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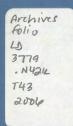


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UNIVERSITY of NEW HAMPSHIRE

FACULTY EXCELLENCE AWARDS



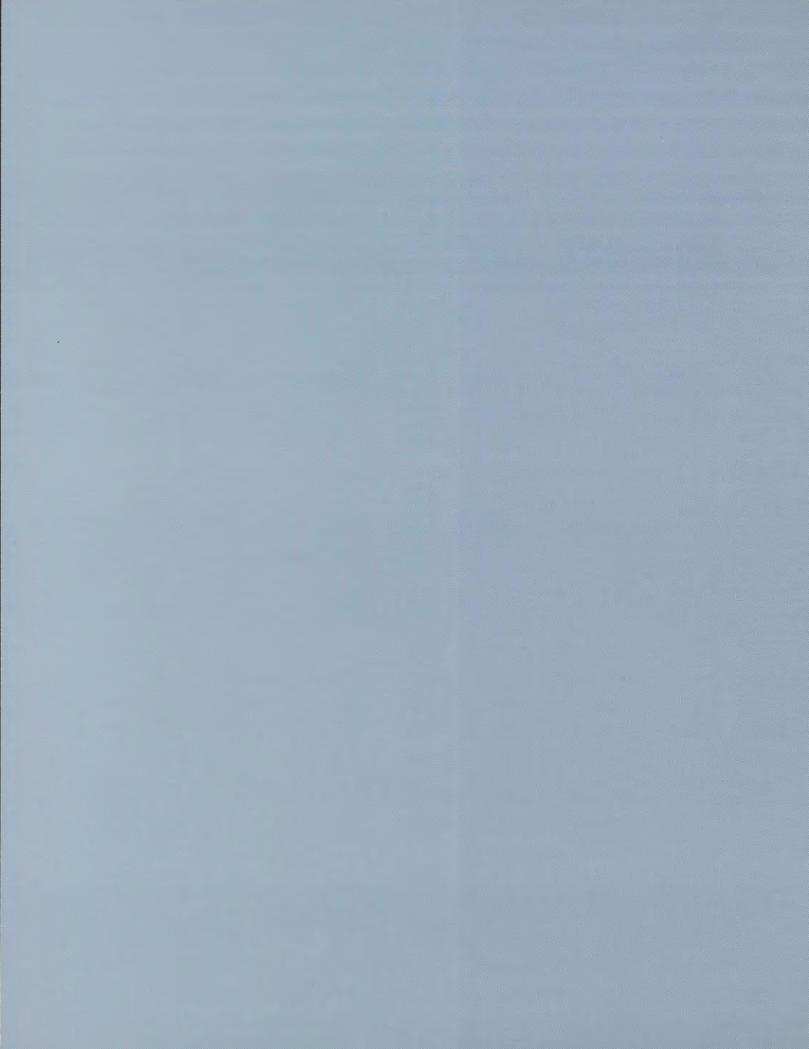


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lease join me in recognizing and celebrating those members of our accomplished faculty who have distinguished themselves in their disciplines and in their work at the University of New Hampshire.

Again this year our faculty has selected a remarkable cohort of award recipients whose work in the classroom, laboratory, and field sites represents the best of UNH's teaching, scholarship, and public engagement. In the following pages you will learn about faculty excellence in fields ranging from microbiology, kinesiology, and economics, to mathematics, political science, and agricultural mechanization. Best of all, you will come to know the creative, passionate faculty members who communicate their expertise to their students, colleagues, communities, the state, and the world. Whether it is helping students to understand the ethical standards of scholarship, mentoring a brand new graduate student, leading students on international expeditions, or simulating real-world challenges in an undergraduate class, these faculty members illustrate why they are among our most valuable resources.

The work represented by this year's excellence recipients brings to life the UNH vision—a place where the best attributes of the New England liberal arts college combine with the sophistication and opportunity found in a comprehensive research university.

These stories are compelling and inspiring. I am sure you will enjoy learning about the work our wonderful faculty does here at the University.

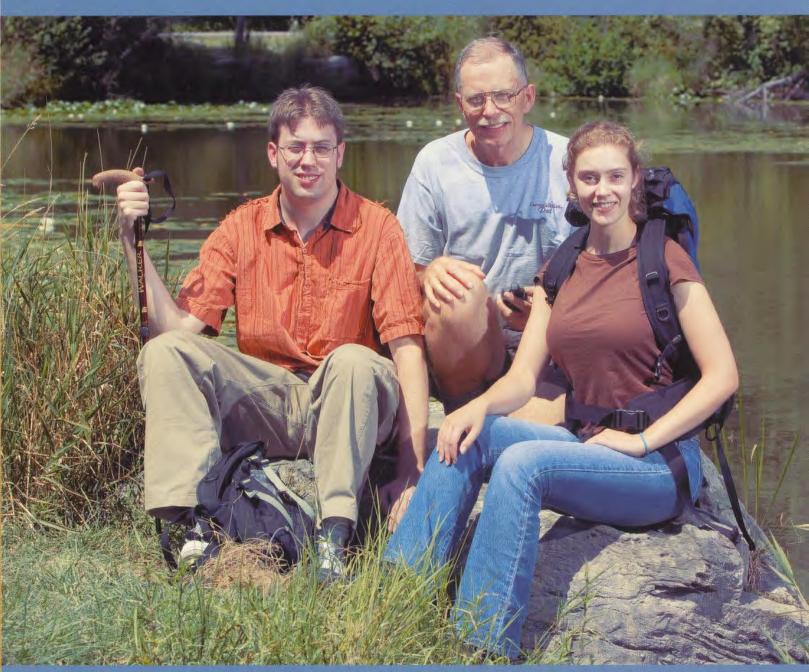
Sincerely,

BRUCE L. MALLORY

Sout Weller

PROVOST AND EXECUTIVE VICE PRESIDENT

THOMAS G. PISTOLE



Tom Pistole with his two children, James and Jennifer.

DISTINGUISHED PROFESSOR

PROFESSOR OF MICROBIOLOGY

College of Life Sciences and Agriculture

A micro-macro thinker

n the three-legged stool of research, teaching, and service that comprises faculty duties, Thomas Pistole has the most comfortable, best-balanced seat in the house.

Indeed, asked to identify the high point of his 35-year career on the UNH faculty, the microbiologist falters at the choice. He speaks about his research in innate immunology and his efforts in service of the wider UNH community. These range from serving on myriad committees to mentoring new faculty to creating a Web-based course on research ethics.

And teaching? Pistole positively glows. "It's hard not to say the most exciting moments are the students I've taught," he says. "Seeing the 'ahas' through them—you just get the chills."

Years ago, Pistole made a personal commitment never to compromise the teaching side of his faculty duties—no mean feat in the research-driven world of microbiology. He mentors graduate students not just in laboratory work but in important research skills such as grant-writing. He helps students overcome external barriers to success, from scheduling meetings around their child-care needs to helping negotiate housing woes. He's a fixture at UNH commencements, whether or not one of his own advisees is being launched into the world. "I always get teary-eyed," he admits.

"He cares about everyone he works with—not just his own students," says former advisee Bochiwe Hara-Kaonga, who received her Ph.D. in 2002 and is finishing a post-doc at Maine Medical Center. "He treats everybody with respect." Once, she recalls, Pistole lent her his own car so she could go to Dartmouth to use a critical piece of lab equipment.

Pistole cares deeply about science as well as scientists. His work looks at how the body defends itself against microbial aggression—the food-borne pathogen salmonella in particular—before antibodies develop. Pistole has toiled in this emerging field since his Ph.D. work at the University of Utah, taking a leadership role as innate immunity gained legitimacy. Early in his career, he was invited to be an associate editor of a major text in his field, *Progress in Clinical and Biological Research*. "As a relatively young faculty member, it was quite an honor," he says.

His vita is crowded with publications, major research funding, editorial responsibilities, and presentations, including a symposium he convened at an American Society for Microbiology meeting that brought an overflow crowd, "even though it wasn't that year's hot topic," he says. While an upper-level course on immunology remains the keystone in his teaching portfolio, the mercurial, shades-of-gray world of scientific ethics has captured his intellectual imagination for the past decade.

Pistole developed the course, Ethics and Issues in Microbiology, in 1995 to help students grapple with issues such as cloning or stem cell research. "We're talking about things that don't have a right answer. For scientists to do that, it's a stretch," he says.

His involvement with that course led him to a national leadership role in research ethics, which circled back to UNH when he, in collaboration with Julie Simpson from the Office of Sponsored Research, developed a Web-based course in responsible conduct of research for graduate students. The modules explore major issues such as plagiarism or falsification. They also help graduate students negotiate what Pistole calls minor crimes: "how you treat different students in your lab, or how you might take a little information from a grant proposal you just reviewed, or who should be the first author on a paper."

"They're minor," says Pistole, "but they are the meat of these issues."

A proponent of balancing work with outside activities ("It gives you this buoyancy, to go away and get energized"), Pistole is active in his church and the Seacoast's choral scene.

There's one extracurricular activity, however, that holds no immediate appeal: retirement. Says Pistole, "I just thrive in [the classroom] environment. Being with the students is so exhilarating."

—Beth Potier

"He cares about everyone he works with—not just his own students."

The accidental professor

ames Tucker was an accidental professor who has become an enthusiastic and intentional professor. The UNH sociologist graduated from college and went to work for an advertising agency, then a greeting card company, and then a series of other white-collar jobs. He learned that he was more interested in the social dynamics of the business organization than he was in making money. So, he went to graduate school. A highly regarded book, *The Therapeutic Corporation*, published by Oxford University Press, was based on his Ph.D. dissertation, which was inspired by his experience in the private sector.

= 6

Tucker's subsequent research and publications have examined the unusual such as psychics and schizophrenics. "I like to look at what goes on at the margins," Tucker explains, and he adds, his research makes a contribution to the discipline. "I study what appeals to me personally, but I also try to fill in the gaps in my field of study—unconventional businesses, unconventional religions, unconventional forms of social control."

Currently Tucker researches legal and social responses to suicide. His approach is historical and cross-cultural. In the U.S. he's talked with the friends and relatives of people who have committed suicide. "I have an open mind when I talk to anyone," he says. "I'm interested not only in how they respond to situations, but why." And, according to Tucker, people like to talk about the beliefs they have and why they do what they do.

This summer he gave several talks on this research in Taiwan and traveled in Southeast Asia, making research connections with scholars in Vietnam and Thailand. Additionally, Tucker is collaborating with a former graduate student, who is exploring these questions in the UK.

"I have an open mind when I talk to anyone."

But if his research is about the unconventional, about life at the margins, his academic life is steeped in the conventional, about being solidly in the middle of things. He has taught at UNH since 1991 and became department chair this fall. Tucker has served on several College of Liberal Arts committees and boards and earned several awards, including faculty development grants, the Faculty Scholars Award, and a fellowship in the Graduate School. From 2001 to 2004, Tucker was the Lamberton Professor of Social and Criminal Justice. That prestigious appointment provided Tucker with resources to continue his research on the various formal and informal ways people seek justice. He consistently earns high scores from his students, teaching a full load, including two large undergraduate courses, advanced undergraduate courses in his area of expertise, and graduate courses on sociological theory and crime and conflict.

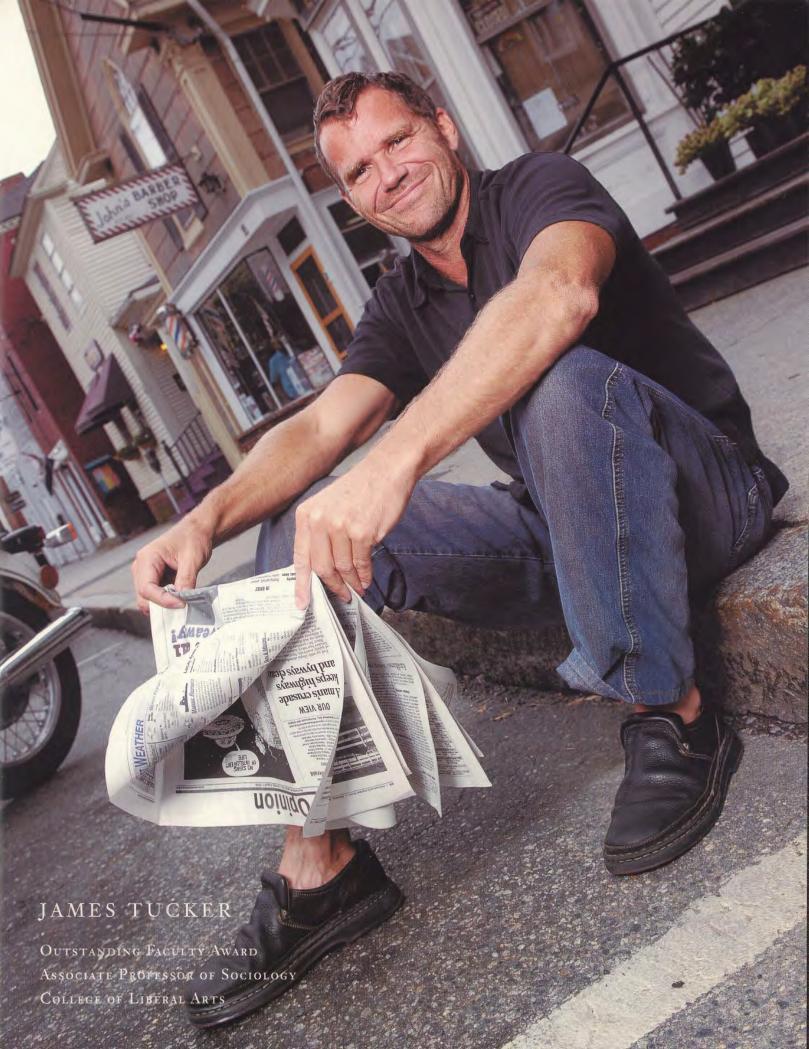
"He has the great skill to be able to combine charisma and rigor in his work with students, and he has contributed significantly to the curricula of the department, Justice Studies, and Cinema Studies," says sociology colleague Sally Ward.

"I love teaching," Tucker says. "I like the bigger classes and engaging my students. When there is mutual engagement in teaching between a professor and his or her students, there's nothing quite like it. Students keep me going."

During the 2004 New Hampshire Presidential Primary, Tucker undertook a documentary film project with a local homeless man. Tucker filmed him as he attended events with all of the Democratic primary candidates. *The Nice Man Cometh* was selected for last year's Carolina Film and Video Festival and was screened for the UNH Center for the Humanities Documentary Film Series. It also was awarded the Best Documentary at the 2005 CheapShot LA Film/Video Festival.

The subject of that film is no longer homeless. He has moved away from the margin and toward the middle. That doesn't mean Tucker has lost interest. "I just gave him my old computer and he's online now," Tucker says.

-Kim Billings





The desire to learn

ichael Middleton prefers to focus on the energy part of adolescence, but he isn't one to shy away from the angst of it either.

"My favorite days are when I'm out in the middle schools with my interns and their students," he says. "I can't imagine working with any other group. Early adolescents still want to build strong relationships with their teachers and peers, but they also have rich experiences in their own lives that they bring to the classroom along with boundless energy. They are starting to struggle with questions like who am I, how good am I, and where am I going. I can't think of more meaningful work than helping them figure out those issues."

Middleton, who joined the faculty in 2001, has established himself as a national leader in the field of educational psychology, introducing a new area of research on how students are motivated to learn. His interest in the topic was sparked by his first job out of college. With an undergraduate degree in psychology and the encouragement of a friend, Middleton found himself teaching students, who were anything but motivated, at an alternative high school.

"I watched many of those kids blossom and succeed when they were given the 'right' classroom context," Middleton says. "And then I saw the opposite while teaching some college students who went from being stars in high school to unknowns in college. It led me to question how people are motivated. I've learned a lot by looking at groups that have traditionally been thought to be unmotivated. I've discovered that people are most motivated when focused on improving, rather than proving, themselves."

Middleton ought to know, because it's what brought him to UNH. "This is a place that respects quality research and expects it," he said. "It's a supportive environment where senior colleagues really want to see young faculty succeed."

Succeed he has. For the last two years he has directed the teacher education program in Manchester while teaching full time and serving on countless committees. In one research project, he's working with a doctoral student on the use of dialogue journals in writing classrooms and on a grant with

education colleagues to implement teaching coaches in schools. Three of his articles have appeared in the *Journal of Educational Psychology*, and recently, he joined the journal's editorial board. As a University Outreach Scholar, he works with two engineering faculty members to look at girls' participation in math and science as a result of their participation in the LEGO competitions. Middleton also helped start and develop the University's summer Middle School Institute.

This fall, for the second time, Middleton will teach a first-year Inquiry class he designed, but with a twist. (Inquiry courses prepare first-year students to succeed at the college level.) The 25 first-year students taking Middleton's class will not only study and learn together but also live together on their own floor in Lord Hall and run a homework help room for local middle school students.

"I do best at a place where I feel a part of things," Middleton says with a laugh. "I won't be living with the students in the dorm, but Chelsea and I will probably attend a few dorm events." His constant companion, Chelsea, is a golden retriever/giant schnauzer mix who is almost as popular a member of the education department as Middleton himself.

Middleton has served on the University's judicial board and as an academic adviser. As cochair of the President's Commission on the Status of Gay, Lesbian, Bisexual, and Transgender Issues for two years, he worked on the community's response to protests against the ordination of Bishop Gene Robinson and to get gender identity and expression added to the University's nondiscrimination policies.

"As a member of a minority group, it's important not to shut the door behind you. A community can best be judged on how it treats its most disenfranchised group," Middleton said.

Or, its least motivated.

—Erika Mantz

"I've discovered that people are most motivated when focused on improving, rather than proving, themselves."

Master networker

ast June during the World Cup playoffs, fans of the Brazilian team packed shoulder to shoulder in German stadiums and crowded around TV sets worldwide to see if their team of soccer demigods, billed as the best, would rise to the occasion.

But A.R. "Venky" Venkatachalam, professor of information systems, was more interested in catching a televised glimpse of the Brazilian coach. "I always try to learn from him," Venkatachalam says of Carlos Parreira, known as a master tactician and an expert in managing people. "He has the same problem as high-tech companies: How do you manage superstars making \$30 million? It's the same with many global companies where the design team is in London, manufacturing is in China, management is in the United States, and they're all hotshots. How do you make them collaborate?"

It's not the first time that Venkatachalam has drawn a connection between seemingly unrelated subjects. In 1995, Bill Wetzel, now professor emeritus of business administration, invited him to listen in on a meeting of U.S. Small Business Administration officials. The subject was how to create a national network that would help small businesses get access to venture capital.

As he listened, Venkatachalam thought of the Internet, which was then an e-mail tool for academics. He had just installed an early—and ornery—browser, Mosaic, and despite his exasperation, he sensed the possibilities. "I told them, 'Perhaps this new network of computers could be used," he recalls.

The resulting system, ACE-Net (Angel Capital Electronic Network), built with UNH's Research Computing Center (RCC), is in use today in 45 states. It was the first of a string of innovative projects with a common theme: take complex subjects with massive amounts of data and figure out ways for people to access that information in a useful way.

"Once he asked me a question and went away and thought about it for a year. And when I heard from him again, he had come up with a solution." Two years later, the U.S. Small Business Administration, having spent \$10 million in an unsuccessful attempt to build a procurement network, turned to Venkatachalam. For less than \$150,000, he designed and built—again with RCC—the Internet-based PRO-Net system that lets users look for businesses that have been approved to work for the government. In June 1997, at a White House ceremony, Vice President Al Gore congratulated Venkatachalam for his work.

A native of India, Venkatachalam earned his undergraduate degree in mechanical engineering. His graduate degrees—an M.B.A. and Ph.D.—are in business management. Patrick Messer, RCC's associate director, admires Venkatachalam's ability to bridge the normally dissimilar fields of business and information technology. "He'll come to us and ask, 'Can we do this?' And if I explain why it can't be done a certain way, he'll think for a while, and then he'll say, 'OK, can we do it *this* way?'

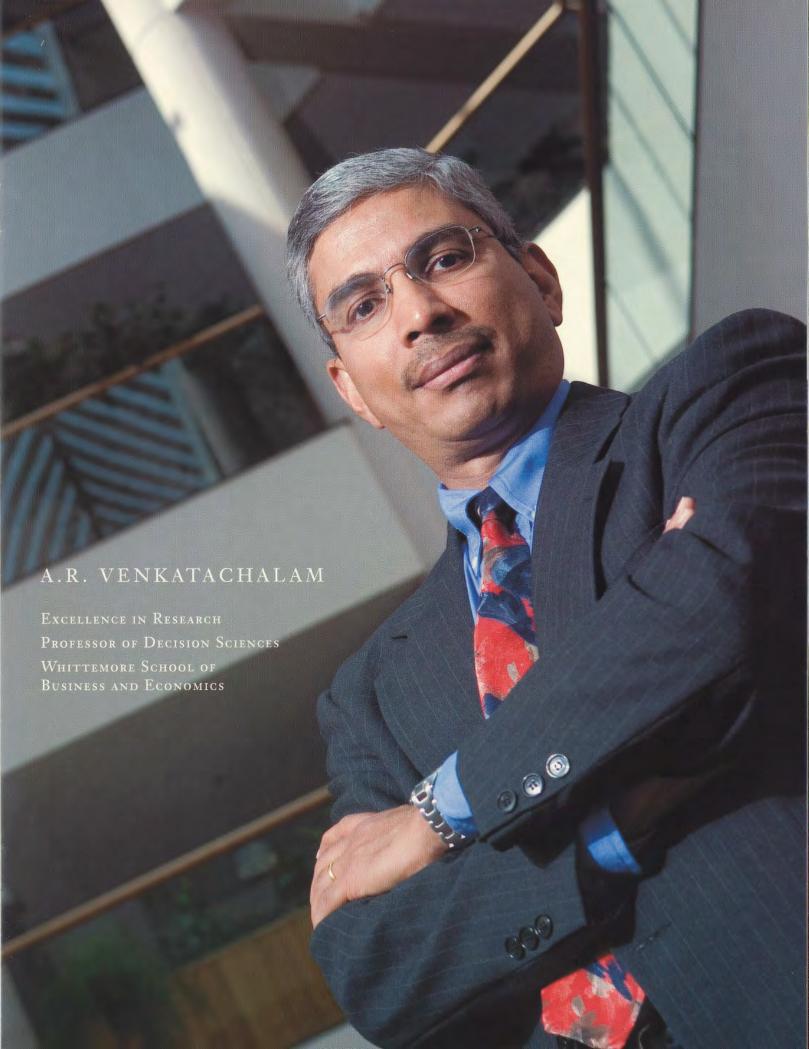
"Once he asked me a question and went away and thought about it for a year," says Messer. "And when I heard from him again, he had come up with a solution."

Like pots simmering on a busy stove, Venkatachalam's research projects coexist with his teaching load, department chair duties, publications, and editorial responsibilities. Recently, to give some structure to his far-flung interests, Venkatachalam created the Enterprise Integration Research Center, where his newest venture is percolating.

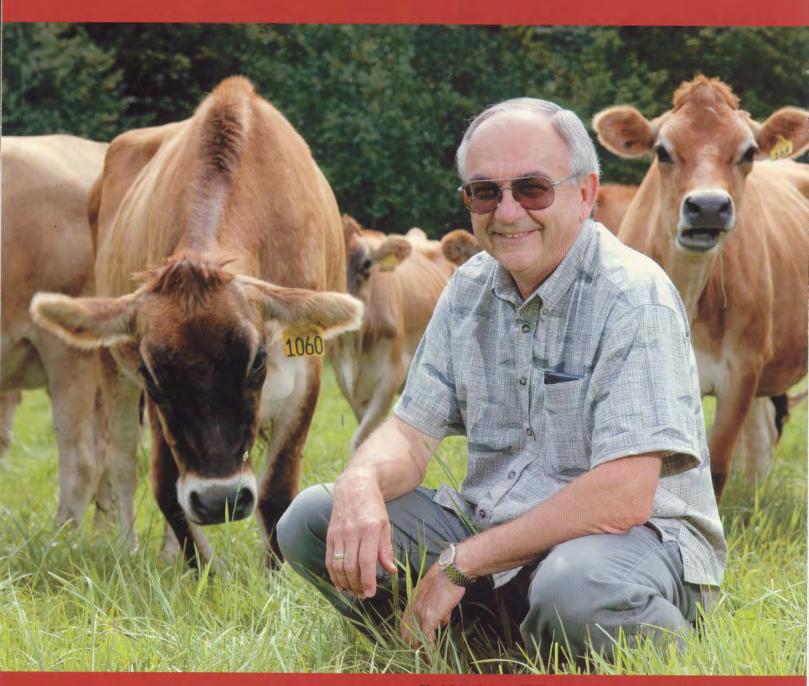
The project, currently a pilot involving several New England states, would help high-tech companies get funding for intellectual property, including patents, trademarks, and copyrights. He can't say very much, he notes apologetically: the University is looking into patenting the concept and possibly launching a spin-off.

In March, Venkatachalam received \$990,000 for the project—the largest grant in the Whittemore School's history—from the U.S. Patent and Trademark Office. If a patent is granted and he is given the go-ahead to build a nationwide network, he may find himself in the pleasant, if ironic, position of watching investors use his patented system to assess the economic potential of his system's patented idea.

-Meg Torbert



CHARLES G. SCHWAB



Chuck Schwab at the UNH Organic Dairy with several of its Jersey cows.

Excellence in Public Service

Professor of Animal and Nutritional Sciences

College of Life Sciences and Agriculture

A farmer at heart

n 1979, Jim and Ellen Putnam relocated their dairy farm in Piermont, N.H., to four miles across town. "My family's farm used to be the first one you saw coming in to Piermont," says Putnam. "Now Ellen and I are on the last farm you see going out."

The move may have been short, but when the Putnams later decided to convert their herd of 40 Holstein and Jersey cows from traditional to organic dairy cows, their learning curve seemed endless. "The transition was hard," recalls Putnam. "Everyday operations such as managing cropland and pastures without chemicals, buying feed from local farmers, and recycling were completely new to us."

Dairies are a \$51 million industry for the state, according to the N.H. Department of Agriculture, but nearly all operate traditionally, e.g., depending on imported feed and chemical fertilizers. Organic farms, such as the Putnam's, form a tiny vanguard. (Vermont, by contrast, has dozens dotting its hilly landscape.) This may change—if Animal and Nutritional Sciences Professor Chuck Schwab and his UNH colleagues have their way.

Schwab is a leader of the \$1.5 million, 30-acre organic dairy farm located in Lee, N.H. Funded through numerous private sources, including organic yogurt maker Stonyfield Farms, the farm serves as regional center of excellence for the study of dairy production and crop management.

"There is an unprecedented demand for organic dairy products and a need for more information about organic, ecologically based farming practices," says Schwab, who worked on his family's farm in Wisconsin nearly every day of his life until he went off to graduate school at age 23. "The UNH farm will bring together all who have a stake in the success of organics—farmers, veterinarians, educators, students, and anybody interested in sustainable farming practices."

For three decades, his research has been at the forefront of determining the amino acid requirements of dairy cattle. Studying how cows digest protein in their food, Schwab's research has focused on defining the cattle's amino acid requirements. His findings have led to better nutritional models that improve the efficiency of conversion of feed protein to milk protein, while reducing nitrogen in animal waste. His contributions now widely guide develop-

ment of nutritional models used by feed companies and nutrition consultants.

Schwab has managed to teach courses in animal nutrition nearly every semester of his 30-year tenure at UNH. And he coordinates the extensive farm operations for his department. In 1982, he envisioned a program that would provide dozens of students each year with the opportunity to manage a live dairy herd. In 1987, he helped UNH realize the vision by bringing the Cooperative for Real Education in Agricultural Management, or CREAM, to campus.

"I'm really a farmer at heart," says Schwab, "one who does research to help producers. My genuine interest is providing useful knowledge and solutions to producers."

And all the producers seem to either know Schwab or to have heard him speak at one of 90 or so conferences and workshops he's done during the past 10 years. He is the founder and now executive director of the Feed Analysis Consortium, a national organization comprising all of the interests of the animal and feed industries—from farmers to nutritional scientists. In 2005, the American Feed Industry Association (AFIA) formally thanked him for his "tireless and unselfish" transfer of knowledge by giving him the AFIA Award for Excellence in Dairy Cattle Nutrition Research.

Like the producers Schwab loves to serve, the organic dairy farm will require long-term cultivation. Notes Schwab: "Organic farming depends less on trying to direct what happens than on promoting what wants to happen."

Putnam, who also serves on the UNH farm's advisory board, reports that sweating out the switch to organics has only just begun to pay off. "The cows are less stressed because we don't push them like we used to. They have 120 acres of organic pasture, where they spend most of their time," Putnam says. "And, we're starting to see our prices climb," he adds, somewhat guardedly, as though not to jinx things. "But, the learning never stops."

—David Moore

"Organic farming depends less on trying to direct what happens than on promoting what wants to happen."

Dog's best friend

t could be said that Professor Jerilee Zezula's remarkable career of service—as a veterinarian, associate professor of applied animal science, and vigorous advocate for animal welfare—was ignited in the sixth grade by her love of a wayward cocker spaniel.

Little Blackie would disappear regularly from their yard in Kittery, Maine, until one day he did not come home. The devastated family did everything they could do to find him. Finally, the Animal Rescue League in Boston contacted them. The police had found Blackie wandering homeless in Brighton, Mass., and traced him through his dog license.

At the urging of her sixth-grade teacher, the young Zezula wrote about the incident for the local newspaper. Zezula recalls that the article was reprinted "everywhere" and she was interviewed by reporters and photographed with her dog.

It was both a public and personal recognition of what was to be a lifelong passion. Animal care became the focus of Zezula's career.

When Doc Z (as she is affectionately known by her students) came to the University in 1979 to teach in the small animal care program, "pet therapy" had just become a hot topic. "The nursing homes were calling shelters wanting animals to come visit. The shelters contacted me to see if our students wanted to do it. Our students were already being taught to evaluate animals for health and temperament, so we got involved," she says.

Zezula became the creator and founder of ElderPet in New Hampshire. Based at the Thompson School, the program is an affiliate of the Delta Society. In addition to providing pet visitations, the program offers support, assistance, and counseling to senior citizens and persons with disabilities, desiring to own or already owning pets.

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Little Blackie would disappear regularly from
r yard in Kittery, Maine, until one day he did
come home. The devastated family did every
a registered Pet Partner. Zezula also teaches a class
called Animal Assisted Activities and Therapy at
UNH.

ElderPet member and Pet Partner, Julie Williams,
tells the story of visiting an elderly resident at a
nursing home in Salem, N.H. "One of the residents,

ElderPet member and Pet Partner, Julie Williams, tells the story of visiting an elderly resident at a nursing home in Salem, N.H. "One of the residents, Mr. Bailey, became particularly fond of my dog, Tony. The sparkle in his eyes when he greeted Tony said more than words could ever say."

Through this work, Zezula has become a licensed

Pet Partner Instructor, an Animal Assisted Therapy I

Instructor, and with her German shepherd, Abby,

When Bailey passed away, Williams attended his memorial service with her dog. "Tony was like a celebrity in the church," she writes. "As we walked down the aisle, my eyes filled with tears when I saw the picture [of Mr. Bailey and Tony]. It truly made me realize what a difference we make."

In the early 1980s, realizing that the field of animal control was underappreciated, its officers undereducated and often frustrated, Zezula became one of the founders of the New England Animal Control Humane Academy. This nonprofit organization meets each summer for a week on the Durham campus to provide guidance and training to officers from throughout New England.

"[The program] offers courses in animal law enforcement, disease control, and dealing with animals—topics that we wouldn't get anywhere else in New England," says Craig Petrie, animal control officer for the Rutland, Vt., police department. Petrie, a 27-year veteran of his department, has attended the academy every year since 1980 and has been on the board "for most of those years." Many students come back year after year.

Zezula and her husband, Alan—a veterinarian at the Yankee Greyhound Racetrack in Seabrook, N.H.—share their life with two dogs: Abby, and Genda, a retired racing greyhound. She tells a story of Genda, who is "people friendly" but afraid of all dogs except other greyhounds. "One of the funniest things I remember is a nursing home visit we made together. When an announcement came over the loudspeakers, Genda started prancing and looking around, as if she was back at the track parading. I said to her, 'What is it with you, anyway?"

"...we got involved."

JERILEE A. ZEZULA



Doc Z and her dog, Abby, visit with Margaret Jackson, a resident at a local assisted living facility.

Excellence in Public Service
Associate Professor of Applied Animal Science
Thompson School of Applied Science

DONALD W. HADWIN



Don Hadwin in his office in Nesmith Hall.

The Jean Brierley Award for Excellence in Teaching
Professor of Mathematics
College of Engineering and Physical Sciences

Fun by the numbers

f you've ever brought small children to campus, you may have run into Don Hadwin. He loves kids and he's always ready to play. Over his T-shirt—he *always* wears T-shirts, with a different joke each day—he sports a photographer's vest with 17 pockets crammed with toys. And there's a filing cabinet full of toys in his office. He buys them in bulk on the Internet, "just to give them away."

The playing doesn't stop when the kids leave. "The most important aspect of both teaching and research is, to me, it's so much fun," he says. "I feel in my heart I haven't worked a day in my life."

That may explain why Hadwin can always be counted on to pick up an extra course or two when the need arises. "Don *loves* to teach. He really does," writes Mathematics and Statistics Chair Eric Grinberg in his nomination letter. "Don *asks* to teach large lectures."

Hadwin's research doesn't suffer from all his time spent in the classroom. With continuous National Science Foundation funding since 1977, Hadwin is among a "very select category of American mathematicians," writes Grinberg.

How does he do it? "I do most of my best research from midnight until 4, so teaching during the day doesn't interfere with that," he says. "I sleep from 4 to 11. They never give me morning classes."

Hadwin's research is in operator theory. It's "pure math," with no clear application. But, he points out, applications are often found afterwards. And for the most part, he does the work in his head. "My kind of research you can do in a canoe, on a boat, when you're stopped at a stoplight," he says. "Everywhere you go."

The first in his family to attend college, Hadwin started Michigan State University (MSU) the summer immediately after graduating from high school. "I was sure I was going to flunk out," he says, "so I wanted to get it over with."

All through high school, Hadwin wanted to be a lawyer, until he learned lawyers spend very little time in the courtroom. Undecided between math and music—he played the tuba—he took some courses in each. "I decided math was a lot easier than music," he says.

A freshman-year calculus course opened Hadwin's eyes to the aesthetics of math. "I just loved it so much. I would go home and read ahead," he says. "I couldn't believe how beautiful it was." That's when Hadwin knew he wanted to be a math professor. Quickly recognized by the other students as excelling in math, he had already been doing a lot of tutoring. As a volunteer in MSU's Student Educational Project (STEP), he taught incoming freshman at Rust College, the oldest historically black college in Mississippi, during the summer of 1966. More teaching came when he entered the graduate program at the University of Wisconsin, but his Ph.D. studies were interrupted in 1968 by the Vietnam War. He was exempted from service, because he taught at several small colleges until the war was over.

This coming year will be Hadwin's 30[™] at UNH. In that time he has not only taught numerous undergraduate and graduate students—five Ph.D. students in one year alone—he has also worked locally with gifted high school, middle school, and elementary school students. One of Hadwin's students, Jeremy England, at age twelve was a semifinalist in the Westinghouse Competition. England later graduated from Harvard and became a Rhodes Scholar. He has cited Hadwin as one of the greatest influence on his career. Hadwin has taught algebra to fourth and fifth graders; he even helped a third grader, later diagnosed with a learning disability, to overcome math anxiety.

There are just two or three key elements to successful teaching, according to Hadwin: "You have to really understand the material. You have to have a non-negative IQ," he says with a smile. "And you have to really want the students to learn—you have to care."

-Robert Emro

"My kind of research you can do in a canoe, on a boat, when you're stopped at a stoplight."

Little bursts of light

Students with a week's worth of the *Financial Times* in their backpacks chatter loudly about the latest international events as they wait for Chris Reardon's Theories in International Relations course to begin. The palpable buzz intensifies when Reardon arrives and jumps into the frenetic conversation.

Ideas bounce around the room like metallic balls in a pinball machine as graduate and undergraduate students tie theories to current events and forecast what might come. For Reardon, classes such as this one are the most fulfilling.

"I don't have to convince them that international relations is important to study. They know how fascinating it is and have the urge to learn more," Reardon says. "For them, learning is a very personal experience."

In many ways, Reardon's impact on his students is similar to that of his ninth-grade teacher. "In 1972 Nixon went to China, and his trip was earth-shaking. I wrote a paper for my ninth-grade teacher, and she gave me an A++. That's one of the things in my life that I'm most proud of. She thought it was fantastic," Reardon says.

Reardon's earliest childhood memories are steeped in Asian culture. His parents met in Thailand—his mother worked for the U.S. Foreign Service in Bangkok, and his father was with RCA. The couple moved to Macon, Ga., where the Reardon home was filled with Chinese furniture. A member of the League of Women Voters, Reardon's mother gave presentations about China's Cultural Revolution. She also befriended the niece of Georgia native John Birch, a Christian missionary and American military intelligence officer killed by supporters of the Communist Party of China.

"So with all of those things influencing my life, I was always fascinated with China," Reardon says.

"I don't have to convince them that international relations is important to study. They know how fascinating it is and have the urge to learn more." After completing his undergraduate degree in international affairs at Johns Hopkins, Reardon attended the prestigious Chinese Language School at Middlebury College and The Stanford Program in Taiwan, where he had intensive training in written and spoken Chinese. He went on to earn his master's and Ph.D. at Columbia University. In addition to serving as an associate professor of political science and coordinating the Asian Studies minor at UNH, he is a research associate at the John K. Fairbanks Center for East Asian Research at Harvard.

Reardon is the author of *The Reluctant Dragon: Crisis Cycles in Chinese Foreign Economic Policy*. He has been involved in the prestigious Fulbright Program on many levels, including as a participating scholar, as a campus committee member with the U.S. student program, and as a consultant and national screening committee member for China.

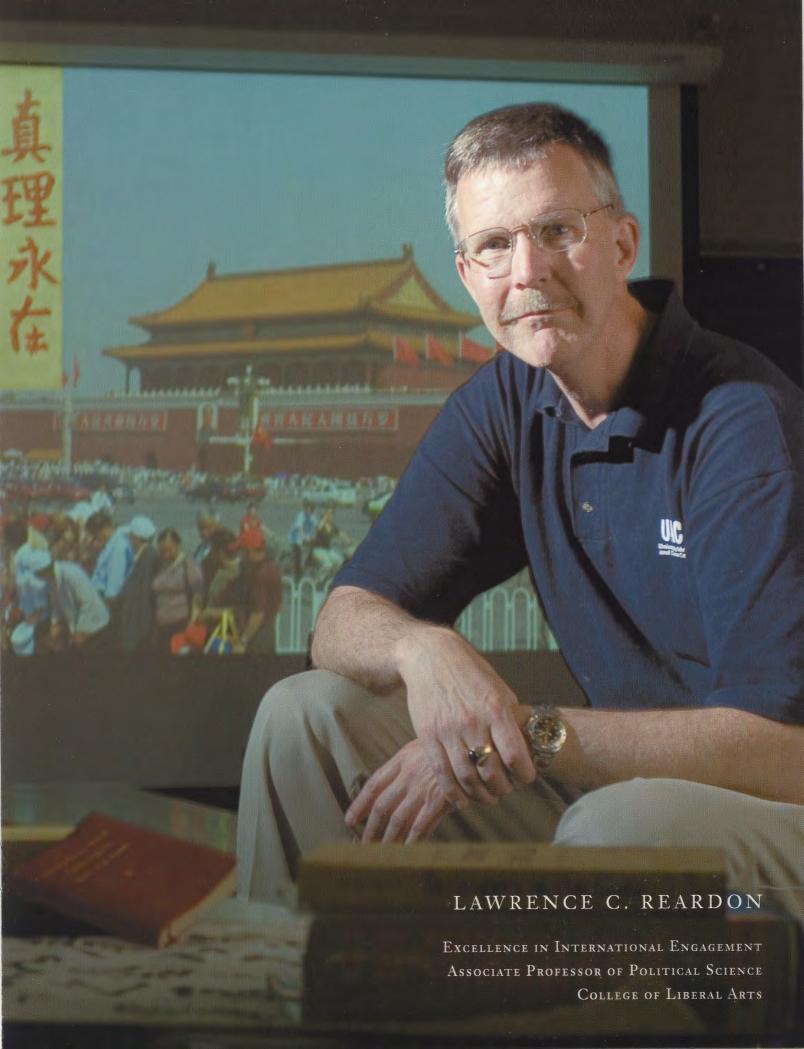
Among the highlights of his career is the time he spent teaching in China at Shenzhen University. There he obtained copies of government policies that advanced his research into understanding China's elite politics. "I was able to get these policies during this initial period before they became propaganda," Reardon says.

The documents were critical for Reardon's dissertation and manuscript for his first book. Yet, he still felt like there were aspects about China's elite politics that he had to uncover. For years, he refined his theories, mulling them over, even while out jogging. Then in 1997, China published the diaries of Premier Zhou Enlai. In them, Reardon hoped his theories would be confirmed.

"To this day, I remember sitting in Virginia. It was 90-some degrees, hot and humid, but I didn't care because every page I turned, I was jumping up and down. Here I was finding in the words of one of these elites that my theories were correct. It was like a puzzle with all of the pieces coming together," Reardon says.

"All of the lights went off. There had always been these little lights that were going off about China—little bursts of light and insight. But I didn't necessarily feel like I could completely justify the work. Then these readings came along and I could," he says. "Everything just fell into place."

—Lori Wright



HEATHER A. TURNER



Heather Turner, right, with former graduate student Nena Stracuzzi

GRADUATE FACULTY MENTOR AWARD
PROFESSOR OF SOCIOLOGY
COLLEGE OF LIBERAL ARTS

Empathy that inspires

Professor Heather Turner is one of those rare, lucky people; she knew exactly what she wanted to do with her life the day she graduated from college. Today, she's doing just that—teaching and researching stress and mental health. Says Turner, "My job is downright fun. It is intellectually stimulating, and I have a sense of making a real contribution to science."

According to former student Teresita Camancho-Gonsalves, Turner's passion for the sociology of stress is "contagious." "It also became my interest and led to the work that I carried out for my dissertation," says Camancho-Gonsalves, who is now the associate director of the Evaluation Center at the Human Services Research Institute.

Turner attributes her love for her field to her father, also a professor of sociology. As early as high school, Turner worked in her father's research unit. She jokes, "I got my interest in research from my dad by osmosis. He never pushed this on me, in fact, he joked that I should get a job that pays more."

She explains that her particular interest in stress and mental health does not stem from knowing someone greatly affected by stress, as one might think, but rather from a fascination in trying to understand a phenomenon often viewed as personal and individual from a societal perspective. "Psychological disorders are in part a function of how society is set up," says Turner. "They reflect the opportunities that people have or don't have in life."

The number of students that seek her out as an adviser is evidence of the sociologist's renown as a leading researcher in medical sociology: Turner has chaired the highest number of M.A. and Ph.D. theses of any faculty member in her department. She has published numerous articles in academic journals, is a research associate with the Crimes Against Children Research Center, and a senior fellow with the Carsey Institute. And, in her spare time, Turner is also conference director for an upcoming International Conference on Social Stress Research.

Says colleague Cliff Brown, "Professor Turner holds students to the highest standards, and her students consistently produce some of our program's strongest empirical research." Turner's students do not become great researchers just by chance. "She has always treated me with the utmost respect, never allowing me to feel foolish over my mistakes, and always pushing me to go a little farther and reach a little higher in my academic pursuits," says Nena Stracuzzi 'o6G, now a post-doc with the Carsey Institute.

Reflecting on her first year in graduate school, Stracuzzi recalls, "I was 39 years old, seven months pregnant, and had just driven across the country with my husband and two-year-old daughter to start the semester. I was so unprepared for what was in store for me in those early years; I am convinced that if I had been paired with another professor, I would not have survived."

Turner has empathy for graduate students, as "life is full of crises."

"But I say you have to do it anyway," says Turner, "and then they usually realize that they can."

The professor shares a little of her secret to bringing students over the "I can't do this" hump: "Doctoral students look at the dissertation as a huge, huge thing for them. I cut it up into manageable pieces. You just can't tell them, ok, go off and write a book. Part of the 'I can't do this' feeling is getting overwhelmed with the whole project. I say, don't worry about doing X, Y, and Z, let's do half of X."

Turner says that mentoring graduate students is the intersection of all the best things about her job: "Developing this kind of relationship with a student allows a collegial association to develop and helps to create a lasting connection with someone with whom you can share your excitement."

-Amy Seif

"But I say you have to do it anyway, and then they usually realize that they can."

It's elemental

hen lecturing a large class on the subject of polymer chemistry, Richard Johnson occasionally pulls "the spider joke." It starts with a casual remark about a spider on the floor behind the lectern. A little later, he'll mention that it's really quite big. Then he'll bend down and pick up a gigantic jiggling arachnid, launching the students out of their seats. One word brings them back to the subject at hand: "plastics."

= 22

During more than 20 years at UNH, Johnson has learned an important lesson. "It's OK for students to think you're a little eccentric," he says. "If you're not having fun in the classroom, you're students aren't having fun."

"Fun" and organic chemistry don't go together in most students' minds; "fear" is more often the case. Besides the complexity of "orgo," students have the added pressure of knowing medical and graduate schools may view their grade in this single course as an important barometer of their overall academic ability. "I really have to build confidence in the students," says Johnson. "This is not just another course, but something that needs to be integral to their education because organic chemistry is everywhere."

Knowledge of organic chemistry is built like a brick building, layer upon layer. A poor grade on the first exam indicates a weak foundation, so Johnson tells struggling students to look at the answer key and then see him for help. A successful early intervention can save the semester. "The best compliment is when a student walks in and says she was afraid at first, but ended up really liking the course," he says.

One way Johnson makes his classes more interesting is by using examples from his own research, which touches on everything from strained molecules and atmospheric chemistry to polymers and carbohydrate mass spectrometry. "Textbooks are too

dogmatic. They give students the impression that everything is known," he explains. "In fact, the frontiers of chemistry are just beyond the textbook."

Johnson's specialty is using computers to expand those frontiers. The common theme to his eclectic research interests is applying computer molecular modeling to questions of chemical behavior. How do carbohydrates fall apart in a mass spectrometer? How much strain can you pack into a molecule? "A lot of the chemistry we do is pure science," he says. But, don't take that to mean it's boring. He adds, "Organic chemistry is the chemistry of life."

As one classroom example, Johnson uses a new molecule he discovered with a graduate student. Called 1,2,3-cyclohexatriene, it's short-lived because of an unusual or "strained" geometry. He draws a diagram. "If a student were to write this on an exam, most instructors would mark it wrong," he says, "but our goal is to make molecules like this." Students are also surprised by the grad student's name. "I can claim to be a senior coauthor to William Shakespeare, which no one in the English department can do," says Johnson with a chuckle.

Johnson has found that molecular modeling also works well in the classroom. His course Web site includes numerous models for students to download. Working as a consultant, he helped Wavefunction, a leading chemistry software company, design a student version. During the last 10 years, he has presented more than 50 teacher workshops or lectures on molecular modeling at schools nationwide—from high schools to Harvard.

While he embraces technology as a teaching tool, Johnson says nothing beats the pace and structure of a chalkboard lecture for teaching a subject like organic chemistry. "The classes I enjoy the most are the big classes. You get a lot of bang for your buck," he says. "There's nothing like walking out at the end of the day and knowing you've really given a good lecture. When it all works—that is a great feeling."

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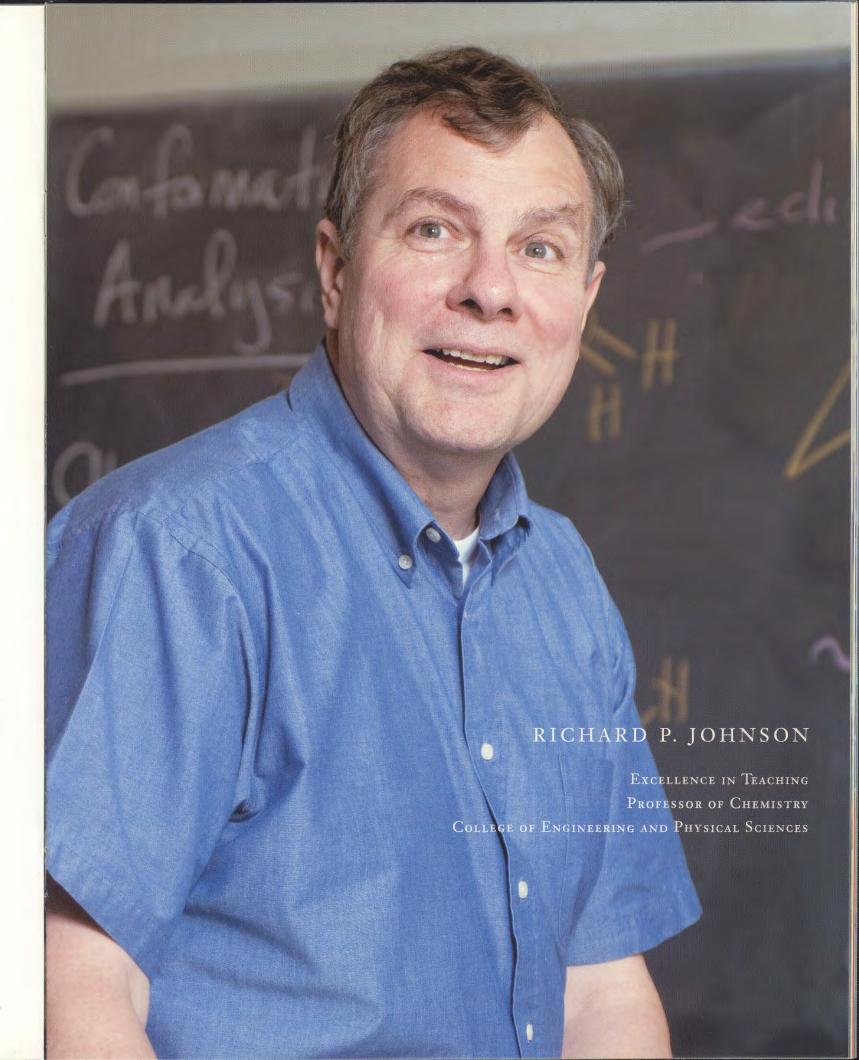
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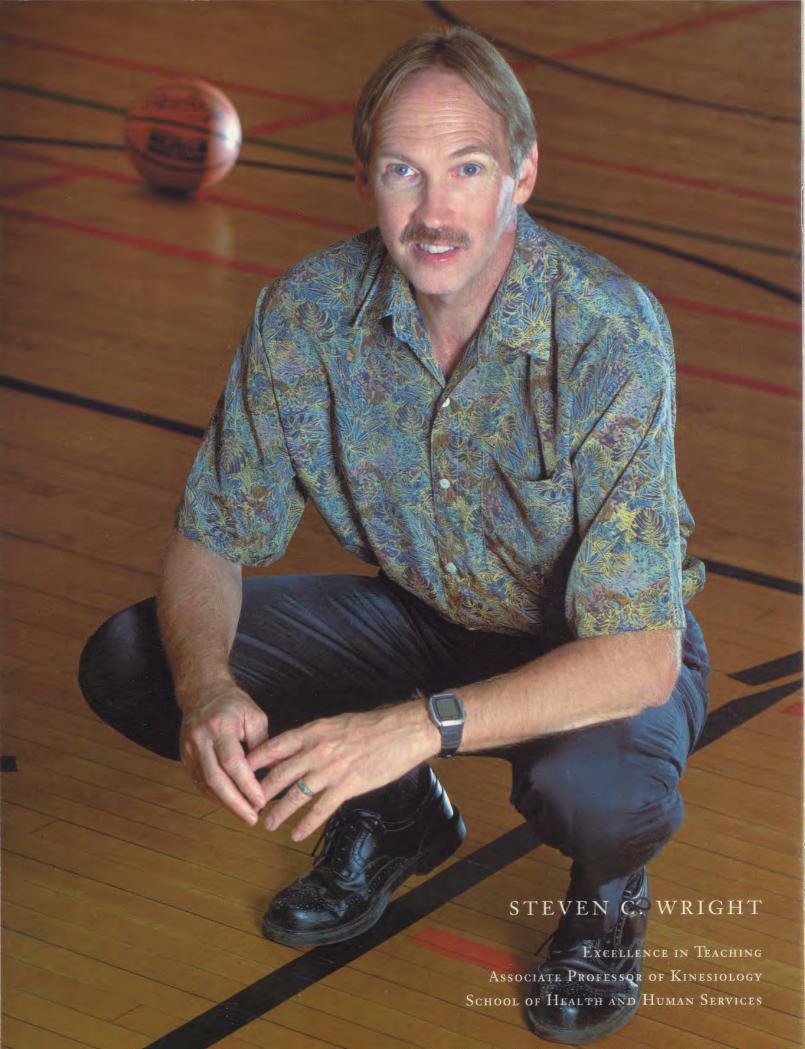
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-Robert Emro

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Playing the game

teve Wright is engaged in a struggle—he might call it a battle. He advocates for the importance of physical education in our schools. "I tell my students, 'You can't go out to the schools and just teach students, you have to educate everybody—parents, teachers, administrators, the school board."

While "No Child Left Behind" is a federally mandated program emphasizing test scores in reading and mathematics, physical education is often jeopardized despite its obvious importance in the face of rising childhood obesity and diabetes.

Compounding matters, notes Wright, is the cliché of the phys ed teacher. "[Physical education] has changed dramatically in the last 20 years," he says. "But, when you go out into the schools, you're fighting a lot of battles about the perception of phys ed, based upon what they—teachers and principals—were taught when they were little kids."

Wright has worked to debunk this stereotype. Much of his research is on teacher socialization, looking at teaching from three perspectives: the students who come into the teaching program; their experiences as they learn to teach; and then, their occupational socialization with emphasis on the critical first year of teaching.

Not surprisingly, Wright espouses a tactical approach to teaching—particularly the teaching of games, another of his interests. Traditionally games are taught through skill development and drills—then the game is played. Wright reverses the equation—first play a modification of the game and then assess the needs of the players.

"It's a different way of teaching because it really focuses on contextual opportunities of the game. When we teach traditionally through skills and drills they are de-contextualized," Wright explains. "When you do a lot of drills, the kids will ask, 'Why are we doing this drill, when are we going to play the game?"

"[Students] get to play the game through the tactical approach and then, when they do the drills, they don't complain. They understand why they need to work on the skills to get better."

Wright and his colleagues use tactical as well as traditional methods. "There is a qualifier to teaching this way," he explains. "What researchers have found is that around fourth grade is when we should start teaching using the tactical approach—kids need basic skills first." Still, he notes that in Australia there are a number of coaches using the approach with their teams. "So, it's going beyond phys ed class."

Wright notes that the tactical method was introduced in the seventies in England. He began employing it while teaching in Singapore, one of his many stops in a teaching career that has taken him to Thailand, Greece, Holland, and Australia—where he began as an outdoor educator.

An adviser in graduate school may have led him to Australia, but Wright points to an earlier influence that set him on a path to teaching.

"My dad was a music teacher," he says with a smile. "On his 25TH college reunion, he brought the family to Princeton—we had never been. We met most of his friends, all very successful people in my eyes. They all talked about how my dad was the most likely to succeed.

"I got back home and I said, 'I don't get it. All your friends are lawyers and doctors. You're just a teacher.'

"He smiled and said, 'Well, I guess it depends how you define success. I love music and I love working with young people. I think I am the most successful. I would never change a thing.'"

A self-described "black sheep" at the time, 15-year-old Wright decided to combine teaching with his love of sports—but not follow in his father's footsteps too closely—by becoming a PE teacher and coach.

"I would see my dad crying sometimes," Wright remembers. "It would be a card from a former student telling him how much he meant in his or her life. That's why I got into teaching."

-Michael Jones

"...you have to educate everybody—parents, teachers, administrators, the school board."

At home in the world

ven though Jennifer Stynes had studied Spanish since eighth grade, she didn't like to speak it. Then, as a sophomore, Stynes enrolled in John Chaston's class. "I took two classes from Professor Chaston that year," she recalls. "He was the one who made me want to declare Spanish as my major."

As a Spanish major, Stynes was required to study abroad, and she was hesitant. She has trouble explaining why that was the case. At first she simply says, "I don't like change. It was a push for me to go to UNH even though I'm from Boston." Then she adds, "I was scared because I wasn't confident enough in my ability to speak Spanish."

Chaston encouraged Stynes to go. He had her listen to tapes of Spanish speakers. The father of five children and a soccer coach, Chaston, the 'o6 director of the Granada program, found more ways to be supportive. "He showed me pictures of Spain. When he had cookouts for students at his house, his whole family encouraged us—they're awesome," says Stynes, who did indeed go to Spain this past semester.

Chaston is a master at moving students beyond Stage 2 to Stage 3, which is considered pivotal. Stage 3 is about real language and real conversation.

"Have you seen the snow-cone diagram of language learning?" asks Chaston. He opens a wirebound book, *The New Hampshire Guidelines for World Language Learning K-12*, to which he contributed. (New Hampshire schools now teach both French and Spanish about equally.) "These first two stages go by the introductory grammar books," he says, pointing to the very tip of the cone graphic. "But after that in Stage 3 and beyond, the grammar rules as they are presented don't always work and students discover that the vocabulary in those texts is far too limited."

"As a teacher, I always think—
'some other parent wants me to
do for their child what I want
them to do for mine.'"

As a sociolinguist, Chaston speaks with an authority that few possess. A graduate of the renowned Spanish linguistics program at the University of Texas at Austin, Chaston has listened to and analyzed the speech of hundreds of native speakers. He has written academic papers on, for example, the use of the subjunctive and indicative or the preterit and imperfect.

In his undergraduate phonetics course, Chaston teaches the three skill sets that students need to master in order to acquire Stage 3 proficiency—theory, speaking (practice), and understanding (listening). He doesn't make it easy, but he does make it fun.

For example, after extensive study and preparation, he'll have students listen to and transcribe portions of interviews he has recorded with native speakers from all Spanish-speaking countries. The oral histories they've listened to include the story of an exiled Cuban's rescue at sea; a Puerto Rican fable of how the owl got his feathers; and a discussion of why Colombian farmers are so willing to grow the coca plant for cocaine production. Students learn about Spanish cultures and also become comfortable with a variety of dialects.

A technological innovator, Chaston creates CDs, which record fun cultural vignettes that evolve into lessons on syntax. The result is the listener learns (painlessly): "Oh, so that's how they'd say, 'These fireworks are amazing!"

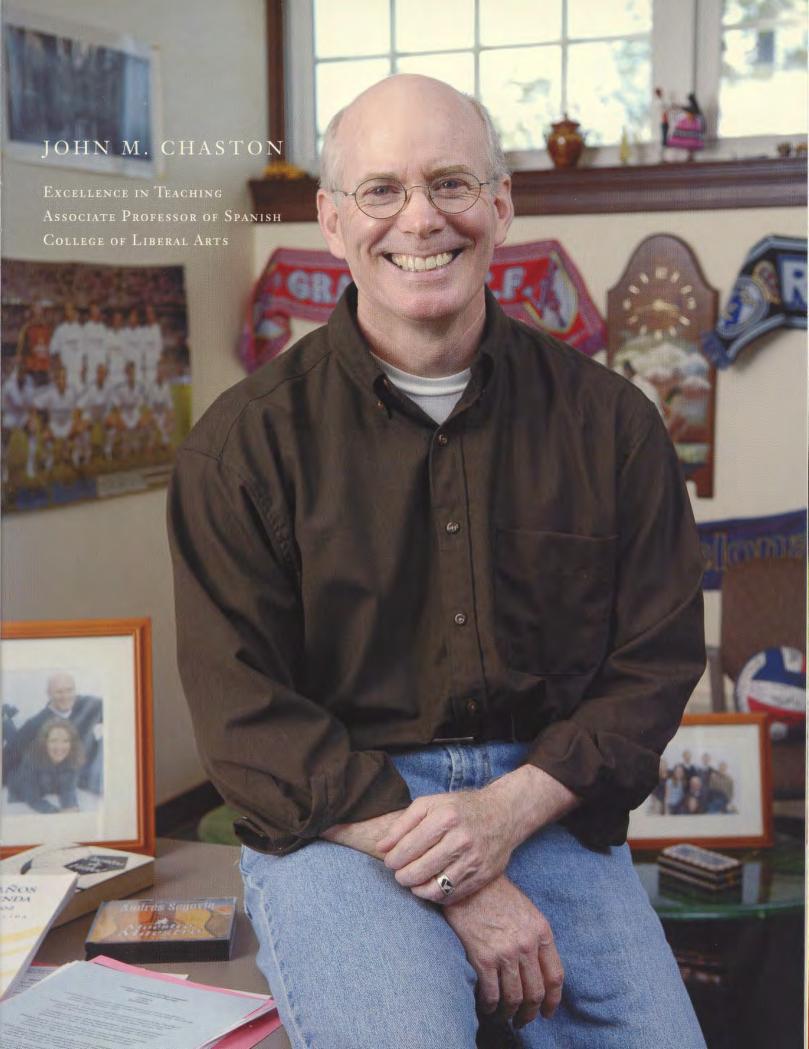
As Chaston notes, students learn because they want to communicate. Ever the coach and social scientist, Chaston also tests students frequently to make certain they're getting it. If a student is slipping, Chaston, whose office door is always open, makes sure that student gets help.

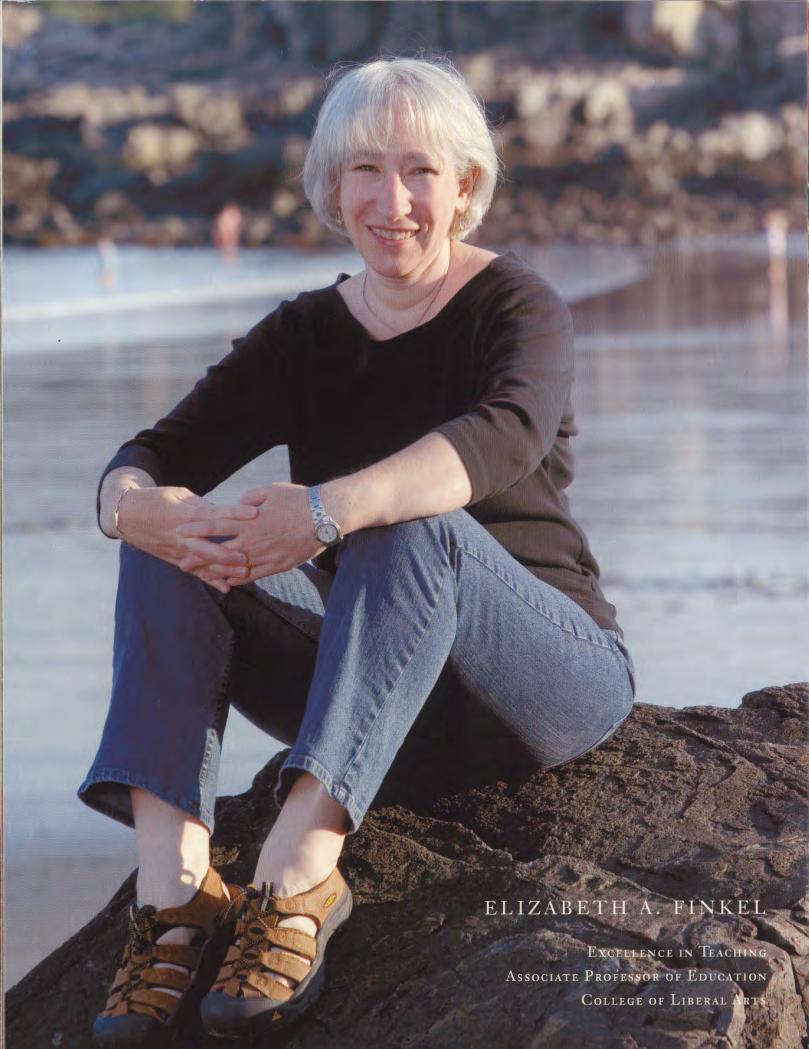
"As a teacher, I always think—'some other parent wants me to do for their child what I want them to do for mine," says Chaston.

Indeed, in Granada this past spring, students told Chaston that he came to Spain with two kids and left with 40 more.

As for Stynes? She's certain she wants her career to incorporate Spanish, perhaps living abroad. Her confidence is inspiring. She is now someone who feels at home in the world.

-Carrie Sherman





A teacher's teacher

uring a summer stint as a graduate teaching assistant in Wyoming, Liza Finkel's interest as an educator surfaced while she was perched next to rocky outcroppings, listening to her students enthusiastically describe their discoveries. That's when Finkel began to change her career from geologist to teacher.

When an opportunity to teach earth and physical sciences to eighth and ninth graders at a small, private school in Finkel's hometown of St. Louis, Mo., emerged, she took it. While teaching middle school, Finkel met Scott Fletcher, a colleague, who later became her husband. She also participated in a mentoring program for new teachers that re-energized her desire to pursue a Ph.D., but this time her focus was science education.

Finkel describes her experience in the doctoral program at the University of Wisconsin at Madison as her "best educational experience."

"Part of it was my readiness to be there," she says. "I knew what my questions were and what I was interested in." In just three years, she earned her Ph.D. and was offered and accepted a position as an assistant professor of science education at the University of Michigan.

Soon after, her husband accepted a position at the University of New Hampshire. The move east led to Finkel's teaching position at Noble High School in North Berwick, Maine, and, three years later, to a faculty position at the University's Department of Education.

Finkel's teaching experience spans a wide range of ages and interests, from middle and high school science students, to undergraduate and graduate education students, to experienced teachers looking for professional development. She is what one colleague calls a "teacher's teacher."

In her course, Educational Structure and Change, a requirement for master's degree students in the Teacher Education Program, Finkel writes the syllabus for the first half of the semester. Then, she and her students jointly write the syllabus for the second half. Says Finkel, "It shows I value their ability to make good decisions about what they should be learning and models a democratic community of inquiry."

She encourages her students to write questions about the topics discussed in almost every class. Her intent is to build a lifelong habit of questioning, as opposed to answering. Says Finkel, "My measure of a person who knows a lot about a specific area is someone who can ask a lot of thoughtful, probing questions."

To represent their yearlong experience in a public school, Finkel's interns each create a portfolio that includes a collection of artifacts. One year, interns presented Finkel and a cosupervisor with mirrors as symbols of the act of reflection. Finkel notes, "I carry that mirror to remind me of those interns and that I should reflect, too."

Finkel is also concerned about the ways that schools can become places in which teachers and students work together to create a more just society. "If we want to work for social justice, what better place to do that than in public schools?" she asks.

Of course, one area of interest for Finkel continues to be science education. She acknowledges the research showing that girls need an environment that supports their interest in science. And, she is an advocate for science teaching that is more cooperative than competitive and more oriented toward inquiry that engages authentic problems or issues. "Young kids love science, girls, boys—it doesn't matter," says Finkel. "They are interested in the world around them. How things happen, why they happen—they don't know it's called 'science."

Helping students understand the world around them requires putting lessons into context. "I'm a geologist and I know a lot about earth science," says Finkel. "As a teacher, I help my students clarify what they're interested in and then relate it to the content of the lesson."

Finkel's gift as an educator is that she can teach others to understand their role in making these connections.

-Susan Entz

"My measure of a person who knows a lot about a specific area is someone who can ask a lot of thoughtful, probing questions."

Laugh while you learn

An encounter with James Krasner is bound to make one smile, or more likely to laugh out loud. Noted for his intelligence and admired for his scholarship, he is hailed for his ability to cause frequent and uncontrollable eruptions of laughter.

"I think it's important to be funny," he says.

"That's my big thing. The essence of humor is sudden shifts of context, and when you're teaching, what you're trying to do is to get people to see something in a different context."

Using humor, Krasner demystifies what might be considered heavy historical literature and imbues it with modern-day relevance. Take Noah, for example. In his Bible as Literature course, Krasner details the specific instructions that God has given Noah for building the ark. "It has to be this many cubits, by this many cubits, by this many cubits, and I say, 'Why is God talking this way, why is he suddenly being so precise about measurements?""

Krasner has his students imagine God as a middle-aged man, who is frustrated with his family and seeks escape in his garage-turned-workshop. "There's an element of emotional response on God's part here," he explains. "He gave Adam and Eve this general instruction, 'You can do whatever you want, but don't eat that,' and it didn't work, so now with Noah it has to be exactly this many inches big, so there is no question. When I say that it's about a middle-aged man, you can laugh. It's funny. And they get it. You really have to put everything in a very down-to-earth frame of reference."

The strategy works equally well in his poetry classes. "Love poetry has changed so little in 500 years," he observes. "You have these really elegant sounding love poems, but they're describing exactly the same sort of bitter, or petty, or silly emotions that

everyone experiences when they're falling in love. When you look at a passage from Shakespeare or Petrarch, and you say, 'Well this is just a bad break-up,' it seems funny, but it's also true. There isn't this division between cultural history and ordinary every day life."

Krasner teaches Victorian British literature, his specialty, at both the graduate and undergraduate levels. As he works with students who are about to begin their own teaching careers, he will, with a Krasnerian twist, challenge them to identify the worst book they read in high school and determine why it was so bad, all in preparation for choosing the books they will ultimately teach. *Jane Eyre*, his favorite, is often at the top of that list.

"She is a great character. I am completely in love with Jane Eyre," he says as he leans forward in his chair. His eyes light up. "She's really angry, and passionate, and sneaky, and she tells all these lies and she gets what she wants, but she manages to come off as this incredibly good moral person and she really is. There's something so alive about her and about the way [Brontë] writes."

Krasner brings a seemingly endless and eclectic range of literary knowledge and insights to his teaching, including research of his own. His book, *The Entangled Eye: Visual Perception and the Representation of Nature in Post-Darwinian Narrative*, was published by Oxford University Press. His work has also appeared in prestigious literary journals such as *Representations, Victorian Poetry, English Literature in Transition, Mosaic*, and *PMLA*.

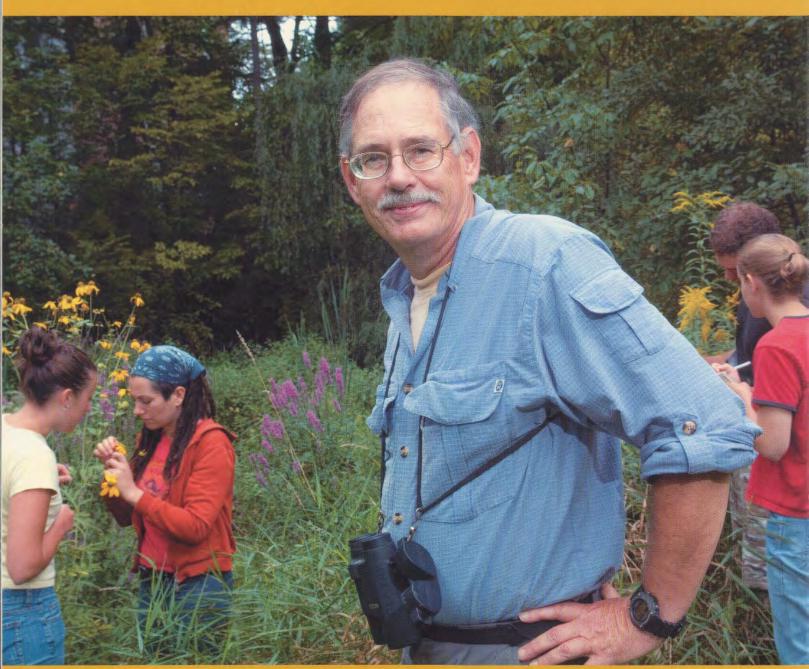
Yet, teaching remains a priority and a love. "Teaching is about the chemistry of the people in the room. You go out there with the same ideas and the same jokes and sometimes it goes better, and sometimes you think it is going worse. There I am yakking all semeser and the real content of the class is what's happening in people's minds and what's happening between he people in the room, and between them and me. It's a magical experience."

—Sarah Aldag

"Teaching is about the chemistry of the people in the room."



JAMES T. TAYLOR



Jim Taylor with students in the ravine on the Durham campus.

Excellence in Teaching
Professor of Zoology
College of Life Science and Agriculture

Snakes and snails

cology is my life, my hobby, my vocation...
it's all I do," says Jim Taylor, professor of
zoology. Taylor was the kind of kid who was
always bringing home frogs and salamanders, snakes
and bugs, and still insisting on trips to the zoo. The
son of a teacher, Taylor grew up in the southern
Appalachian town of Berea, Ky., where he hunted,
fished, and raised beagles. He always knew he wanted
to be a scientist and an academic. He studied at the
University of Southern Mississippi, the University of
Tennessee, and Oregon State University. He landed
his first teaching job at UNH where students have
enjoyed his unique style of teaching for 29 years.

Any course with Taylor covers issues bigger than ecology. He wants students to understand science as a way of knowing, and so he emphasizes the process of doing science. For ten years Taylor cotaught ecology with Professor Tom Lee, a course so lively they earned the moniker, the "Cheech and Chong of Ecology."

"We learned so much from each other and the students absolutely loved it," recalls Taylor. "[When you coteach] you teach on the tip of your personality, and watching another makes you better."

Reflecting on that experience, Lee notes, "Jim has an off-beat sense of humor and an uncanny ability to relate the most complex issues to everyday life. He can explain the efficiency of energy flow by comparing people's eating habits. He's one of the most effective lecturers I have ever observed. He taught me the importance of communicating to students a few really important concepts... and he showed me how to teach quantitative material in a way that students would learn it, see its value, and apply it to solve real problems."

Taylor's General Ecology course makes the most of New Hampshire's diverse environments in which students can apply data-gathering techniques and statistical tools.

His students engage in field-based projects that include sheep grazing on the power-lines, mammal trapping on Foss Farm, and measuring the size of the algae populations and animals in intertidal zones. During "Winterim," Taylor and students study the tropical ecology of St. John in the U.S. Virgin

Islands. There they explore not only the coral reefs but also the mangrove shore.

Taylor sets high standards, challenges his students to do their best, and has earned high praise from his students. Basically, you can't pass a Jim Taylor course without working hard and learning lots. Former student, Kim Babbitt, now an associate professor of wildlife ecology at UNH, can attest to that.

"When I was a student here, I took General Ecology with Jim Taylor and that was one of the best classes I had while at UNH," says Babbitt. "It continues to be one of the best courses we offer in the college."

As a member of the New Hampshire Scientific Committee on Biodiversity, Taylor has organized volunteers to gather data to assess the distribution and abundance of amphibians in the state. Their findings confirmed the anecdotal evidence that there is a decline in amphibian species. His books, *The Reptiles and Amphibians of New Hampshire* and *New Hampshire's Living Legacy: Biodiversity in the Granite State*, have been important milestones in bringing public attention to the need for conservation of natural diversity in New Hampshire.

Now that his daughters have completed college, Taylor spends his vacations trekking. During a sabbatical semester in 2004, Taylor took his first trip abroad to Indonesia. Since then he has been to the Amazon, Bolivia, Africa, the Galapagos, Costa Rica, and Panama. This past summer, he went to Mongolia and then on to Tanzania, for a fourth visit. The Tanzania trip was a walking safari.

On campus, Taylor is easy to spot—he's the one wearing pink crocs given to him by his students with his beagle, Marley, at his side.

-Gretchen Forbes

"Ecology is my life."

The mind's eye

ohn Sparrow has two great passions: teaching psychology and college hockey. "When I began undergraduate school [at SUNY Oswego], I had no idea of what I'd be 'when I grew up,'" Sparrow reminisces, "and then I took an introductory psychology course, and I was hooked."

His interest in experimental psychology led him to graduate study in the psychology program at UNH, which has been nationally recognized for its college teaching program. "What I really appreciated about UNH was that the program focused on the teaching of psychology and on research, instead of having a clinical perspective," explains Sparrow. "In this program, you really learn how to be an effective teacher."

At UNH, Sparrow also learned what it meant to be a true college hockey fanatic, "I played hockey as a kid and grew up watching the NHL, but college hockey is different—exciting, fast, and clean," he enthuses. "Plus, UNH has a first-rate team that's really terrific to watch."

During his years as a graduate student, Sparrow began his research in visual perception and "psychophysics," the quantitative relationships between physical stimuli and the observer's experience.

"We can talk about the physical aspects of vision," Sparrow explains, "what the lens and rods and cones are doing in the eye, but that can only tell us about the biology and physiology of vision. It doesn't explain how the brain perceives what we see—color or motion—for example. The answers to questions about perception represent the *psychology* of vision."

After earning his doctorate, Sparrow taught at SUNY Geneseo. But his connection to UNH and southern New Hampshire remained a powerful one, and five years later he accepted a position at UNH Manchester.

"Imagine what the goalie has to do in terms of depth perception, perceived motion, and visual cues." For 13 years, Sparrow, an associate professor, has honed his teaching approach at the urban Manchester campus, where he credits his students for being especially "focused and engaged." "UNH Manchester has students of all ages and backgrounds who make up a very nontraditional group of undergraduates. They feel free to question and challenge the information presented, so classes become dialogues rather than lectures," he says, "This level of interaction makes the classroom experience very exciting for me, and I am able to raise the bar for the students I teach."

With teaching evaluations that are nearly a perfect five (as well as a previous Teaching Excellence Award in 1996), Sparrow's students clearly return his compliment. They recognize his teaching abilities, including "his gift for making complex topics understandable" and the way in which he challenges his students to "push beyond where [they thought they] could go."

Sparrow's students, many of whom have interests in clinical and counseling psychology, often gain an important new perspective of the field from his classes. "One of my missions is to remind students that the roots of our discipline are in experimental psychology," Sparrow says. "Psychology didn't begin with questions about schizophrenia or the theories of Freud; it actually grew from the work of philosophers and the need for empirical, scientific research on the nature of the mind, perception and sensory processing, cognition, and learning and behavior."

This is where Sparrow's work meets his passion for college hockey. In presentations about his research on motion and depth perception, he has been known to incorporate Hockey East video clips. "Think about the nature of motion perception in hockey; players and the puck are moving virtually all the time. Imagine what the goalie has to do in terms of depth perception, perceived motion, and visual cues," Sparrow says. "In hockey, as in any sport, athletic ability is clearly required, but there is also a whole lot of psychology as well."

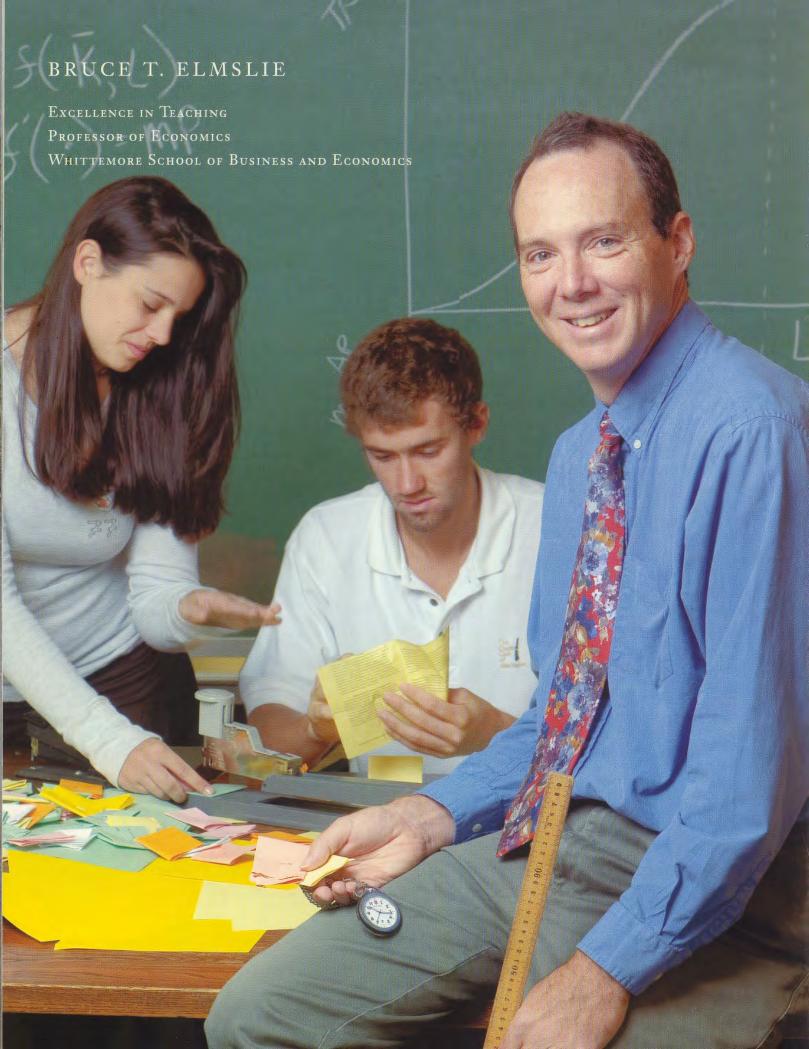
—Donna Eason

JOHN E. SPARROW



John Sparrow at the Whittemore Center, home of the UNH Wildcats.

Excellence in Teaching
Associate Professor of Psychology
University of New Hampshire, Manchester



Widgets and curves

n a Wednesday morning in June, the mood is tense in Room 308 of McConnell Hall. A cluster of students huddles around a table, ripping and folding in a flurry of white copy paper. The guy operating the stapler is working as fast as he can, punching away, muttering under his breath when the thing jams up. There's laughter, but everyone's focused. It's a race against the clock here in this miniproduction facility, staffed by students in Bruce Elmslie's Principles of Microeconomics class.

"Time's up!" says a voice from the floor, where another student is keeping time. The tally? Eleven. Elmslie records the number on the board, where the class can see the results of this experiment: Seven workers produced 11 "widgets" (a.k.a. pieces of paper folded three times and stapled). The tally has been going up steadily with each additional worker. But now there's a problem.

"We need another stapler," says a member of the work team, pointing to the pile of unstapled widgets. "We're producing more than we can finish." Additional workers are brought on for a few more rounds, but space is tight around the table. All the new "hires" can do is cheer the laborers on. Production levels out, then stalls. Voilà! An economic truth becomes obvious: a variable input (labor) added to fixed input (capital) does not always result in increased production. Translation: Stapler overload has been reached.

By the time the factory workers return to their seats and Elmslie begins plotting the points of the production function on the board, his students are ready to grasp the concept behind the demonstration. The widget factory has done its job, providing tangible proof of why a production curve looks the way it does.

Widgets and curves—taken together, they sum up the teaching genius of Bruce Elmslie. "He can make very difficult concepts very easy to grasp," says graduate student Sara Siegel.

Elmslie had an inkling he'd like teaching from way back. As an undergraduate, he was a tutor. As a graduate student, he was a teaching assistant. And he kept getting the same feedback: *You make things easy*

to understand. Elmslie was hooked. "Trying to teach the principles of economics—and having someone respond to your explanation—it was terrific."

Elmslie still thrives on student success. Teaching complex material to undergraduates, many of whom have never set foot in a calculus class, is a feat Elmslie is especially proud of. Take his economic growth class, for example. Students choose a specific country to study, with specific institutions and very real problems. "They are able to make quantum leaps in their abilities to analyze the economy," Elmslie says. "It involves lots of advanced mathematics—a whole new level many never thought they could reach."

In the end, students develop a recommendation on what to do to improve the growth rate of their chosen country. "His entry point is always a realworld issue," says graduate student Arpita Banerjee, "and then he goes back to the theoretical models."

Which explains why UNH's Budapest program is so important to Elmslie, who coordinates the study-abroad experience for WSBE students. With its rich and tragic history, Hungary is an ideal learning laboratory. "Just in the past 15 years it's become an emerging market economy," says Elmslie, "and students get to see this firsthand. They live in a modern city, but five miles out, someone is plowing a field with a horse and a hand plow. Seeing an economy like that—full of contradictions—is a great experience."

At its most basic level, Elmslie points out, economics is about those farmers behind their plows. It's also about students sitting in a university classroom. Those who study with Elmslie come away understanding this essential truth, which permeates his teaching: "Economics is everywhere," he says. "It's always around you. It's about your life."

-Suki Casanave

"His entry point is always a real-world issue."

A classroom that works

e's one part I.M. Pei, one part Bob the Builder, and a dash Nick Adams. Tom March would be the perfect host for a PBS show called "How to do all the things you ever really need to do in life." Yet it's no wonder PBS hasn't discovered him yet; modesty runs deep at the Thompson School of Applied Science (TSAS), where some of the world's best teachers hide out in a modern-day Galt's Gulch.

March's field, agricultural mechanization, might be more aptly named "incredibly useful things you didn't know," or something like that. March serves up knowledge that TSAS students need as they complete their individual two-year programs. Many baccalaureate students also take his courses to put an applied spin on their own studies. March's technical computer literacy course prepares students for integrating AutoCAD and other software in fields such as construction management, surveying, and architecture. His courses on electricity, building construction, welding, and internal combustion engines combine university-level theory with practical, hands-on instruction. Students learn literally through their fingertips, feeling the heat and hum of engines. This is knowledge that sticks.

Over the years, March has tweaked his teaching approach to include lectures, labs, demonstrations, and handouts. "The handouts are awesome," notes one of his students. These handouts are highly customized "textbooks" that accompany his lectures and slide shows. Even March admits that these virtual field trips have become extremely effective learning tools. They're loaded with real-world photographs that pack a pedagogical punch.

Many of the photographs come from March's own projects. In class, students relive his undertakings through the digital slides capturing important moments. For example, one series records March's work designing and building two cottages and a custom boathouse on his lakefront property in New York.

Students learn literally through their fingertips, feeling the heat and hum of engines. Another unveils his work on an elevator to scale the 30-foot cliff between cottage and beach. When his mother-in-law found herself in a wheelchair, he built the elevator so she could still enjoy the sand between her toes. Don't try Googling "elevator kit." He made it from scratch, spending nearly 300 "after-hours" designing it in AutoCAD, then countless nights and weekends fabricating and welding the components.

At the west end of Putnam Hall, March's classroom is unlike any other at UNH. Flooded with natural light, the large, workshop-style space features electrical booths, welding benches, giant equipment cabinets, and more, all on a concrete floor.

According to him, it's a classroom that really works. It should. He designed and built it himself when he arrived at the Thompson School in 1977, spending his off-hours measuring, hammering, and, two years later, finishing the space. Today, it's so clean and tidy that the school's Stacey's Café could set up its buffet there at a moment's notice.

Was all the work worth it? "Absolutely," he says. "It's an investment in my teaching and in what is going to happen in the classroom."

What happens in the classroom is profound. "If it wasn't for [March's] encouragement last year, I would not be here now," recalls one student. Another simply says, "He's wicked smart." And one student went as far to say, he's "Superman when it comes to ANYTHING!"

Super man and super busy, that's for certain. Still, March finds time to reel in enough lake trout to enjoy of the grill or freeze for winter meals and to explore the vast Finger Lakes region by boat. More than once he's made the two-state, two-nation, multiday trok from Cayuga Lake and back via the interconnected waterways of New York, Ontario, Quebec, and Vernont.

Does he ever sit still? On occasion, you'll find Tom Mirch at the end of the dock, enjoying a glass of Finger Lakes wine with his wife Priscilla, his childrer, or his violin virtuoso neighbor, watching the Cayiga sunset.

He says there could not be "a more perfect job or lifestyle than what I've had here for so long."

-Tracey Bentley



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