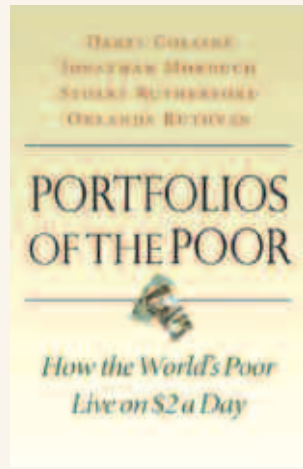
By Caitin Weaver

Billions of people around the world live on less than \$2 a day—an amount most of us could likely dig out of our couch cushions. It's hard to imagine what it would be like to scrape by on so small an income, much less prosper. Yet despite widespread global poverty, little systematic research has been conducted on the fundamental question of how the poor manage their money.

Co-authors Daryl Collins, a Ph.D. student at the Robert F. Wagner Graduate School of Public Service, and Jonathan Morduch, policy and economics professor at Wagner and managing director of the Financial Access Initiative, tackle this basic question in their new book *Portfolios of the Poor: How the World's Poor Live on \$2 a Day*. The work is the first in-depth examination of how the world's poorest households patch together financially viable lives, revealing that they do so with surprising sophistication and complexity, refuting commonly held assumptions.

Collins, Morduch, and their co-authors, Stuart Rutherford and Orlanda Ruthven, were frustrated by existing empirical approaches. On one end of the spectrum, nationally representative economic surveys—such as those by governments and the World Bank—offer limited insight into how the poor actually live their lives week by week. On the other, small-scale anthropological studies examine behavior more closely but don't provide the kind of quantified evidence of economic behavior over time needed by researchers, regulators, and policymakers. Rutherford started by spending a year reporting on the lives of villagers and slum dwellers in Bangladesh, making bi-weekly visits to specific households and recording "diaries" that tracked penny-by-penny how they managed their money. Ruthven continued the work in India and Collins expanded the approach in South Africa.

The researchers got to know Hamid and Khadeja, a Bangladeshi couple who are active money managers despite their limited income of \$70 per month; Nomsa, an



elderly South African woman who cares for her four grandchildren on a limited government stipend; and Sandeep, from Delhi, an outgoing fellow who uses his huge acquaintanceship to develop a host of informal financial partnerships, borrowing from friends and neighbors.

The financial diaries show that the poor are not living hand-to-mouth, but that most of them save and borrow with an eye to the future, and maintain complex financial lives because they are poor, not in spite of it. The households also demonstrate that being poor isn't just about living on one or two dollars a day, but about dealing with the fact that these are just averages—on some days you have more and some days much less. Coping with the ups and downs is an overlooked but fundamental challenge for poor households. And above all, it becomes clear that the real tragedy of poverty is not just that the poor have limited resources, but that they lack the financial tools to squeeze all they can from what they have.

While the global microfinance movement celebrates widening access to loans to promote small business, the financial diaries also show that households seek loans for a wide range of purposes. One family diverts half of their "production" loans to things like food, paying down debt, and meeting other pressing consumption needs. The diaries also reveal how households create self-discipline devices (like rule-bound savings clubs) to protect their savings strategies in the face of temptation, an insight that aligns with new research at the overlap of psychology and economics.

## Obama's Education Reforms Offer Opportunities, Say Policy Experts

By Timothy Farrell

President Barack Obama recently unveiled an ambitious agenda for education reform, encompassing not only K-12 but also higher education. Proposed reforms include increasing the number of charter schools, experimenting with merit pay for teachers, and increased funding for early childhood education. The Obama administration's education plans follow on the heels of the \$787 billion stimulus package that will send much-needed money to states to shore up shrinking education budgets.

NYU Research recently sat down to discuss Obama's plans and the challenges and opportunities that reformers face with the Steinhardt School of Culture, Education, and Human Development's Pedro Noguera, Peter L. Agnew Professor of Education; Amy Ellen Schwartz, professor of public policy, economics, and education (also at the Robert F. Wagner Graduate School of Public Service); and Lawrence Aber, professor of public policy and applied psychology.

**NYU Research: What do you think is the most effective use of federal money on education right now?**

**Noguera:** It's great that Obama is putting stimulus money into education. What I think is troubling is the stimulus money is intended to create jobs quickly. The problem is you don't get reforms quickly. Where I think they should be investing much more heavily is partnerships between universities and cities and schools. Schools can't solve the big problems by themselves.

**Schwartz:** We should be thinking long term. Let me put in my plug for money to improve school buildings. Buildings matter; there are lots of cities where the school buildings need work. And school construction was struck from the bill.

**Aber:** We would all like the stimulus money to be used for evidence-based programs and policies. You just can't do that quickly, but, nonetheless, it should be a major theme. Let's spend it on things that work.

**Schwartz:** But the list of things for which we have really good credible evidence is extremely small. My sense is that there is promising work for which we have some nice evidence on a small scale — but absolutely no



Lawrence Aber, Amy Ellen Schwartz, and Pedro Noguera

evidence about what to do on a systemic level.

**Obama has signaled that he is willing to offer merit pay for teachers, something which several districts around the country have experimented with. Does merit pay improve student performance?**

**Noguera:** I think there should be evidence that kids are learning. If the education department is committed to merit pay, it would be smart to find a district or two where the union is open to playing and to do it as a pilot program. Come up with a strategy both union and district can live with for evaluating teacher performance.

**Aber:** To provide merit pay you have to solve the problem of identifying and reliably measuring the important dimensions of what merit is. And we're not quite there yet.

**Schwartz:** What's really interesting about the way merit pay has been implemented in New York City is that it's at the school level rather than the teacher level. This is an important question for us to ask. Do we want to reward and incentivize schools to be collectively good, or do we want to pick out individual stars at the school?

**Obama noted that the dropout rate for Latino students is rising faster than that of any other student population. Does his education plan offer enough support to reverse this trend?**

**Aber:** High school is already too late to begin to think about dropouts. I think Obama and his people see that. Lack of basic reading and math skills at the end of elementary school are directly related to drop out probability. So

way before students begin to drop out, there are programs and policies that can begin to reduce rates.

**Schwartz:** I want to say that high school can't be too late. We have millions of kids in high school. While it may be true that we want to think about the next generation, it can't be too late for this cohort of 14- to 18-year-olds.

**Noguera:** The New York City Department of Education (DOE) is very aware that it has a dropout problem and an achievement problem with English Language Learners (ELLs), who drop out largely to enter the work force. But the DOE figured out that special international high schools tend to serve well immigrant kids who come late into this country and have very little formal education in their native countries.

**What reforms of No Child Left Behind (NCLB) would you suggest the administration focus on?**

**Aber:** NCLB put all of the focus on education, on improving achievement, on what happens in the classroom. To focus exclusively on education reform within the classroom is not to take into account at least half of what influences children's outcomes—the idea is that antipoverty policy is education policy, health policy is education policy, housing policy is education policy. They all have discernable effects on children's achievement.

**Noguera:** It's important that we have evidence that kids are learning. The only way to do that is to assess. The question is how do you use the assessments? We've lost track of the fact that assessment is only a tool. It is not a solution.

## Biologists Isolate Protein that Plays Fundamental Role in Development

By James Devitt

NYU biologists have isolated a protein that plays a fundamental role in embryonic development. Their research, which appeared in the journal *Nature* and was co-authored with a scientist at the University of Utah, provides additional insight into a range of developmental processes, including sex determination and tissue formation.

In all animals, an embryo will

begin its development by using proteins and other gene products delivered by the mother. However, the embryo will eventually need to become independent of the mother and begin creating these on its own. This process, called the maternal-to-zygotic transition, is vital for all animal species.

Biologists have sought to understand what activates this process. While previous studies have identified some significant molecules relevant to embryonic development, they have not un-

covered what mediates this transition at the earliest stages. The NYU research team, led by Christine Rushlow, an associate professor in the Department of Biology, focused on this early stage by examining early development in the fruit fly *Drosophila*. Fruit fly development is well understood by biologists and therefore serves as an appropriate vehicle for analyses.

The researchers specifically looked for a protein that activates an early-acting gene, zen, which was already known to play

a significant role in development. In their study, they isolated a protein that binds to zen and activates its transcription. They also observed that mutant embryos—those which lacked this particular protein—had defective cellular formation and didn't activate certain genes necessary for sex determination and pattern formation. Pattern formation is a process responsible for laying down the organism's body axes: head to tail and back to front.

An NYU graduate student on

the research team, Joey Nien, named this crucial protein Zelda, inspired by a character in the popular "Legend of Zelda" video game who brings light to the world. Without Zelda, Rushlow noted, any generation of normal development within the species would be lost.

"Zelda spurs the fly's development by activating its genome," Rushlow explains. "Without Zelda, basic embryonic structures don't form and sex determination would not occur. All offspring would be male."

## BOOKSHELF

### Advocacy Leadership: Toward a Post-Reform Agenda in Education

By Gary L. Anderson  
(Routledge, 2009)

A national obsession with standardized testing is forcing school professionals to act more like entrepreneurs and M.B.A.s and less like educators, argues Gary L. Anderson, professor of educational administration at the Steinhardt School of Culture, Education, and Human Development. In his new book, *Advocacy Leadership: Toward a Post-Reform Agenda in Higher Education*, Anderson examines the new environment of schools in which contracting, outsourcing, student recruitment, public relations, and high-stakes testing are center stage.

Anderson provides a devastating critique of why this managerial role is counterproductive, especially for improving opportunities for low-income students and students of color. He proposes a way of theorizing educational leadership to emphasize its leadership role, delivering a compelling argument for the need to move away from current inauthentic and inequitable approaches to school reform in order to jump-start a conversation about an alternative version of education today.

### A History of the Future

By Donna Goodman  
(Monacelli Press/Random House, 2008)

*History of the Future*, by Donna Goodman, an adjunct instructor at NYU's

Gallatin School of Individualized Study, examines the impact of technological innovation on architecture and urban planning over a series of eras: the Machine Ages in Europe and the United States, the Automobile Age, the Space Age, the Media and Information Age, and the Environmental Age.

Goodman begins with Renaissance concepts that laid the foundations for modern visionary work and concludes with emerging projects in sustainable design—the part of the book that *Vanity Fair* described as “most intriguing” because of its detailing of “the ineluctable challenges of today—creating places, products, and services for an ever expanding population with as little wasted resources as possible.”

### We Remember with Reverence and Love: American Jews and the Myth of Silence after the Holocaust, 1945-1962

By Hasia Diner  
(NYU Press, 2009)

Silence about the Holocaust among American Jews is not supported by a trove of religious, cultural, and journalistic archival material, NYU Professor Hasia Diner concludes in her book, *We Remember with Reverence and Love: American Jews and the Myth of Silence after the Holocaust, 1945-1962*. In fact, she writes, “American Jews told and retold details of the catastrophe in multiple forms. Over and over, men and women asserted the necessity of revisiting it in their

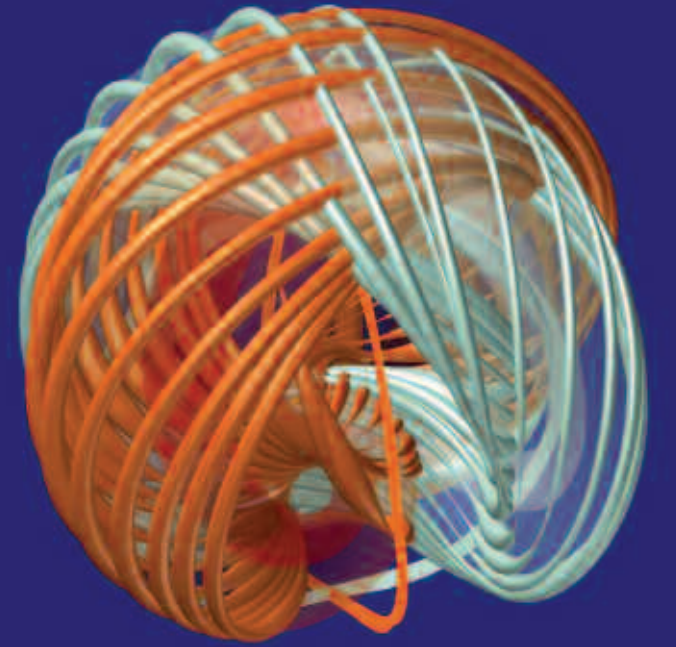
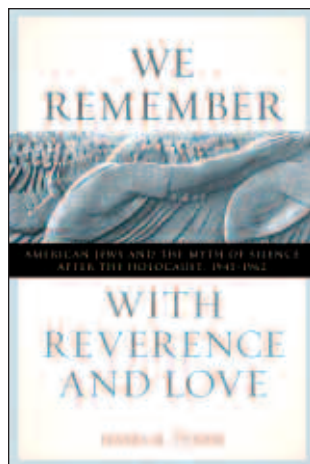
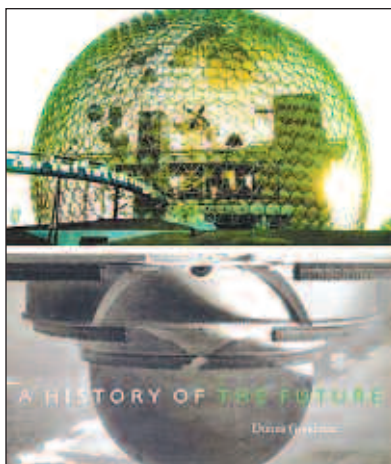
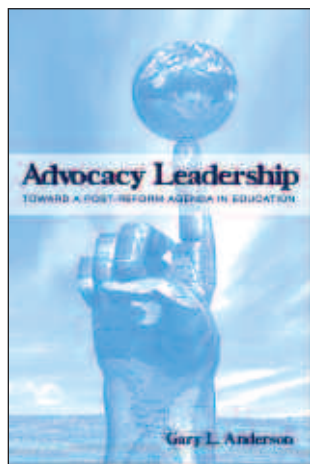
institutions and organs of public opinion, in all its horrors.”

Diner adds that these actions “laid the foundation for the better organized, bigger, and more elaborately funded Holocaust projects of the last decades of the twentieth century.”

The work challenges the existing post-war narrative of the Holocaust that posits American Jews turned away from the genocide in Europe and instead focused on the comforts of suburbia and other benefits generated by the 1950s economic boom. Previous scholars have contended it was the offspring of Holocaust survivors who brought the horrors of World War II to the public sphere—a development that occurred in the 1960s as a result of either the Eichmann trial early in the decade or the June 1967 Six-Day War.

An exhaustive review of Jewish life in America over the nearly two decades following World War II reveals the extent to which the Holocaust was a fundamental component in families and communities.

“Some American Jews chiseled references to the tragedy onto cemetery markers and emblazoned them onto the plaques that adorned the walls of Jewish communal buildings,” Diner writes. “Others turned to music, composing, recording and performing what would emerge as a familiar repertoire of works that stood for the Holocaust. Those able to created dances, dramas, pageants, poems, scholarly works, and graphic images that took as their subject something about the Jews who had perished.”



An artist's impression of the light structure that will start out in the shape of a ball, then propagate in a specific direction and open like an umbrella.

## Physics Team Creates Knotted Beams of Light

A team of physicists, which includes William Irvine, a research scientist in NYU's Department of Physics, has shown how to create a new class of knotted beams of light.

Working from Maxwell's equations, which describe the properties of electric and magnetic fields, Irvine and his colleagues explored the physical properties of light beams with remarkable geometric structure—the electric and magnetic field they created may be visualized as a set of circles that are linked to each other and can form knots.

Their findings appeared in the journal *Nature Physics*.

In computer imaging, the light structure starts out in the shape of a ball, then propagates in a specific direction and opens up like an umbrella. Just as familiar laser beams have become an indispensable tool in modern science, these new forms of light

might lead to new scientific applications.

There is the potential for the knotted fields of light to contribute to the confinement of plasma needed for nuclear fusion reactors by injecting “helicity” into the plasma—a helical twist in the threads of electrical current circulating through the plasma cannot be unknotted, which should prevent even the ultra-hot plasma in a fusion reactor from breaking apart. The researchers note that this application is only speculative at this point.

The fact that the linked and knotted structures of light have only recently been investigated is partially due to the complex mathematics that underlies the derivation of these structures. Now that a proper understanding of the dynamics of knots of light has been gained, experimental efforts can begin to create this new form of light.

—James Devitt

## Biologists Find Stem Cell-Like Functions in Other Types of Plant Cells

By James Devitt

Ordinary cells have the ability to replace lost organs in plants—a function previously thought to be limited to stem cells—researchers at NYU's Center for Genomics and Systems Biology and Utrecht University in the Netherlands have found. The findings, which suggest that some roles of stem cells in organ regeneration may be shared by other types of cells, were published in the journal *Nature*.

Stem cells have two known fundamental properties: they can renew themselves and they can give rise to specialized cells.

These traits make them the engines for regeneration, creating new cells to replace lost organs and tissue. These phenomena are especially evident in plants, which continually re-grow their branches and roots.

The center of stem cell activity is a stem cell niche, where stem cells are directed to perform these renewal and regeneration functions. However, it's unclear how significant the stem cell niche is to organogenesis—the building and rebuilding of organs.

The scientists studied the plant *Arabidopsis thaliana*, which is a good candidate because researchers have previously identified all of the genes expressed in its individual cells,

allowing them to track cell identities as they regenerate.

In the study, the researchers cut off the plant's root tip, thereby excising the stem cell niche, and examined the return of cell identities by measuring all gene activity. The results suggested that stem cells returned quite late in regeneration—after other cells were already replaced. The researchers then used mutant plants in which the stem cell niche no longer functions to confirm their initial observations. Despite the absence of the stem cell niche, the plant's ordinary cells worked to regenerate all the major tissues constituting the root tip—a process that began hours after it had been removed.

However, researchers found that plants without functional stem cell niches could not resume normal growth, showing that other cells did not replace all functions of stem cells.

Scientists have recently shown that manipulating non-stem cells in mammals to express several genes could convert those cells into stem cells—a process known as reprogramming. In 2008, a *Nature* study conducted at the Harvard Stem Cell Institute recreated pancreatic cells in mice into another type of cell that produces insulin without the aid of stem cells. In the NYU-Utrecht study, the researchers sought to determine if entire organs regenerate in plants

absent of stem cells without using genetic manipulation.

“You could think of these findings as a massive reprogramming of an organ's identity without the need for a stem cell niche,” says Kenneth Birnbaum, an assistant professor of biology at NYU whose lab conducted the research. “Here is a case of an organism that can perform this kind of reprogramming naturally. This may be one reason why plants are so adept at regenerating their body parts.”

The work was supported by a grant from the National Institutes of Health.

# Scholars from Three NYU Schools Examine Effectiveness of Methods for Fighting Obesity

By Robert Polner

When it comes to smoking, a lot is known about the tools for combating it effectively—smoking cessation workshops, for example, or hefty sales taxes on cigarettes. But unsuccessful efforts to fight obesity, a more recent health scourge, have left several states and the federal government casting around for a public health response that will work.

Some states and cities are trying out a version of New York City's pioneering municipal law requiring local restaurants with 15 or more locations nationwide to post the number of calories on each food product they sell. But whether serving up the calorie total with one's hamburger, fried chicken, or French fries will lead fast food patrons to make more healthful choices about what they eat, the portion size, and how often they consume it is still the subject of guesswork and controversy.

To find out if calorie labeling works in the city where it began last July, Brian Elbel, a health and medical policy expert with the School of Medicine and the Robert F. Wagner Graduate School of Public Service, is working with Wagner Associate Dean and Professor of Public Service Rogan Kersh and Beth Dixon, a professor of nutrition and public health in the Steinhardt School of Culture, Education, and Human Development, to assess its impact on the dietary habits of customers in northern Manhattan, the South Bronx, and Central Brooklyn, all low income neighborhoods, which studies show tend to be at greater risk of obesity. For purposes of comparison, they also surveyed restaurants in Newark, N.J., which has



Beth Dixon



Brian Elbel



Rogan Kersh

no such public health requirement. In all, 1,400 patrons have been surveyed.

Each participant in the surveys received \$2 for their meal receipt, which indicated what they had ordered, and answered a battery of questions designed to illuminate such things as whether they noticed the posted calorie labels, whether the labels influenced their food selection, and, if so, how.

As they sort through the wealth of survey data—a process still under way—the researchers are interested to know, in part, whether labeling affects certain types of patrons differently, such as those who ate out with friends as opposed to others dining with a family member, or those who reported they eat at fast food chains infrequently as compared to others who do so at least five times weekly. Gender and age

are also taken into account.

"Calorie labeling could be wonderfully effective, but we don't yet know," said Elbel, who has explored the relevant research that has been conducted to date and is interested in extending the survey to locations around the country that have passed a similar law. He notes that there is some evidence that men tend to order more when calorie labels are present, although the reason is unclear. Ultimately, the research is designed to show which government policies are likely to make a difference in reducing obesity, particularly among younger people and taking into account as well the complex and uneven history of state regulation of traditionally "private" spheres such as alcohol and tobacco consumption, an area of particular interest to Kersh.

Obesity and related illnesses,



*Some states and cities are trying out a version of New York City's pioneering municipal law requiring local restaurants with 15 or more locations nationwide to post the number of calories on each food product they sell.*

such as diabetes, continue to increase among school-age children, and have led to studies across a range of academic disciplines. One recent study by professor of health and public policy Beth Weitzman and lecturer in public administration Tod Mijanovich, both of Wagner, and Stephanie L. Bernell of Oregon State University, concluded that behavioral norms of adolescent girls' school environments may contribute to weight problems. Published earlier this year in the *Journal of Adolescent Health*, their research found that black and Hispanic girls ages 10 to 18 who attended majority white schools have significantly lower

body mass index (BMI) than do their counterparts in schools with smaller proportions of white classmates. The research data are drawn from schools in five cities.

"Evidence is mounting regarding the factors associated with obesity and overweight among adolescents and how they vary across gender and race," they write. "This study suggests that, at least for adolescents, the importance of the peer group, and its norms and values, may be important to consider in developing and targeting programs for weight control, and should be the subject of further research."

# Dental Study Finds Sports Drink Consumption Can Cause Tooth Erosion

By Ami Finkelthal

While sipping on sports drinks all day may provide an energy boost, this popular practice is also exposing people to levels of acid that can cause tooth erosion and hypersensitivity, NYU dental researchers have found.

In a recent study, researchers found that prolonged consumption of sports drinks may be linked to a condition known as erosive tooth wear, in which acids eat away the tooth's smooth, hard enamel coating and trickle into the bone-like material underneath, causing the tooth to soften and weaken. The condition affects one in 15 Americans and can result in severe tooth damage and even tooth loss if left untreated.

"This is the first time that the citric acid in sports drinks has been linked to erosive tooth

wear," says Mark Wolff, professor and chairman of the Department of Cariology and Comprehensive Care at the College of Dentistry, who led the study. The findings were presented on April 1 at the 2009 annual meeting of the International Association for Dental Research in Miami.

Wolff's research team cut in half cow teeth, which were used for the study because of their close resemblance to human teeth. They immersed one half of the specimens in a sports drink, the other half in water, then com-



Mark Wolff



*"This is the first time that the citric acid in sports drinks has been linked to erosive tooth wear."*

pared the two halves and discovered that the one exposed to the sports drink displayed a significant amount of erosion and softening.

Five teeth were immersed in each drink for 75 to 90 minutes to simulate the effects of sipping on sports drinks over the course of the day. The researchers evaluated the

effects of a range of top-selling sports drinks on the cow teeth. According to Wolff, brushing teeth immediately after consuming a sports drink can compound the problem of tooth erosion, because softened enamel is very susceptible to the abrasive properties of toothpaste.

"To prevent tooth erosion, consume sports drinks in mod-

eration, and wait at least 30 minutes before brushing your teeth, to allow softened enamel to re-harden," Wolff advises. "If you frequently consume sports drinks, ask your dentist if you should use an acid-neutralizing remineralizing toothpaste to help re-harden soft enamel."

## Reducing Behavior Problems in Head Start Is Focus of Steinhardt School Professor

By Timothy Farrell

A major component of President Barack Obama's education reform plan is increased funding for Head Start, the federally financed health and education program for low-income children and families. Now, a new research study suggests that an intervention that provides teacher training, coaching, and mental health consultation in Head Start preschools increases children's readiness for school by reducing behavioral problems.

The study, the Chicago School Readiness Project (CSR), was led by C. Cybele Raver, associate professor of applied psychology at the Steinhardt School of Culture, Education, and Human Development and director of NYU's Institute of Human Development and Social Change. Raver collaborated with researchers from Loyola University and Harvard.

The project was driven by evi-



C. Cybele Raver

dence that young children in poor neighborhoods are at greater risk for developing emotional and behavioral problems due to the social and psychological stressors of poverty. These factors are linked to children's lower readiness for school. While previous studies have shown that classroom interventions can help reduce older children's behavioral problems once they are in elementary school, it was unclear whether an intervention targeting low-income children in urban preschools would have a similar effect. The CSR was intended to address this question.

The study introduced a series of programmatic components to 35 Head Start classrooms in seven high-poverty neighborhoods in Chicago. The components included training Head Start teachers in classroom management, introducing a mental health consultant who supported teachers and conducted stress reduction workshops, and offering mental health consultation for select chil-

dren. Researchers studied two cohorts of children for one year, with Head Start classrooms randomly assigned to treatment and control groups. Survey methods in addition to observational methods were employed to assess children's behavioral problems—such as their sad, withdrawn, aggressive, and disruptive classroom behaviors.

After examining the data, Raver and her team concluded that the multi-component intervention yielded statistically significant reductions in the number of behavioral problems among Head Start children. Children in the treatment group showed fewer signs of sadness and withdrawal than in the control group, as well as fewer instances of aggressive and disruptive behavior.

"Using the 'gold standard' in prevention science, we are able to show that Head Start programs can take a set of clear, concrete steps to support teachers' ability to effectively manage their classrooms," says Raver.

Funding for the study was provided by the National Institute of Child Health and Human Development, the William T. Grant Foundation, and the McCormick Tribune Foundation.

## Sociology Study Finds High School Science Textbooks Increasingly Link Race to Genetics

By James Devitt

High school biology textbooks over the past 15 years have given newfound attention to race, centering on genetic definitions of racial categories rather than previous phenotypical, or appearance-based, models, according to a study by NYU's Ann Morning, an assistant professor of sociology. But, Morning found, contemporary biology textbooks provide less evidence for their genetic treatment of race than their predecessors did.

"Today's textbooks have redefined race as genetic without fur-

nishing empirical evidence for this framing, in sharp contrast to the copious explanations and illustrations that were used to support the earlier phenotypic model," Morning says.

The study, "Reconstructing Race in Science and Society," appeared in "Exploring Genetics and Social Structure," a special issue of the *American Journal of Sociology*.

Morning's research, the first to examine what American high school science teaches students about race, sampled 80 biology textbooks published between 1952 and 2002. Her findings revealed that after decades of

declining attention on the subject of race, textbooks published since the early 1990s have shown renewed interest.

"The textbooks' transformation sheds light on the broader relationship between race and science in the United States, where claims about racial difference have not only drawn instrumentally and selectively from empirical research, but at times forgo scientific grounding altogether," Morning adds. "Textbook race seems to have become genetic because the field of genetics carries prestige that compensates for the flaws of earlier biological models of race."

## Neuroscientists Identify Physiological Link in Process of Learning Through Trial and Error

By James Devitt

Learning through trial and error often requires subjects to establish new physiological links by using information about outcome to strengthen correct responses or modify incorrect ones. New findings, which appeared recently in the journal *Neuron*, now offer new clues about the process.

"Our results open a new door to understanding the important role of trial outcome in the learning process," says Wendy Suzuki, a professor at NYU's Center for Neural Science and a co-author of the study.

For the past half-century, scientists have examined the role of the brain's medial temporal lobe in learning. Previous scholarship has determined that a critical function of the lobe is to successfully acquire new information about facts and events (declarative learning) by making new associations between initially unrelated items (associative learning).

The researchers on the *Neuron* study sought to understand if there is a link between how the brain functions in associative learning and in processing information about trial outcome. Specifically, they were interested in cell activity in a portion of medial temporal lobe called the hippocampus. Earlier research had found that hippocampal neurons are involved in associative learning, such as matching names with faces.

To investigate this process, the researchers had primates play a computer memory game in which the subjects matched particular object-place combinations with motor responses. When they associated the correct object-place association with the correct response, the primates were rewarded with their favorite fruit juice. During these sessions, the researchers recorded the activity of the primates' hippocampal neurons.

The results showed that a surprisingly large proportion of recorded hippocampal cells—50 percent—differentiated between correct and error responses. This finding was striking since previous learning or memory studies in the hippocampus showed lower proportions of active cells in task-related activities. Moreover, their findings showed many of these cells also responded stronger to particular object-place combinations as learning improved. This suggests that the cells' ability to make distinctions between correct and incorrect trial outcomes may influence new learning by changing a cell's sensitivity to the stimuli being learned.

The study's other co-authors included researchers from France's National Center for Scientific Research, the Harvard Medical School, and the University of California, Davis. The effort was supported by a grant from the National Institutes of Health.



Wendy Suzuki

## Sociologists Trace Gap in Black and White Student Test Scores

By James Devitt

NYU sociologists have mapped out the trajectory for the long-standing gap between black and white students' test scores. Their findings, which appeared in the journal *Social Science Research*, show that early childhood home environment accounts for much of the gap that exists before starting school and in early school years—and which becomes more pronounced in later years. However, the researchers also found that the impact of the home environment on test scores diminishes after grammar school.

Some of the risk factors for low-achievement scores that are part of the early childhood home environment are birth to a teenage mother, having a low birth weight, having a mother with low cognitive skills, and low family income in early childhood.

"If we take these factors as important markers of mothers' early economic disadvantage and health risk behaviors, then our results suggest that early environments, including prenatal environments, do matter and that racial achievement gaps may be preventable," wrote the study's authors, Wei-Jun Jean Yeung, a professor of sociology at NYU, and Kathryn M. Pfeiffer of Research Works, Inc.

They emphasized the importance of early childhood programs that encourage verbal conversation, reading, and counting at home and encouraged the expansion of Early Head Start and prekindergarten programs that have an emphasis on parental involvement.

The study used data from the Panel Study of Income Dynamics (PSID), which is supported primarily by the National Science Foundation, and its two waves of Child Development Supplements

(CDS). The PSID is a longitudinal study that began in 1968 with a nationally representative sample of about 5,000 American families. The CDS, conducted in 1997 and again in 2003, collects information on child development and family dynamics, including parent-child relationships, home environment, indicators of children's health, cognitive achievement, social-emotional development, and time use. It employs testing data from the applied problems and letter-word tests that assess early math and verbal skills.

Even before children start formal schooling, black children score about 10 percent and 7 percent lower than whites on applied problem and letter-word tests, suggesting that schools do not create the entire racial achievement gaps. Moreover, the gaps in early cognitive skills between black and white children were highly predictive of gaps at

later ages, setting off a trajectory of cumulative disadvantage for black children over time.

According to the PSID data, about 40 percent of white children have a maternal grandparent who had some college education compared to fewer than 15 percent of black children. In addition, a larger proportion of black mothers gave birth under the age of 20 (14 percent vs. 4 percent) or were receiving public assistance (31 percent vs. 5 percent) than white mothers. About a third of the black children (from birth to age 5), compared to 3 percent of whites, had a family income lower than \$15,000.

After taking these differences into account, Yeung and Pfeiffer found large reductions in the gaps in test scores between black and white students up to the sixth grade. For instance, among children who began preschool in 1997, the racial gap in applied problem scores is reduced by 30

percent when grandparents' education and the characteristics of the mother at the time of birth are held constant. When socioeconomic status and other family characteristics are also considered, the remaining gap fell by an additional one-third. Similar reductions are found for these children when they reached grammar school. Accounting for these changes for those in grades 4-6 in 2003 reduces the gap in letter-word scores by 70 percent.

Beyond the elementary school years, however, their results showed that early home environment could no longer account for all the achievement gaps between black and white students. The authors speculate that these factors include the quality of schools and neighborhood and peer influence.

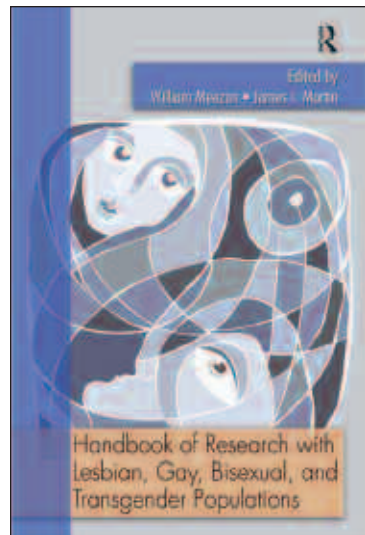
The research was supported by a grant from the National Science Foundation.

## Professors Produce First Anthology of Research on LGBT Populations

By Barbara Jester

In an effort to provide a detailed examination of current methods and theoretical frameworks used in conducting research on lesbian, gay, bisexual, and transgender, or LGBT, populations, James I. Martin, associate professor in the Silver School of Social Work and director of the school's Ph.D. program, and William Meezan, dean of the College of Social Work at The Ohio State University, have edited the only book of its kind on the subject, *Handbook of Research with Lesbian, Gay, Bisexual and Transgender Populations*, published by Routledge.

Building on an earlier version of this book, which appeared as a special 2003 issue of the *Journal*



of *Gay and Lesbian Social Services*, this volume seeks to advance the field of LGBT

research, particularly in social work and the behavioral sciences. Martin believes that examining the lives of those who define themselves or live outside the "norms" can expand our understanding of the full range of human experience. For example, by studying bisexuality, everyone's sexuality is illuminated; by studying transgender experience, everyone's gender may be better understood. But he also believes that more complex research on these populations is needed, especially because most of the earlier research was exploratory and descriptive, using simple research designs such as surveys. One way to increase complexity is to account for the impact of social and historical changes.

"Knowledge is always changing," Martin says. "The things we

believe to be true about various groups of people do not remain true for all time. This is particularly so for LGBT populations. Social and historical changes have a great impact on LGBT identities and life courses. For example, the life trajectories of lesbian and gay youth today are very different from what they were 20 years ago."

Because of the sociopolitical context in which LGBT people live, and their marginalized status, several areas of research are particularly challenging. Major issues that LGBT researchers continue to focus on include sexual behavior among gay and bisexual men, mental health and substance

abuse problems among lesbians, and victimization among LGBT populations and whether it contributes to depression, substance abuse, and risky behavior. Ultimately, Martin and Meezan hope their book can help to "move the field forward."

"Good research can provide critical information about the characteristics and identities of LGBT people, their experiences and life courses, and the challenges and rewards that they face," they write. "It can also form the basis for improved services and more enlightened policies."



James I. Martin

## French Literary Journal Archives Provides Context for Fales's Downtown Collection

By Barbara Jester

In 1974 the French philosopher Sylvère Lotringer, in an effort to bridge radical French theory and the intellectual and art worlds of New York City, launched the journal *Semiotext(e)*. The original editorial board included 10 people—mostly graduate students at Columbia University, where Lotringer taught—each of whom chipped in \$50 to get the journal started.

The next year they held their first conference on the "Schizo-Culture" (on prisons and madness), and speakers included French philosophers Michel Foucault and Jean Baudrillard as well as composer John Cage and writer William S. Burroughs. Out of the conference came the second journal issue which sold out in three weeks. Subsequent issues included "Italy: Autonomia: Post-Political Politics" and the infamous "Polysexuality." In 1983 Lotringer started the *Foreign Agents* book series, concentrating on the French critics, and began publishing books as well. The journal and publishing house are



French philosopher Sylvère Lotringer, above, launched the journal *Semiotext(e)* in 1974 in an effort to bridge radical French theory with New York City's intellectual and art worlds.

now operated by Lotringer, Chris Kraus, and Hedi al Hoti.

Recently Fales Library, the special collections and rare books library in Bobst, acquired the complete archives of *Semiotext(e)*, comprising more than 300 cubic feet of materials and containing

manuscripts, correspondence, photographs, films, video, audio, and a variety of other items. This collection documents the cross-over between French critical thinking and the New York art scenes of the 1970s and 80s and, according to Marvin Taylor, head of Fales,

makes manifest the philosophical underpinnings of downtown art practices, providing a context for much of the material in Fales's renowned Downtown Collection.

The Downtown Collection documents the lower Manhattan art, performance, and literary scene from 1975 until the present, with special emphasis on the late 1970s and 80s. Included in the vast collection are the papers of avant-garde novelist Dennis Cooper, theatre impresario Richard Foreman, artist and writer Gary Indiana, punk-rock icon Richard Hell, and artist David Wojnarowicz, as well as the archives of the Judson Memorial Church and Mabou Mines.

"For anyone studying French critical theory or the post-modern art scene, these materials will be invaluable," Taylor says. "The *Semiotext(e)* archives, both that of the journal and the publishing venture, reveal how post-structuralism changed the American academy with its revolutionary approaches to textuality."

*Semiotext(e)*'s backlist in publishing includes works by most of the cutting-edge French cultural critics as well as avant-garde fiction and non-fiction by American writers Kathy Acker, Cookie

Mueller, Chris Kraus, Eileen Myles, and Shulamith Firestone, among many others.

"In *Semiotext(e)*," Lotringer writes, "we bounced theory against other primary material—pictures, interviews, and all kinds of 'documents'—lifted straight from American culture. We wanted to avoid secondhand commentaries and so stimulate thinking in a different way, eliciting perceptual or pragmatic connections, something the previous decade's artists had simply called 'getting the information.'"

While it is expected to take a couple of years to process the papers, faculty and students in several areas of the University, including the departments of English, French, and comparative literature, are anxious to utilize the acquisition.

"Last fall I gave a cross-listed French/comparative literature seminar on the French 1970s, and a number of students began projects that would be greatly enriched by the ability to work with this collection," says Emily Apter, professor of French and comparative literature. "It is also an area for my personal research, possibly a short book down the line."

## Teagle Foundation Grants Benefit Steinhardt School and Polytechnic Institute

By Timothy Farrell

The Teagle Foundation, a New York-based organization dedicated to improving access to higher education, recently awarded grants to the Steinhardt School of Culture, Education, and Human Development and the Polytechnic Institute at NYU for programs aimed at preparing talented but underserved high school students for college. In total, the foundation awarded grants to 12 programs at area universities that partner with community-based organizations to help make the dream of college a reality for disadvantaged students. Each grantee is awarded \$240,000 over three years.

"I am extremely pleased that the Teagle Foundation is able to help talented but underserved students from New York City pre-

pare for college," says W. Robert Connor, president of the Teagle Foundation. "Most of the credit, however, must go to the partnering institutions like Steinhardt and the Children's Aid Society, and NYU Poly and the Urban Assembly Institute, that have worked together to design truly unique and challenging programs which respond to the needs of these students."

The foundation's grant to Steinhardt will help fund "EXCEL in Thinking, Writing, and Inquiry," a program developed in partnership with the Children's Aid Society and aimed at talented high school juniors at the Next Generation Teen Center and Fanny Lou Hamer High School in the South Bronx. The program, which includes both after-school activities and a four-week summer intensive, will hone students' reading, writing, and critical thinking skills.

For Joseph McDonald, professor of education at Steinhardt and the grant's principal investigator, a highlight of the program is its ability to promote "uptown, downtown exchanges" between students in the South Bronx and faculty and students at NYU. Activities are designed to introduce students, many of whom will be the first in their family to attend college, to the Washington Square campus; students will be paired with mentor-tutors from Steinhardt's Metropolitan Center for Urban Education.

A four-week summer residency at NYU will consist of a philosophy seminar that will engage students in college-level work. The course will feature an online curriculum on logic, designed by David Velleman, professor of philosophy in the Faculty of Arts and Science.

NYU Poly, in partnership with the Urban Assembly Institute of Math and Science for Young



Students and teachers at Brooklyn's Urban Assembly Institute of Math and Science for Young Women

Women, a public school in Brooklyn that empowers girls to pursue studies in science, technology, engineering, and mathe-

matics (STEM), received funding for "College Prep and Readiness for STEM Education."

## CAS's *Inquiry* Highlights Undergraduate Scholarship

*Inquiry*, the College of Arts and Science's (CAS) annual journal of undergraduate research, includes more than 150 research abstracts from a broad spectrum of areas of study. "Wall Street Changing: The Architecture of Lower Manhattan's Financial District and Its Converted Functions," "A Great Leap Forward: The Beijing National Grand Theater," and "The Effect of Stress on Recovery from Fear" are just a few examples of the projects that CAS students conducted under faculty supervision during the 2007-2008 academic year.

CAS has long been a national leader in promoting research by undergraduate students. All majors within the college offer honors tracks that require original scholarship, and the college dean's office offers research grants to support student projects. Several studies were conducted while students participated in NYU's study abroad programs.

The abstracts published in *Inquiry* represent a small fraction of the undergraduate research that is conducted annually at CAS. Students also have the opportunity to present their findings at departmental events and at the annual CAS Undergraduate Research Conference. This year's



conference will take place on April 17 in the Silver Center for Arts and Science. For more on the event, go to <http://cas.nyu.edu/page/ug.researchconference.html>.

"Located at the center of a major research university, the College of Arts and Science has the opportunity and responsibility to involve undergraduates in the production of knowledge," says CAS Dean Matthew S. Santirocco. "Working closely with faculty mentors, our students develop the necessary skills and habits of mind that will prepare

them for lifelong learning."

Santirocco notes that the monetary support necessary to conduct these research projects is available through donations from parents, friends, and alumni who have contributed to the Dean's Undergraduate Research Fund, as well as through external grants individual faculty and departments have received to promote this type of research.

*Inquiry's* 12th volume can be downloaded at <http://cas.nyu.edu/page/ug.ResearchJournal>.

—James Devitt

## Gallatin School Inaugurates Research Scholars Program for Undergraduates

The Gallatin School of Individualized Study recently launched a new fellowship program that pairs undergraduates with faculty members on academic research projects.

Sponsored by the office of Gallatin Dean Susanne Wofford, Gallatin Research Scholars are awarded a \$4,000 stipend to work on faculty research projects for 11 hours each week. The aim is to introduce talented undergraduates to the rigors of academic research while fostering a close mentoring relationship with faculty.

"The Gallatin Research Scholars Program provides the selected scholars with extended opportunities to learn about research firsthand by collaborating with faculty members on long-term research projects," says Wofford. "Faculty members will work closely with students and will include them in the several stages of their research: designing projects, undertaking the research, and drawing conclusions. I think this will be a very special experience for both faculty and students."

Four Gallatin seniors have been selected to be the inaugural research scholars. Duncan Meisel

is working with associate professor Stephen Duncombe on a project researching the history and efficacy of political art; Jennifer Gonda is working with associate professor David Moore on a study of experiential learning in higher education; Sam Adams is working with assistant professor Eve Meltzer on research into the artist Robert Morris's drawing series, "Blind Time;" and Vasiliki Paloympis is working with associate professor Julie Malmig on the creation of a performance arts Web site and blog for professional and classroom use.

—Timothy Farrell

## Mikhail Gromov Named Winner of Abel Prize

Continued from page 1

This is the third time in five years that an NYU mathematician has been the recipient of the Abel Prize. Professor Peter Lax of the Courant Institute was awarded the Abel in 2005 and Courant professor Srinivasa S.R. Varadhan was selected in 2007. Gromov, 65, is also a professor at France's Institut des Hautes Études Scientifiques. The Abel Prize recognizes contributions of extraordinary depth and influence to the mathematical sciences and has been awarded annually since 2003.

In awarding the prize, the Norwegian Academy of Science and Letters cited Gromov's work in Riemannian geometry, which developed from the study of curved surfaces and their higher dimensional spaces. It has applications in a range of areas, including the measurement of heavy stars and black holes, where space is not three-dimensional, but, rather, curved and bent. Leslie Greengard, the direc-

tor of NYU's Courant Institute of Mathematical Sciences, noted that Gromov's "unique viewpoint has revolutionized geometry, topology, group theory, and their interplay."

"The defining characteristic of a great university is the excellence of its faculty," says President John Sexton. "The bestowing of the Abel Prize in Mathematics on our colleague Mikhail Gromov exemplifies the truly outstanding quality of scholarship to be found at Courant and throughout NYU."

The Academy noted that Gromov "played a decisive role in the creation of modern global Riemannian geometry. His solutions of important problems in global geometry relied on new general concepts, such as the convergence of Riemannian manifolds and a compactness principle, which now bears his name (Gromov's Compactness Theorem)."

The Academy also recognized Gromov, who has been at NYU since 1996, as a founder of the field

of global symplectic geometry, an outgrowth of classical Hamiltonian mechanics, which describes the motion of particles. Symplectic geometry has application to many areas, including mathematical physics, dynamical systems, and low-dimensional topology, with the potential for discovering and understanding new conserved quantities, such as energy or momentum, that don't change as a system evolves over time.

"While this award recognizes the many deep and important contributions he has made to geometry during his career, his scientific interests are far-ranging and include differential equations, mathematical physics, and biology," says Provost David McLaughlin. "We are very happy for him, and very proud to have him as a member of our faculty, whose high caliber he so powerfully represents."

For more information about Gromov and his achievements, visit the Abel Prize Web site: [www.abelprisen.no/en/](http://www.abelprisen.no/en/)

## Nursing Professors Conduct Research Across the Globe

Faculty members at NYU's College of Nursing are continually conducting research on health needs and practices in New York and throughout the country. But a number of professors have also undertaken studies aimed to advance health care throughout the world. The following is an update of some of the work being done on several continents to improve the well-being of other populations.

**Mei Fu** has taken her research on women's adjustment to breast cancer to two continents. She is currently collaborating on two studies in Brazil—exploring post-surgery complications in breast cancer patients and another study on lymphedema—and has also conducted research in China with the aim of improving care of patients with breast cancer.

Fu is now engaged in a novel study of symptom clusters in 180 Korean liver cancer patients. She and her colleagues are the first to divide patients into subgroups based on clusters of symptoms in order to plan more specific interventions.

**Kathy Hutchinson** is in her second year of a four-year intervention study of mother-and-daughter approaches to preventing HIV. Her team of investigators from NYU, the University of the West Indies, and the University of Pennsylvania is developing a curriculum that will be used during the next portion of the study. Hutchinson has adapted research tools to new settings—specifically Jamaica and Botswana.

The current NIH-funded study will engage 360 adolescent girls and their mothers in a series of educational games, exercises, discussions, and role playing geared toward training girls in

beliefs and skills to refuse or abstain from sex and to protect themselves if they do have sex.

**Ann Kurth**, a pioneering HIV/AIDS researcher, works in Kenya on a National Institutes of Health (NIH)-funded project examining the relationship between reproduction and HIV among couples in a culture that places high value on having children. She and her colleagues will conduct home-based HIV and pregnancy counseling and testing in the Nyanza area of western Kenya, where HIV prevalence is the country's highest.

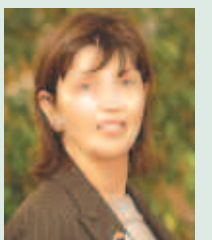
Kurth is planning a major randomized trial of computerized counseling with a Kenyan organization that cares for over 82,000 HIV-positive people in western Kenya, and is working on a vaginal health study in Mombasa among commercial sex workers.

**Michele Shedlin** has been based on the U.S.-Mexico border for the past four years, focusing research on the cultural acceptability of health programs and interventions. Working with a team at the University of Texas at Austin and the Population Research Center on an NIH-funded study, she is comparing women who receive oral contraceptives in Mexico without a prescription to those who obtain them with prescriptions in El Paso.

In another NIH-funded project of which she is principal investigator, Shedlin and her colleagues are studying the cultural and institutional factors that affect antiretroviral therapy (ART) adherence in a Mexican-origin population on the border. She is also researching Colombian refugees in Ecuador, collecting health information on this vulnerable population fleeing drug-related violence.

## New Study Shows Ways to Retain Nurses and Reduce Costs

A new research study, published in the March/April issue of the journal *Nursing Economics*, has determined what factors can help keep new nurses from leaving their jobs and, in doing so, save health systems money. When nurses leave for another position or retire early, it dramatically affects a hospital's bottom line—as much as 5 percent of a hospital's budget may go to paying for nursing turnover costs.



Christine Kovner

Funded by the Robert Wood Johnson Foundation, the study reports on 1,933 newly licensed registered nurses working in hospitals in 34 states and Washington, D.C. The researchers found that nurses' intent to stay is influenced by their perceptions of their working conditions, specific workplace attributes, their personal characteristics, and available job opportunities. The researchers also examined factors related to general satisfaction and organizational commitment, which prove to increase the likelihood that new registered nurses will remain in the field.

"If nurses stay in their jobs, hospitals and the health care system will realize significant savings on costs associated with replacing nursing staff," says Christine Kovner, professor at NYU's College of Nursing and lead author of the study along with William H. Greene, Toyota Motor Corporation Term Professor at the Stern School of Business. "More importantly, patient outcomes are at stake because when the nursing staff is destabilized by frequent resignations and high turnover, the disruption and inconsistency of service can have a negative impact on patient care and safety."

In addition to the challenges facing individual hospitals, the unprecedented nationwide nursing shortage means that the U.S. health care system will be unable to meet the projected shortfall of up to half a million nurses by 2024. Kovner says that knowing what positively or negatively affects new nurse retention can help hospital managers better direct their resources and keep their workforce stable.

The research used a sub-set of nurses involved in a larger RWJF-funded study, which tracks changes in the careers of a group of newly licensed nurses over 10 years. The study is funded through 2016.

## Study Shows Party, Ideology, Religiosity, and Age Drove Vote on California's Proposition 8

An analysis of California's Proposition 8 vote shows that party affiliation, political ideology, frequency of attending worship services, and age were the driving forces behind the passage of the measure.

Proposition 8, which amended the California constitution to remove the right of same-sex couples to marry, was approved by the state's voters by 52 to 48 percent on Nov. 4.

The study was written by Patrick J. Egan, an assistant professor in NYU's Wilf Family Department of Politics, and Kenneth Sherrill, a professor of political science at CUNY's Hunter College. Egan and Sherrill reviewed pre- and post-election polls as well as precinct-level voting data from five California counties with high numbers of African American voters. The study—"California's

es), support for Proposition 8 among African Americans and Latinos was not significantly different than that of other groups. In addition, the study shows how support for marriage equality has grown substantially across almost all California demographic groups.

The study found that four factors—party identification, ideology, frequency of religious service attendance, and age—drove the "yes" vote for Proposition 8. For example, more than 70 percent of voters who were Republican, identified themselves as conservative, or who attended religious services at least weekly supported Proposition 8. Conversely, 70 percent or more of voters who were Democrat, identified themselves as liberal, or who rarely attended religious services opposed the measure. More than two-thirds (67 percent) of voters 65 or older supported Proposition 8 while majorities under 65 opposed it.

Since the passage of Proposition 8, much has been said about the dramatic opposition to marriage equality among African Americans, fueled by National Election Pool (NEP) figures indicating 70 percent of California's African Americans supported Proposition 8. However, this study found that once attendance of religious services is factored out, there was no significant difference between African Americans and other groups. People of all races and ethnicities who worship at least once a week overwhelmingly supported Proposition 8, with support among white, Asian, and Latino frequent churchgoers actually recorded as greater than among African Americans.

The study found that overall support for marriage equality among Californians has increased by 9 percent—from 39 to 48 percent—since 2000, with support increasing among every age group under age 65, across all racial and ethnic groups, and among Protestants, Catholics, and Jews. There are three groups where voting patterns have not changed: Republicans, conservatives, and those 65 and older. The largest gain—up 16 percent—was among voters 45-64 years of age, followed by a 13 percent increase among voters 18-29. Among Republicans, support for gay marriage fell slightly (1 percent) compared to 2000. Support for gay marriage among Democrats increased 13 percent.



Vote percentages on Propiotion 8

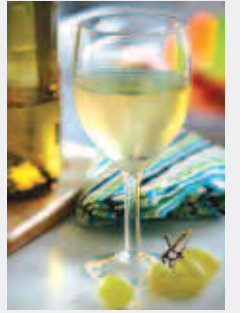
Proposition 8: What Happened, and What Does the Future Hold?"—was commissioned by the Evelyn & Walter Haas, Jr. Fund in San Francisco.

Through a precinct-by-precinct analysis and review of multiple sources of data, the study also puts African American support for Proposition 8 in the range of 57 to 59 percent—short of the 70 percent reported election night. The study also found that after taking into account the effect of religiosity (as measured by attendance of religious servic-

## Dental Student's Study Finds White Wine Can Make Tooth Stains Darker

By Ami Finkelthal

Every summer, dozens of NYU dental students conduct research to gain a deeper understanding of the science behind the oral health conditions that they will be treating as dentists. One such student, Cristina Dobrescu, '10, spent part of the summer of 2008 exploring why people who drink white wine are more likely to develop tooth stains than those who do not.



"Tooth staining is a common problem treated by dentists," says Mark Wolff, professor and chairman of the Department of Cariology & Comprehensive Care and associate dean for Predoctoral Clinical Education at the College of Dentistry, who developed the wine study research protocol with Dobrescu and was a coinvestigator on the study along with Denise Estafan, associate professor of cariology and comprehensive care. "Although it has long been known that red wine causes teeth to stain, we wondered why people who drink white wine also develop dark spots on their teeth."

According to Dobrescu's study, drinking white wine can also increase the potential for teeth to take on dark stains because the acids in white wine create rough spots and grooves that enable chemicals in other beverages that cause staining, such as coffee and tea, to penetrate deeper into the tooth. Dobrescu submitted an abstract describing her findings to the International Association for Dental Research, which accepted it for presentation at its 2009 annual scientific meeting in Miami. She presented the findings on the opening day of the conference, and a program that aired recently on Food Network TV also featured findings from her study.

Dobrescu compared two sets of six cow teeth, whose surface closely resembles that of human teeth, and used a spectrophotometer, an instrument that measures color intensities, to evaluate staining levels. She found that teeth soaked for one hour in white wine before being immersed in black tea had significantly darker stains than teeth immersed for one hour in water before exposure to the tea. According to Dobrescu, dipping teeth in white wine for one hour is similar to the effect of sipping the wine with dinner.

Still, red wine continues to beat out white wine when it comes to staining teeth. When Dobrescu repeated the experiment with red wine, the resulting stains were significantly darker than those in the white wine group.

"Red wine, unlike white, contains a highly-pigmented substance known as chromogen," she explains. But she and Wolff note that connoisseurs concerned about staining need not cut back on their consumption. The advice: "The best way to prevent staining caused by wine, as well as other beverages, is to use a toothpaste containing a whitening agent."

## Presidential Transition Project Sheds Light on New Administration

Continued from page 1

"Oh my goodness," was Janis's personal reaction to the request. She turned first to the *Plum Book*, the official guide to Washington, D.C., job listings. While it was extensive in its sweep of federal agencies, she found it was less than thoroughly comprehensive. She then contacted "many, many agencies," interviewed department heads, and identified 487 jobs that require Senate confirmation.

The difficulties inherent in this tallying were telling. No ordinary job seeker, average citizen or even a government analyst, could readily determine where all these positions lay.

"The landscape is opaque and confusing, and only someone like Dr. Light, who has written numerous books on government, could possibly read its clues and codes," says Janis.

The Project found that Obama's transition started out at a good clip. By the close of his first week on the job, he had announced an impressive 47



Senator Tom Daschle speaks to reporters after the announcement of his selection to be Obama's nominee for the position of Secretary of Health and Human Services.

nominees for top jobs, and officially nominated 37 of them. But then Senator Tom Daschle's nomination for health and human services secretary was withdrawn Feb. 3 amid a controversy about his failure to accurately report and pay income taxes, and the transition slowed to a crawl. In the ensuing month, when the extensive and arguably excessive

vetting process was intensified, the White House announced just 10 candidates for Senate-confirmed positions and formally nominated only six people.

Once the controversy died down, the pace of nominations picked up considerably.

The project also examined the nominating process for patterns, revealing the new administration's profile based on such defining characteristics as race and gender, level of education, and whether nominees attended an elite-level university. In the early weeks of the nomination, it found that, within the White House, the majority of new staffers were actually younger than Obama, and had not attended an elite-level university for their bachelor's or higher degrees. Many did not have a graduate degree of any kind; one hadn't graduated from college.

Did the new appointees work as lobbyists? Had they made campaign contributions? To whom? Were they Beltway insiders or outsiders? The data helped enlarge the public understanding of Team Obama, as well as how it



Clara Janis, an M.P.A. student at Wagner, assisted on the project.

compared to presidential transitions of the Bush and Clinton years, on which the project also assembled data.

*Washington Post* columnist Al Kamen has consistently referred to the project's data in his column. "Heads Pop Up and Heads Roll: Let's Keep Track" was the title of one that ran in March. In addition, Light has used the project as a

jumping-off point for an analysis piece he contributes to the *Post's* coverage of Washington, D.C., on an occasional basis. One such piece, titled "Not So Elite After All," which ran in December 2008, punctured the widespread claim that the Cabinet, transition process at that time, and profile of White House appointees were a harbinger of an ivory tower kind of administration.

The project is a benefit to researchers, present and future, who want to understand the structural barriers to a reasonably speedy White House vetting and Senate confirmation process, and who seek to suggest what to do about them. Light has also noted the proliferation of at-will White House appointees, or "policy czars," who do not need confirmation.

"The system is not working in the way it needs to in order to get government working quickly whenever you have a new president," says Janis. "The problem is systemic, related to the vetting process. That's what our research data really point to."

## New York University

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## Richard Allen Co-Organizes First Film Festival to Explore Influence of Muslim Cultures on Bombay Cinema

By Richard Pierce

Just three years after his groundbreaking international conference exploring and celebrating Indian cinema, Richard Allen, professor and chair of cinema studies at the Tisch School of the Arts, along with his co-organizer Ira Bhaskar, associate professor of cinema studies at the School of the Arts and Aesthetics at Jawaharlal Nehru University, New Delhi, broke new ground again last month with a first-of-its-kind film festival in Abu Dhabi, entitled “Muslim Cultures of Bombay Cinema.”

The festival was not only the first to celebrate and explore the rich influence of Muslim cultures and traditions on the cinema of Bombay (now Mumbai) from the 1930s to present, but it also marked the first major arts event for the NYU Abu Dhabi Institute, a critical component of NYU Abu Dhabi, which will admit its first class of students for the fall 2010 semester. NYU Abu Dhabi will be a world-class research university with a fully integrated liberal arts and science college, drawing students from around the globe. The NYU Abu Dhabi Institute, which opened last fall, will stimulate

research that is both integral to the undergraduate experience and also drive the University’s graduate programs.

The festival featured 14 films representing three genres: the historical, the courtesan, and the Muslim social.

“Many more films could have been selected to represent the three genres we are presenting here,” wrote Allen and Bhaskar. “We have made our choices based on the importance of presenting canonical works in the festival, the availability of negatives or prints from which we could create or use films for

screening, the historical range and breadth in which every decade from the 1930s to the 2000s is present, and diversity in the kinds of films we are showing from the mainstream to the New Wave.”

From the beginning, Bombay cinema, through the influence of Parsi theater, has been influenced by Islamic culture and the Urdu language, and certain Persian love stories and poetic forms, as well as particular song traditions, according to Allen and Bhaskar. The organizers also point out that many of those involved in the Bombay cine-



A scene from the Indian film *Jodhaa Akbar* (2008), directed by Ashutosh Gowariker.

ma—actors and directors—were Muslim.

“The selection of films in the festival was intended to show the way in which Muslim culture and its expressive styles are not only deeply ingrained in Bombay cinema but represent a high point in Indian cinema in general,” wrote the organizers.

Muslim Cultures of Bombay Cinema was presented by NYU Abu Dhabi Institute in conjunction with Abu Dhabi Authority for Culture and Heritage and the Indian Embassy. The festival was held at the Al Dhafra Auditorium, Cultural Foundation, Abu Dhabi

from Feb. 26 to March 22, 2009. Among the guests who came to introduce their work were Ashutosh Gowariker, director of the award-winning *Lagaan* (2001) and *Jodhaa Akbar* (2008); Farida Jalal, the celebrated actress of Hindi cinema and star of *Mammo* (1995); and India’s most celebrated filmmaker Shyam Benegal, director of over 20 feature films, two of which—*Mammo*, and *Sadari Begum* (1997)—were included in the festival.

In conjunction with the festival, Bhaskar and Allen have authored *Islamicate Cultures of Bombay* (Tulika Books, New Delhi 2009).



## To Spend Less, Use Cash, Stern Study Finds

Shoppers are likely to spend more when using a credit card or gift card than when using cash, according to research conducted by Stern School of Business marketing professor Priya Raghuram, with Joydeep Srivastava of the Robert H. Smith School of Business at the University of Maryland, College Park.

The findings, which were published in the article “Monopoly Money: The Effect of Payment Coupling and Form on Spending

Behavior” in the September issue of the American Psychological Association’s *Journal of Experimental Psychology*, show that cash discourages spending while credit cards, debit cards, and gift cards encourage it. The research results also show that consumers are more frugal when they have to estimate expenses in detail.

The authors gathered data from four studies—two examined consumer behavior by having participants estimate the cost of

meals that were described in detail, while two other studies examined how people spent differently when given the same amount of money in cash versus credit.

“The studies suggest that less transparent payment forms tend to be treated like play money and are hence more easily spent,” explains Raghuram. “The more transparent the payment outflow, the greater the aversion to spending, or higher the ‘pain of paying.’”

## Courant Scientist Receives DOE’s Massive Computing Project Award To Develop Magnetic Fusion Energy

Continued from page 3

and Novel Computational Impact on Theory and Experiment (INCITE) award will allow the research team to simulate an aspect of plasma behavior on one of the world’s most powerful computers.

Chang’s is one of 66 projects, announced by DOE’s Office of Science, that seek to address some of the greatest scientific challenges

by using some of the world’s most powerful supercomputers at DOE national laboratories. The projects—competitively selected for their technical readiness and scientific merit—aim to advance

research in a range of areas, including astrophysics, climate change, new materials, energy production, and biology.

“From understanding the makeup of our universe to protecting the quality of life here on earth, the computational science now possible using DOE’s supercomputers touches all of our lives,” said DOE Under Secretary for Science Raymond Orbach, who launched INCITE in 2003. “By dedicating time on these supercomputers to carefully selected projects, we are advancing scientific research in ways we could barely envision 10 years ago, improving our national competitiveness.”



Choong-Seock Chang