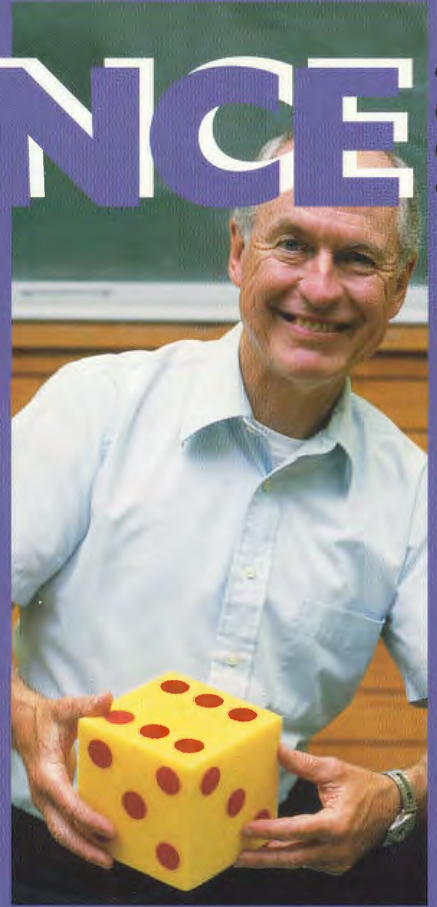


UNIVERSITY OF NEW HAMPSHIRE

EXCELLENCE

1999



Teaching • Research • Public Service

Models for Excellence

As the new provost, this is my first opportunity publicly to recognize and celebrate the excellence of the University of New Hampshire's faculty. This excellence became immediately apparent to me when I was considering joining the University this past spring. I was struck then by the quality of the faculty and their dedication to students, to the highest standards of scholarship and research, and to UNH. I continue to be impressed.

Although this publication showcases the extraordinary accomplishments of a

group of talented individuals, it also celebrates our faculty as a whole. In these profiles we learn about award-winning individuals who were selected by their peers and students for special recognition. By these choices, it is evident that standards for excellence are high, and that our faculty values the many different ways excellence emerges at UNH.

In the laboratory, the classroom, the library, the concert hall, and beyond the University, UNH faculty—some very experienced, some early in their careers—are changing the lives of our

students, extending our understanding, and improving our communities.

I am especially pleased to congratulate these award winners and to have become a part of this wonderful faculty.

*David Hiley
Professor of Philosophy
Provost and Vice President for
Academic Affairs*

Excellence in their careers

Reaching a career pinnacle means a continued commitment to students, disciplines, and the University.

Keith Polk 1
Distinguished Professor

Margaret Lamb 2
Outstanding Associate Professor

Kurk Dorsey 3
Outstanding Assistant Professor

Excellence in research and public service

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Excellence in Public Service

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Alumni Affairs Award for Excellence in Public Service

Excellence in the classroom

Teachers who excel do more than convey information. They share a love of learning and passion for knowledge that challenges students to become their best.

William Condon 7
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Keith Polk

THERE IS NO APPARENT MOODINESS, NO imperious toss of the head or tortured look to the eyes. Keith Polk is an accomplished musician, a scholar, an *artiste*. Shouldn't he be difficult, or at least temperamental?

Polk certainly has the résumé to justify a little conceit. An accomplished French horn player, he performed in his first symphony orchestra at 16, spent time in Europe researching Renaissance music, and continues a long career telling students about music and its potential. And, yet, Polk speaks about his dedication to his craft and his students with a matter-of-factness that surprises a visitor expecting artsy expressions and existential patter.

This artist without angst explains that freelancing musicians have to say yes to so-so jobs so they'll be offered the plum assignments. He confesses to disliking playing "pops" tunes. He talks about needing more preparation and practice time as he gets older. And he admits his scholarly research on Renaissance music was the result of his studies at Berkeley because, at that time and place, "Renaissance music was where the action was."

With his low-key demeanor, Polk might convince you he isn't at home on stage. While not a showman, he is nevertheless a performer. He's been performing since high school, when he ditched the piano in favor of the French horn and was able to properly mine his musical talent.

By 16, he was a regular replacement horn with the San Diego Symphony; a year later was a permanent member. But while he enjoyed the guidance of conductor Robert Shaw—who had already won international fame as a chorale director—Shaw's successor hit a sour note. "It dawned on me that I really didn't want to be at the mercy of a conductor," he recalls. "An orchestra is not a democratic organization."

Neither is a classroom, but there the comparisons end, Polk claims. He is reluctant to compare his role as teacher to that of a conductor. A conductor, he points out, faces a group of trained musicians with the aim of coordinating their performance. A teacher faces a group of untrained students needing more structured guidance.

But Polk will admit to one similarity. Both conductors and teachers guide their musicians and students to an end, he says: thanks to the conductor, the musicians perform; thanks to the instructor, the students learn.

In explaining the learning process, Polk talks about efficiency.

"If you've been a performer, you understand that when you're in front of a class, you have to control the dynamics," he explains. That means being efficient at

detecting the tensions, the underlying mood. Who is engaged? Who is responding? And are they responding to each other or to the instructor? "After a while, you build momentum as a teacher," says Polk. "It's usually three to four weeks until I have them all."

"When I'm teaching, I take advantage of every opportunity," he says. "That might mean choosing between the not-so-perfect recording of a perfect piece and a not-so-perfect piece that sounds good." You choose the latter, to help convey the various sounds, the melding of notes, the use of melody.

Polk's sensible side, comfortably co-existing with his artistic sensibilities, is also evident in his honors program course on Music, Art, and Social Change.

He spends the first two weeks teaching students fundamental musical terms. After all, what good is listening to Mozart and Stravinsky if you don't know the basics?

One of those basics is knowing that some instruments in an orchestra can be played with more expression than others. A good oboe player, for instance, combines technical skill with artistic heart to become outstanding.

Polk's French horn playing is the same. "As a musician, I feel I'm an expressive player," he says with a reserved smile. And as a professor? "Certainly not a B flat teaching personality," he says, matter-of-factly, of course.

—Carmelle Druchniak, UNH News Bureau

Art without the angst

At home on stage and in the classroom



When he was a young performer with the San Diego Symphony, Keith Polk did odd jobs to earn extra money. One of his more memorable assignments was ferrying a new conductor from his hotel to symphony hall for a morning rehearsal.

The passenger turned out to be drunk, but Polk dutifully drove the conductor to the hall. Inside, Polk helped him to the conductor's podium, noted "The orchestra is that way," and left to take his seat. Says Polk: "It turned out to be not that bad a rehearsal."

Education and Research

B.A., San Diego State College, 1956

M.A., music, University of Wisconsin, 1958

Ph.D., University of California-Berkeley, 1968

Margaret Lamb

At the heart of healing

Caring for women, not just treating disease

FROM THE PASSENGER SEAT OF HER GRAND-mother's Jeep, Peggy Lamb had her gaze fixed on the road ahead. It was 1960, and in the rural town of Ossining, New York, Peggy's grandmother was making the rounds, tending to her elderly sick and homebound neighbors. She wasn't a professional nurse; that wasn't possible for a traditional woman born in 1900, but in Peggy's seven-year-old eyes, she embodied all anyone needed to know about healing.

Peggy Lamb says that while her childhood excursions with her grandmother may have predestined her to become a nurse, it was chance that propelled her into her area of specialization: gynecological oncology. Lamb says that while studying for her master's degree in Rochester, N.Y., she had wanted a position working in the labor and delivery area of Strong Memorial Hospital, but there were no openings.

"They said, 'Try working in the women's oncology section for a while, and we'll let you know when there's another opening,'" Lamb recalls. But working in the oncology area proved to be a joy for Lamb and she's never left. "I have found that women who have had (or who have) cancer are so awe-inspiring. And because I generally worked with them for years through the course of their illness, I wanted my work to have a real effect on their quality of life."

Lamb said she decided to investigate one of the great unspoken areas of cancer treatment; that is, how having cancer affects the long-term sexual relationships women have with their partners. "At first I was worried that no one would feel comfortable talking about these issues," says Lamb. "But the opposite actually occurred. They were both relieved and grateful to have someone to talk to. Imagine, I sent letters to women who didn't know me who had cancer and asked if I could talk with them about how the disease was affecting their sex lives. And they almost always said, 'Yes, come talk with me.'"

Lamb's willingness and ability to investigate important but difficult areas of cancer patients' lives spills over into her nursing classes at UNH, where students often hear from women who have had cancer about the "other" effects of the disease, and how good nursing can make a difference. But Lamb doesn't stop with classroom examples. She brings her students to Exeter Hospital twice a week during the school year to see nursing in action. Especially during the night shift, from 2 until 10 P.M., students often witness patients and their families coping with illness and the challenges they face.

Many of UNH's nursing graduates work at Exeter Hospital, where Lamb is a familiar face, and they share their experiences with the new students coming through the program. Lamb has created a community of learning, where students, alumni, and



"Nursing education creates an opportunity for a natural marriage between research and practice. As our field becomes more and more evidence-based, students are thirsty for research results, for the practical knowledge it gives them when faced with the fear of making mistakes with other people's lives."

Taking a break from a busy rotation at Exeter Hospital to meet with Peggy Lamb (standing right) is, seated (left) Sarah Burgess, senior. Standing (left) are Lori Swasey RN, '92, clinical manager north, and (center) Sue Cronin RN, '91, education director, Exeter Hospital.

faculty all interact to the betterment of their profession and each other.

This fall Lamb prepares to embark on an ambitious pilot study. She will be analyzing the quality of life issues involved with a new and potent treatment for patients with advanced cervical cancer. Clearly she will be keeping long days and nights balancing her devotion to teaching with her long-term vision of better lives for women with deadly illnesses. But for Lamb this hectic pace makes sense—as much sense as her grandmother's devotion to the housebound in Ossining.

"I found this small part of the world that needed my attention," she says, "and it holds it still."

—Susan Warner Smith, *University Publications*

Education and Research

B.S., nursing, State University of New York at Brockport, 1975
 M.S., nursing, University of Rochester, 1979
 Ph.D., nursing, Boston College, 1991

RESEARCH: Lamb was recently awarded a grant for a pilot study on the longitudinal effects on quality of life and sexual functioning for women with high risk cervical cancer who are undergoing chemo/radiation therapy. The treatment is heralded as a breakthrough for this disease.

Kurk Dorsey

YOU DON'T HAVE TO LOOK AT THE SCHEDULE to know when history professor Kurk Dorsey is holding office hours. You can tell by the number of students lined up in the hallway. Some are looking for tips on how to organize a research paper or study for an exam; some want to continue a spirited discussion that started in class. Whatever the reason, students always want to talk to Dorsey, and despite an exceptionally heavy teaching schedule, he always finds time for them.

Dorsey's accessibility is one reason why student evaluations rate him among the University's best teachers. "I can't even count how many times he has taken the time to talk with me at length about whatever issue I might bring to him," says Valerie Dunham, a graduate student who has taken three of Dorsey's history courses.

Of course, Dorsey wouldn't be so much in demand during office hours if he didn't engage his students in the classroom.

Students consistently rate him one of the best lecturers on campus. "By far the best discussion leader and instructor in the department," one student evaluation says. "Awesome—you can't help but pay attention," says another.

Dorsey's popularity is particularly impressive considering that none of his classes is easy. All require heavy reading, papers, regular attendance, and participation in discussions. He also has the reputation of being a very demanding grader—tough enough to earn the nickname "D+ Dorsey."

"Professor Dorsey is a tough teacher, but students enjoy working hard for

him," says Katie Porter, an undergraduate history major. "Students trust his opinion of their work and listen to his advice.

Seniors I have spoken with are confident their writing skills have improved due to his counseling and high expectations."

If Dorsey's courses are demanding,

they are also fun. The assistant professor has a contagious enthusiasm and a casual sense of humor that invite even the shyest student to participate in classroom discussions. He generally goes into an 80-minute class planning to lecture for 45 or 50 minutes, knowing that class discussion will fill the gap. He encourages students to interrupt with questions at any time.

If questions aren't forthcoming, he will deliberately say something to spark discussion, challenging the students to take different points of view.

"Many students come to college thinking they hate history, so the first challenge in an introductory course is to teach them that history doesn't stink," Dorsey says. "How do I know when I'm succeeding? When they start getting excited about discussions in class. When they're more interested in the subject than in their grades. When a non-history

major signs up for a second course, or even starts talking about becoming a history major."

Dorsey was an undergraduate biology major at Cornell when his own interest in history was awakened by Professor Walter LaFeber, an authority on U.S. foreign policy.

"LaFeber was a superb teacher. He could walk into a classroom without notes and speak brilliantly for 50 minutes," Dorsey recalls. He signed up for more history courses, discovered that he was particularly fascinated by American foreign policy, and graduated with a dual major in history and biology.

As a graduate student at Northwestern University and a doctoral candidate at Yale, Dorsey combined his interests by researching the first

Dorsey has been a bird-watcher since he was a teenager. He's already counted 491 species in North America, more than halfway toward the North American record of 802 species.

Dorsey has been known to go to extremes in his quest for a particular bird. One trip took him up a 14,000-foot mountain pass in Colorado in mid-January in search of ptarmigans. His favorite find, however, is a dipper, a bird that lives in western mountain streams and literally walks underwater. "It looks like a gray wren that's scuba diving."

international environmental treaties, which were signed by the U.S. and Canada in the early 1900s and dealt with wildlife conservation on both sides of the border. This research provided the basis for a book, *The Dawn of Conservation Diplomacy* (University of Washington Press). Dorsey's book has been named co-winner of the 1999 Stuart L. Bernath Book Prize from the Society for Historians of American Foreign Relations, which recognizes the year's best book by a new author on the history of foreign relations. Dorsey is now working on his second book, a history of international treaties on whaling.

"In his brief career at UNH, Kurk Dorsey has given more than the 100 percent we hope for from our younger faculty," says J. William Harris, chair of the history department. "There may be other professors at his level who are as good, but it is hard to believe that there are any better."

Dorsey's students agree. Their impression was summed up in a single phrase on a recent course evaluation: "A+ for Dorsey!"

—Maggie Paine, *University Relations*

Education and Research

B.A., Cornell University
M.A., Northwestern University
Ph.D., Yale University

RESEARCH: international efforts to regulate whaling

A history of outstanding teaching

Popular mentor expects the best



Eugene Freuder

WHEN YOU WALK ONTO THE LOT OF A USED-CAR DEALERSHIP, YOU probably don't think of choosing a car as a "constraint satisfaction" problem. But computer scientist Eugene Freuder does. The variables in this problem are the size, color, model, cost, and make of a car. The values are different possibilities for each variable. The problem of finding the right car can only be solved by choosing values that will satisfy certain restrictions, or constraints.

A quick look at the math shows how devilishly difficult it can be to solve such problems. If you have ten variables each with ten possible values, there are 10 billion possibilities. "If there are relatively few solutions and if you search blindly," Freuder notes, "even a computer using the 'brute force' approach, running through all possibilities on a large problem, will take, for all practical purposes, forever." The constraint satisfaction approach provides models that help to limit the possibilities.

When you first step onto that car lot, Freuder says, the salesman has little idea of your restrictions. "He might suggest a little sports car," Freuder says, and you might say, "I've got twelve kids at home." Knowing more about your size constraints, the salesman says, "How about a minivan?" You say, "I've used up all my money feeding and clothing all those kids." And the salesman points you toward a '68 VW microbus in the rear.

Freuder has given this situation some thought because he is developing a software "agent" called "Matchmaker," which will interact with a shopper on the Web, making suggestions, eliciting likes or dislikes (constraints), and remembering them for future reference. Another project is aimed at helping NASA program the computer on an autonomous, unmanned spacecraft to figure out how to schedule its own activities in the absence of a human to tell it what to do.

These are just two of the many ways in which computers are now being asked to perform tasks previously done by people. Freuder has been called one of the founding fathers of constraint computation, a set of methods used for solving a number of complex problems that conventional computer programming techniques often can't handle—such as scheduling, configuring, designing, and diagnosing. Freuder, who studied math at Harvard before getting his Ph.D. in artificial intelligence at MIT, likes the multidisciplinary aspect of constraint computation, especially its use of combinatorial mathematics. Interna-

Using wires, batteries, and switches housed in a box, Freuder built a machine that could play reverse tic-tac-toe for his junior high school science fair.

tionally renowned in the field, he is the founding editor of the journal *Constraints* and has received a steady stream of research funding since 1981. He also works with several industrial partners, including Lucent, Trilogy, Oracle, and Nokia.

Freuder's UNH students have benefited greatly from both his projects and his mentoring. In one class, everyone was expected to submit a paper to the National Conference on Artificial Intelligence. "The expectations were set high," recalls graduate student Mihaela Sabin, "and could be summarized in two words Professor Freuder used over the entire course, 'Impress me!'—announced with a smile and the unspoken but always present: 'I know you can do it!'"

He was right. All four students presented their work at the conference and received scholarships to help them attend. "It was the moment when I understood not what research is about," says Sabin, "but how it is done right."

—Virginia Stuart, College of Engineering and Physical Sciences

The science of satisfaction

From car lots to computer programs



Education and Research

B.A., mathematics, Harvard University

Ph.D., computer science, Massachusetts Institute of Technology

Research: constraint computation in artificial intelligence

David Seiler

Sharing all that jazz

From the classroom to the state



LIKE HIS MENTOR, THE GREAT TRUMPET player Clark Terry, David Seiler is dedicated to passing on the jazz language. Teaching and public service blend seamlessly for this musician, whose efforts and energies have earned him the reputation as New Hampshire's ambassador of jazz.

"Clark is the forefather of giving back," says Seiler, of the man who inspires him as a teacher and performer. "I believe that, as a player, you are obligated to give back to the kids, and adults as well."

It's a simple philosophy that has earned Seiler this year's Excellence in Public Service award. For 27 years he has helped transform music education at the University and in the public and private schools.

Seiler began playing classical piano at the age of four, and later developed a love of jazz while growing up in Lacrosse, Wis., listening to big bands like the Duke Ellington Orchestra play at the Intrastate Fair. "I believe I was given some gifts," he says modestly. "Beethoven was in my head before I can remember." Today, Seiler performs as both a classical clarinetist and jazz woodwinds specialist.

Prior to his tenure at UNH, Seiler helped found what is now called the Lionel Hampton Jazz Festival at the University of Idaho. For the most part, however, jazz as an academic discipline did not exist anywhere. Seiler aimed to change that by bringing world-renowned

players into the classroom. Through his acquaintance with Terry, for example, connections were made with musicians like Louie Bellson, Frank Wess, Doc Cheatham and Jimmy Heath, who were invited to perform and teach at UNH.

Seiler founded the UNH Jazz Festival in 1974, which later became the Clark Terry-UNH Jazz Festival.

The event brings 1,200 high school students to the Durham campus to compete for awards and attend a concert with Terry.

He was also instrumental in developing the New Hampshire Music Educator's All State Jazz Festival in 1983. Today, more than 35 high school districts participate annually.

"UNH could not have chosen a better ambassador to represent its music department—or the University as a whole," says Russell Poehlman, director of fine arts for the Manchester school district. "His most notable contribution to UNH and music education in New Hampshire has been his mission to promote the importance of jazz music as an integral part of a statewide music curriculum."

Seiler's public outreach efforts extend beyond the schools as well. He and the late Tommy Gallant helped salvage the Portsmouth Jazz Festival by moving the event to Prescott Park and raising the necessary financial support. The event continues as the Seacoast Jazz Festival—this year renamed the Tommy Gallant Seacoast Jazz Festival—reaching thousands each year.

Seiler also coordinates UNH's Traditional Jazz Concert Series, teaches at UNH's Summer Youth Music School, performs at alumni functions, and conducts the UNH Jazz Band, as it travels to schools throughout the state and region. He has helped create several scholarship funds: the Arthur Mirabile Scholarship and the Tommy Gallant Scholarship, both for UNH students. He also works with the Harry W. Jones, Jr. Educational Fund to produce a major fund-raising concert each year, which generates scholarships for college-bound music students.

"Professor Seiler has enhanced the musical climate in the University, in the Seacoast, in New Hampshire and in all of New England," says Peggy Vagts, chairperson of the Department of Music. "Countless students have been affected by his outreach efforts."

Seiler says such praise is humbling. He truly enjoys what he does and feels it's part of his job as an educator and artist.

"I believe in being out there in the real world—hanging out with musicians, with high school music teachers and kids," he says. "It's all part of building bridges in the music community, and part of what the University ought to be. I'm living the lesson I want to teach my students."

—Sharon Keeler, UNH News Bureau

Education

B.M. and M.M., University of Wisconsin-Madison

Marc Hiller

Making a career in public health

A turning point that affected thousands of lives

WHEN SOMEONE IS IN PAIN, HE OR SHE DOESN'T CARE ABOUT PUBLIC health. It takes someone else.

Marc Hiller became interested in health and medical care early. As a high school student in Pittsburgh, Pennsylvania, both of his parents died, one directly and the other indirectly, of cardiovascular disease. At first, he wanted to "become a surgeon/ researcher and find a cure for heart disease or to perfect the artificial heart" and thereby "prevent any other kid from having his or her parents die prematurely."

Through college he volunteered for the American Heart Association and learned that prevention was key: 1) not smoking, 2) good nutrition, and 3) exercise. He concluded that "as a surgeon, I would impact only a finite number of lives, but on the prevention side, I could affect hundreds, maybe thousands of lives." Hiller embarked on a career in public health, combining education, research, and advocacy.

A UNH faculty member since 1979, Hiller has worked tirelessly on public health issues at the local, state, and national levels. A member of Dover's Board of Health and a founding member and past president of the New Hampshire Public Health Association, Hiller is also project director of "Turning Point," a strategic planning initiative funded by the Robert Wood Johnson and the W. K. Kellogg foundations to improve the state's public health system for the 21st century. New Hampshire was one of only 14 states to receive this funding.

As project director Hiller works with 20 state leaders whose careers and expertise also commit them to this goal. Working with others around the state, they've developed a three-part plan: 1) to strengthen the state and local public health infrastructure, 2) to advance the benefits of prevention, and 3) to develop public health and health care data systems.

Each part of the plan entails specific challenges. Take for example the coordination necessary to promote seatbelt use in school buses and helmet use for bicyclists and motorcyclists: the departments of Health and Human Services, Education, Transportation, and Public Safety are all involved. Many other public health issues, such as water fluoridation and the prevention of water and food borne illnesses, demand similar and extensive coordination.

"The Turning Point project requires a great deal of facilitation and development of partnerships," writes Dr. Bobbie Berkowitz, director of the Turning Point National Program Office. "... Marc has been a wonderful example of partnering among academia and public health."

Prevention is largely about education. When Hiller talks about "awareness at the highest level," he means it. Increasing awareness often means crafting and sponsoring legislative efforts at local and state levels. Hiller is working to ban smoking in all restaurants in the city of Dover. He states, "[Non-smoking] in public places will catch on. Usually one town adopts it and then many others follow suit."

How much of a problem is smoking in the state? New Hampshire has the third highest rate of teen smoking in the country.

Other issues Hiller has worked on include a bill to require trigger locks on handguns to protect children and a proposal to allow condom availability in a local high school to prevent sexually transmitted disease and unintended pregnancies among teens. "We may not always win," says Hiller wryly. "But we raise the level of public awareness and dialogue."

Turning Point's third major effort is to collect data that can be used at state and local levels. Right now, data are collected at



Hiller has two sons who pull him across the street when they see someone smoking.

"If I ever got around to having a personalized license plate, it would say, 'PUBHLTH,'" he says.

state and county levels, which are often unusable at the local level. After all, says Hiller, the goal is to more effectively assess community needs and to prioritize to meet those which are the greatest.

Lori Real, director of New Hampshire's Health and Human Services Office of Research and Planning, wrote of Hiller's work with Turning Point, "This [effort] is laying the foundation for public health in the next century."

—Carrie Sherman, *University Publications*

Education and Research

B.S., University of Pittsburgh
M.P.H., University of Pittsburgh
Dr.P.H., University of Pittsburgh

PUBLIC SERVICE: member, City of Dover's Board of Health and Board of Ethics; member, Wentworth Douglass Hospital Bioethics Committee; founding member, New Hampshire Public Health Association; past chair, American Public Health Association Forum on Bioethics; chair, Association of University Programs in Health Administration (AUPHA) Faculty Ethics Forum; project director, New Hampshire Turning Point Initiative

William Condon

ON THE WALLS OUTSIDE BILL CONDON'S office there are thought-provoking sayings posted everywhere: "Why does a floppy disk end in a 'k,' while a compact disc ends in a 'c'?" and "Success is more a function of common sense applied in a consistent manner than it is of genius." Over his computer there is another: "Nothing is so irrelevant as the score at halftime."

"That's my favorite one," he says.

Condon, who as a teacher calls himself an "instigator," is this year's winner of the Jean Brierly Award for Teaching Excellence. Two years ago he won the Teaching Excellence Award for the College of Life Sciences and Agriculture. It's no surprise that this award-winning professor talks about teaching by telling a story about how he recently learned something new.

"At a workshop, my colleague, Lee Seidel, said, 'If you want to make things relevant to students, give them a one- or two-page popular press article on the issue.'" Then, Condon says, "you have them come back the next class and spend 10 or 15 minutes discussing the article. Then you give the science." The technique is called "issue-driven teaching."

At first the idea perplexed Condon. He thought he was already doing this in his classes. If he wanted to make the shape of proteins relevant, he would lecture about the shape of proteins and then say, "This is relevant because of mad cow disease. Prions are thought to be the cause of mad cow disease, and prions are misshaped proteins."

But Condon—who teaches biology, endocrinology, reproductive physiology, animal rights and societal issues, and this year will be adding a semester of anatomy and physiology—is a learner himself, so he decided to try "issue-driven teaching" last year in a biology class with 120 students from various majors.

He identified a topic and gave them articles from the popular press. The next class, Condon, who began his career as a lecturer 24 years ago, came to class thinking, "I'm not going to get a discussion going with 120 people."

He smiles, "I had trouble stopping the discussion. It was wonderful. I ended with the lecture on the shapes of proteins and it was just so much better than anything else I have ever done."

The student evaluations from biology were very nearly off the scale. "I have

never had a teacher with such tremendous knowledge, intensity, and enthusiasm for a course," one student wrote. Another said, "As for Dr. Condon, I would take this class just to have him as a professor." And another wrote, "I leave here full of ambition to go out and learn more about biology."

Condon says issue-driven teaching is a natural for biology today, because "you've got things like mad cow disease, cloning, transgenics (moving genes across species—animals or plants), so it's pretty easy to find topics they can sink their teeth into."

Furthermore, "there's a truckload of popular press on so-called science that isn't science, such as correlation studies in newspapers—articles that say left-handed people don't live as long as right-handed people do. Correlation does not prove causation."

Controversy is also easy to come by in his animal rights course. "I don't lecture. I have a 'contrasting viewpoints method.' Basically I give them both sides of every issue. Both extremes. If I can't find both sides, I don't cover it."

But, given such a controversial topic, don't students usually have positions already formed when they take this class? "It's the only course that I walk into on the first day and tell them my objective

is to make them more confused at the end of the course than they are at the beginning. I say that because in animal rights there are no black and white issues: they are all grey.

"The first day I ask them, 'How many of you think animals have rights?' Ninety per cent of hands go flying. When I ask that same question at the end of the semester, I might get five percent."

But Condon tries strenuously not to influence them. "If they spend a whole semester reading both sides, they realize it's not a black and white issue," he says.

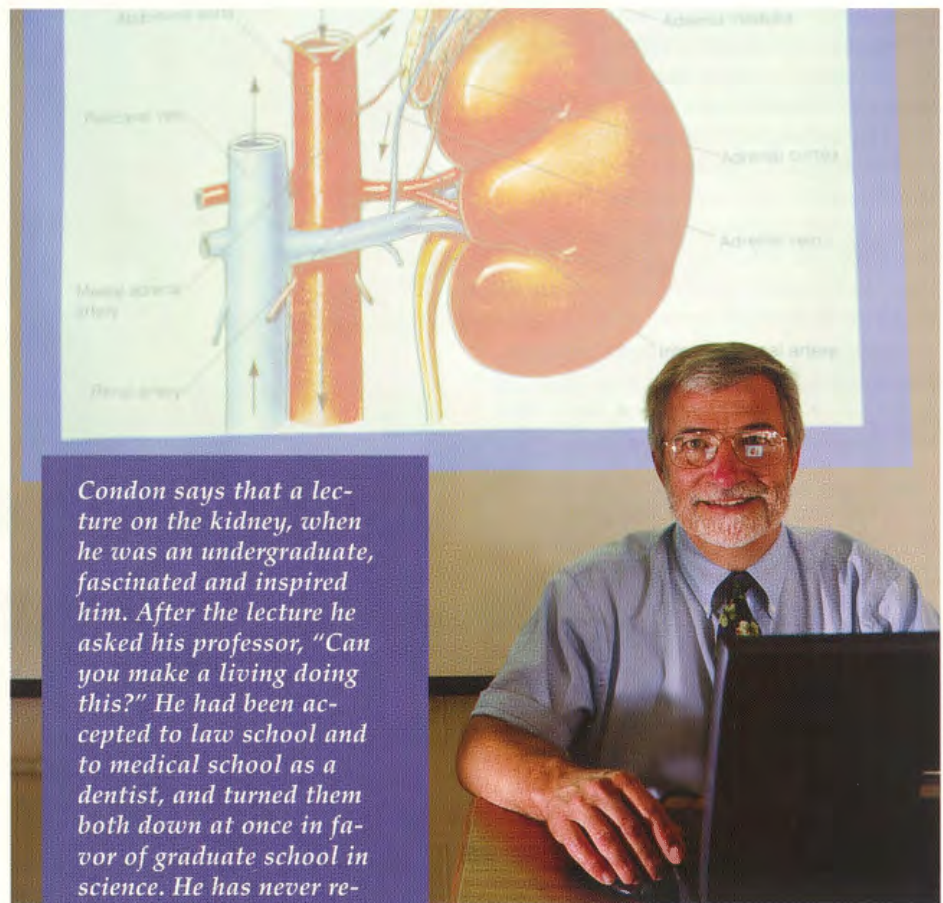
Condon tries never to let students know where he falls on an issue. "I make them think about the socioeconomic, ethical sides of many issues," he says. "There are so many issues in science now—assisted reproductive technologies like *in vitro* fertilization, splitting embryos, freezing embryos, and cloning. I'm not going to tell them what to believe. That's like lecturing about religion."

That doesn't mean students don't get curious about his views. "I'd taught the animal rights course six times and this year for the first time somebody raised their hand and asked, 'Do you eat meat?' No one has ever asked me that. And I said 'yes.' I don't lie to them. If they ask me a direct question, I'll tell them."

—Mary Peterson, *University Publications*

The professor as 'instigator'

Issue-driven teaching from cloning to transgenics



Condon says that a lecture on the kidney, when he was an undergraduate, fascinated and inspired him. After the lecture he asked his professor, "Can you make a living doing this?" He had been accepted to law school and to medical school as a dentist, and turned them both down at once in favor of graduate school in science. He has never regretted the decision.

Education and Research

B.A., biology, Merrimack College, 1965
M.S. and Ph.D., reproductive physiology,
University of Massachusetts at
Amherst, 1968 and 1975

RESEARCH: reproductive endocrinology

Susan Walsh

SUE WALSH SITS AT THE PIANO PLAYING A TUNE FROM JOHN GAY'S "The Beggar's Opera," a 1728 ballad opera starring London's pickpockets, prostitutes, and highwaymen. Students from her English 693 Satire class surround her, singing the parts of Macheath, the jailed hero, and two of his "wives," Polly Peachum and Lucy Lockett. As they contemplate the imminent execution of Macheath, the two women lovingly express the wish "to be hanged with you, My dear, with you."

"I bring my students to the piano because I want them to get inside the music," Walsh explains. "Polly, Lucy, and Macheath trade off the melody, and yet they are so preoccupied by their own fates they can't hear each other. Their song seems to promise a three-part fusion, but, poignantly, it never materializes." As her students sing past each other, they express the characters' inability to harmonize self-interest and love.

Walsh is fascinated by the idea of the soundtrack as a learning tool. For her, there are cultural soundtracks at the heart of literature, and she tries to tune her students' ears to them. Her own interests focus on Victorian literature and culture, specifically the ways in which all the parts of nineteenth-century life are intertwined—medicine, finance, politics, religion, literature. Walsh enjoys studying these cross-disciplinary models. It amuses her that today's pundits sometimes invoke the Victorian era as a golden age of religious certitude and family values. "In many respects it was anything but, and a lot of Victorians knew it," she says. "They were actually optimistic, edgy, and doubtful."

Walsh's interest in literature and music started with her parents. Her mother taught junior high school English and French, making sure her children practiced the piano and used adverbs correctly ("slowly" and "quietly" were instructional favorites).

Her mother had a brush with infamy when a parent complained that she was distributing prurient materials through her book club. At issue was Carl Sandberg's "American Songbag," in which the speaker of "The Foggy, Foggy Dew" keeps a young maid from the night air and then sings, "Now I am a bachelor, I live with my son." Shocking! But, Walsh adds, "My mother stood her ground, so we don't have to talk about her in hushed tones." Walsh's father is a metallurgist whose Shakespeare professor urged him to get a doctorate in English. That was unthinkable in a late-1940s steel town in western Pennsylvania, so he

became "a learned industrialist" who still quotes Shakespeare, Kipling, and Yeats.

Walsh describes her teaching philosophy as "a germ theory of instruction" where she fills the room with her own enthusiasm. "Even students with the most developed immune systems will catch the bug eventually," she laughs.

And, in fact, her students frequently remark upon this enthusiasm for literary works. "She is one of those rare teachers who educates, entertains, and inspires all in one shot," comments one student.

Walsh likes to remind her classes of a line from Robert Browning: "A man's reach should exceed his grasp, /Or what's a heaven for?" Great students, like great artists, refuse to settle for the easy way, and instead "attempt what they fear is beyond them. And in this way, they often achieve it."

—Ginger Lever, UNH Manchester

From soundtracks to teaching

English literature provides prose for melody

Trained as a pianist since age five, Walsh earned money as an undergraduate by accompanying voice students in their practice sessions and recitals.



Education and Research

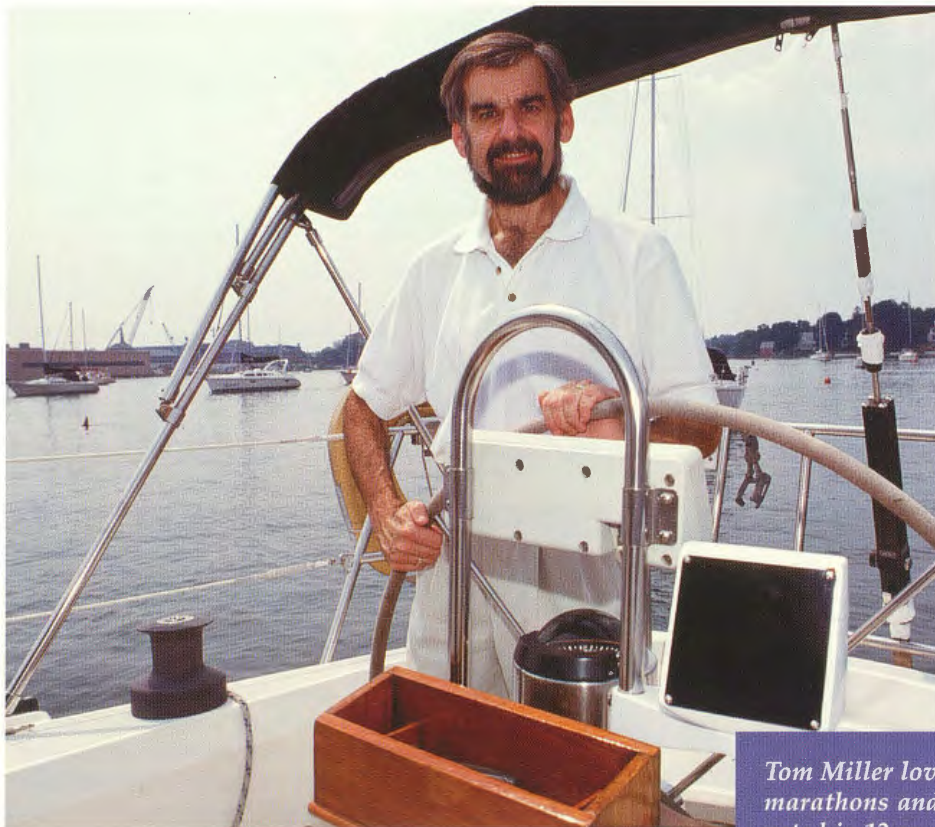
B.A., English, Kenyon College
M.A. and Ph.D., English, Duke University

RESEARCH: nineteenth-century British literature, medicine, and economics

Tom Miller

Steering a straight course

Engineering a process for student discovery



IT MAKES SENSE THAT TOM MILLER LOVES TO sail. Sailing takes patience. It's about more than "just getting there." It requires thoughtful attention to weather conditions, a sensitive hand on the tiller, constant adjustments to halyards, and an intuitive sense of where to head next. Sort of like teaching.

During his 20 years as a professor of electrical engineering at UNH, Miller has built a reputation for "smooth sailing," for sensitive teaching that leaves students knowing precisely where they're going. "He has a knack for understanding the mind of the student," says Mike Dalton, a 1999 graduate in electrical engineering. "He seems to think about things as a student, keeping track of what he's already explained, remembering what the learner knows and what he doesn't."

And he knows how to listen. Every student who's visited his office with a question has experienced the "Miller style." The professor folds his lanky frame into his desk chair, leans back, and presses the fingertips of one hand to his chin. He looks at the ceiling. He ponders. The room is silent. Then he answers your question—clearly and concisely, providing just the information you need.

For Miller, the sign of successful teaching is the quality of these inquiries. "When you see students asking questions that show they understand the

concepts—that's the biggest reward." The challenge, he says, is to teach real understanding. "You have to select engineering problems in such a way that students see the process and fundamental concepts that go into solving the problem. If you're not successful, they learn only a series of steps to solve the problem—and could never reapply the principles."

Miller applied this same approach to teaching robots. Creator of a walking biped named Schmedly and his four-legged cousin, Miller was known at UNH as "the robot guy" from 1986 until 1997. The real research was the programming of intuition or the teaching of "first principles." In other words, Miller was providing the robot with concepts, which were used by the robot to make corrections in its behavior, so that it was teaching itself to walk the way people do—by practicing.

Today, Miller's research, while it has changed directions, is still focused on teaching. The field of computer communication technologies has become vast and specialized. Asynchronous Transfer Mode, Fiber Distributed Data Interface,

Gigabit Ethernet, Network Management, Token Ring, VLAN—the list goes on and on. The basic problem, faced by universities and most businesses, is how to train new employees in these new technologies. It is impossible to provide classes to accommodate every specialty.

Which is where Miller's autonomous teaching system comes in. His on-line tutorial is controlled by a server computer that monitors what the student is doing—essentially standing in as a teacher. "We're designing an underlying technology that makes decisions on what to show the student next based on what they do right and what they do wrong," explains Miller, whose system is already being used by students working in UNH's InterOperability Lab (IOL). "The server computer actually sees you moving the mouse, filling in answer boxes. It knows if you fill things in once or three times."

And so, in his research, just as in his teaching, Miller has taken on the challenge of adapting to the needs of the moment. "Tom's a naturally gifted teacher," says John LaCourse, chair of the electrical and computer engineering department. "He has done some superb research, as well. He doesn't toot his own horn, though. Tom Miller is a humble guy."

He's also a hard person to thank, according to his students. "He helps you out and then he's gone," says Steve Scapicchio, a 1999 graduate who's working in the IOL. Which is why ev-

eryone who knows Miller seems so pleased about his award. "He deserves it," says Dalton.

—Suki Casanave, College of Engineering and Physical Sciences

Tom Miller loves to run marathons and has competed in 12 races in the past 16 years. His favorite one is Boston, he says, "because it has such great crowd support." Miller's last three races have been his best. He even broke the three-hour barrier in Boston, finishing in 2:58.

Education and Research

B.S., electrical engineering, Pennsylvania State University, 1972

M.S. and Ph.D., bioengineering, Pennsylvania State University, 1974 and 1977

Postdoctoral fellow in biomedical engineering, Duke University, 1977-1979

RESEARCH: adaptive real-time software systems, with application to robot control and signal processing; autonomous instructional systems for technology training

Mary Jane Moran

Training teachers as classroom researchers

Creating a curriculum built on partnership

MARY JANE MORAN RECALLS THE DAY SHE MADE A CAREER-ALTERING confession in front of a classroom of aspiring student-teachers eager to study early childhood issues and intern at UNH's nationally known Child Study and Development Center (CSDC).

"I told my students, 'I don't think I can keep teaching this way,'" she says, remembering the day in 1992 when she abandoned the "old school" approach to teaching and adopted one of collaborative inquiry and discovery. It's the difference between memorizing Shakespeare for next week's test and analyzing Shakespeare with your classmates because you plan to co-author an award-winning play.

At the CSDC, where infants through kindergartners are cared for and educated, required topics are covered, but there is no prescribed learning schedule. The same is true in Moran's class-



room. Everything is subject to change, depending on the students' interests, needs and questions. Gone is the assembly line approach of outputting future teachers and students, each identical to the class before them.

"It's a philosophy of educating teachers, not as experts, but as classroom researchers," says Moran, assistant professor of family studies and CSDC associate director. "Children and teachers, with my participation and guidance, co-construct the curriculum in partnership."

At the CSDC, for example, classroom work/research is documented with photos, drawings, dialogue and projects displayed on the corridor walls. "Visitors can see that teachers are actively engaged in research topics with children. It's a dynamic way of learning."

It was also a major shift in her teaching approach. "For the first 10 years of my teaching I thought I was responsible for dispensing and transmitting knowledge, making decisions about what students should know and how they should use it," says Moran. "But that doesn't ground them. It doesn't give student teachers ownership of their practice and knowledge."

Students and colleagues say that Moran's classroom makeover played a key role in her winning the 1999 School of Health and Human Services award in teaching.

"What separates Mary Jane from other professors is that she is a respectful co-worker as opposed to a lecturer dispensing information," says former student Jessica Holmes. She is a genuine collaborator sharing in the ups and downs of the learning process."

Moran remembers the anxiety she felt as she undertook the transformation. "The change in 1992 was a risk. I had no idea how it was going to turn out at the end of the semester, and I told that to my students."

But the payoff, as described by a former student now working as a pre-school teacher at the CSDC, has been priceless. "I listen better to children; I ask better questions; I am more conscious of the choices I make in the classroom," says Lisa Desrochers.

Today, Moran's classes include videotaping student teachers at

the CSDC and critiquing their classroom performance with children. She meets with students individually and in teaching teams to review their work; in class, she also showcases students on video who illustrate concepts and theories being studied. "It's very different than showing a video of a master teacher from Cincinnati, Ohio. I don't have to go that far to capture examples of good teaching," she says, adding that reflective journals, audiotaped meetings among peers, and project documentation are other ways she "makes public" her students' teaching.

Meanwhile, Moran's own teaching continues to evolve, and most recently has come to include mentors—previous-year students who act as additional resources for student teachers. Not only do the mentors serve as a sounding board for ideas, but they're

Moran enjoys exploring the cultures of the Southwest and Tuscany, eating southern food (especially fried corn), and listening to blues music.

"living proof" of a personal philosophy born from Moran's 1992 classroom confession: "Teaching is a dynamic, collaborative exchange based on inquiry and discovery," she says. "An effective teacher is willing to trust students and take risks, despite being uncertain about what is going to happen."

—Tracy Manforte, UNH News Bureau

Education and Research

B.S., speech and hearing, University of Tennessee

M.S., child development and family relations, University of Tennessee

Ph.D., education, University of New Hampshire

RESEARCH: teacher education with an emphasis on collaborative inquiry, reflective practice, and the role of documentation in the development of novice teachers

George Estes



George Estes has a recipe for soil. Many years ago, he bought a piece of property in Lee where all the topsoil had been removed. Estes spent the next decade mixing various sources of organic matter (cover crops, sawdust, wood chips from highway prunings, manures, etc.) until he had rebuilt the soil—and used it for PYO strawberries for another two decades.

A career made of sound choices

En route to another fork in the road

GEORGE ESTES, WHO IS RETIRING AFTER three decades of teaching, says he subscribes to the Fork in the Road Theory. “At critical times in my life,” he explains, “there has been a fork in the road, and the choices I’ve made have proven to be sound ones.”

That first important fork likely occurred his senior year in college. Estes had grown up on a farm in Aroostook County, Maine. He remembers digging potatoes by hand starting at age five or six, and having respect for the work that needed to be done. His senior year in college, one of his professors asked him if he had considered graduate school. “Oh no,” Estes remembers telling him, “I’ll go back and work on my Dad’s farm.”

He talked with his father about what his professor had said. His father was honest with him and said his future might be better spent away from the farm. “Go to graduate school,” the father told his son.

“So you see,” Estes says, “a fork in the road can suddenly appear over a cup of coffee, as it did when I talked to my father.”

And his father was right. Since that conversation in the 1950s, Aroostook County potato harvests have decreased from 225,000 to 70,000 acres. George Estes, meanwhile, went on to graduate school at the University of Maine, and then earned his doctorate in plant biology at Oregon State University.

Though he is known throughout the state and region for his research and outreach activities in agronomy, Estes

says his greater love is teaching. “The young people have been most important to me,” he says. “Every year, there are two or three of them who remind me of myself when I was their age.”

He says there has been no greater satisfaction than being at “the fork in the road” for students, and helping them find their paths in life. He points to cards and letters on a shelf in his office, all from present and former students.

In fact, an entire class got together one evening and wrote a letter nominating him for the College of Life Sciences and Agriculture Teaching Excellence Award:

“We asked each other what faculty member had the most impact on all of us over time. Without hesitation, we all responded by saying Dr. Estes. In no way are we saying that his courses were easy. In fact, we thought they were just the opposite. He loves to teach, he demonstrates a genuine concern and respect for his students both in and out of the classroom.”

Estes is soft-spoken, and very modest. He cannot resist squirming in his chair as some of his accomplishments are listed to him. Mention crops or soil, though, or especially stewardship of the land, and the chair squeaks in place as he leans forward to talk about his love of land.

In New Hampshire’s North Country, near Lancaster, there is a fork in the road. One, North Road, is the main route to Groveton. The other, Lost Nation Road, is a road that runs along the Pilot Range—the northernmost peaks of the White Mountains. Estes and his wife have property on Lost Nation Road. Nothing on it but a picnic table. It is there, sitting at the picnic table, with his wife, three children and four grandchil-

dren, that Estes is most at peace with the world. It’s another fork in the road he takes.

Estes reflects on what he defines as a successful day in the classroom. “There have been so many days when things have gone so well,” he says. “I wouldn’t call them magic moments or anything... It’s often been the lectures on soil and land stewardship. I come from the land and I love it, and I believe every new generation has to be taught the old lessons. That’s the joy of education for me. All of us in the 1990s are going so fast that we forget the simple truth that we depend on the land and must take care of it.”

Estes’ next fork in the road is just ahead. He is retiring—cleaning out his office in Spaulding Life Sciences Center; teaching a colleague how to make real whipped cream for the department’s annual strawberry shortcake treat; wondering what it will be like not to be on campus every single day.

Ahead of him, of course, is the back road to Groveton, the road to his vegetable garden, the roads to his family. The way he talks, this likely will be the first time he can choose a road and travel a ways, then backtrack; take another road for a time, backtrack; choose another, and on.

—Kim Billings, UNH News Bureau

Education

B.S. and M.S., University of Maine at Orono, 1958 and 1960
Ph.D., Oregon State University, 1969

Carole Barnett

A professor who means business

Honoring the greatness in every student

HONORED BY HER STUDENTS, RESPECTED BY HER peers, Carole Barnett is one of those educators who changes people's lives.

"She basically takes students who aren't completely aware of all their assets or the qualities they have, and opens them up like a flower," says former student A.J. Shattuck, B.S. '99, Business Administration. "One thing I learned from her is I've only been working at half the caliber I'm capable of. She helped me realize you can leap forward and accomplish things you've never thought of. She shows you that you can do things that will make a difference in the world."

Over the years, Barnett, an assistant professor of management, has received top evaluations and hundreds of letters and e-mails from students who have emerged from her influence with higher ideals of personal excellence and—if Barnett's hit the mark—knowing how they learn what they learn. This spring, the combination of her teaching evaluations and work with faculty in curriculum development earned Barnett the 1999 Teaching Excellence Award from the Whittemore School of Business and Economics. Two weeks later, Barnett's full-time M.B.A. students surprised her at their hooding ceremony with a speech and a plaque naming her their most influential faculty member.

Associate Dean of the Whittemore School, Stephen Fink, says Barnett consistently receives the highest student evaluation scores that he's seen in his 30 years of teaching.

"Her work in curriculum development, planning, and collaboration with other educators combined with student evaluations are all outstanding attributes," Fink says.

Barnett expects the best from her students because she strives for perfection in her own life and teaching.

"I try to recognize and honor the greatness in every single student who walks into my classroom. I become committed to working with each one of them to develop an understanding of their abilities to be what they want to be. And then I give myself permission to be inordinately demanding of them," says Barnett.

She thrives on only five hours of sleep a night. The concept of "office hours" is redundant to her—she's accessible 19 hours a day for her students.

Over the past year, Barnett and a team of four M.B.A. students traveled to Minneapolis, Minnesota, to develop an in-depth business analysis—called a "case study"—of Polaris Industries, Inc., a dynamic 45-year-old small-cap company that was among the first to manufacture snowmobiles.

"Polaris is a study of business growth and transformational leadership all embedded within a larger theme of learning," says Barnett. Polaris' 57-year-old founding entrepreneur recently passed his scepter to a 37-year-old executive from a *Fortune-10* background. The new CEO sees every business challenge as a great opportunity for growth. Similarly, Barnett sees her field studies as essential fodder for classroom learning.

In 1996, Barnett and her M.B.A. students wrote another dramatic in-depth case study—of ValuJet Airlines, Inc. "She gave us the tools to pick apart the company

and she showed us how to do it, but she didn't do it for us. It was very rewarding when we were done because it was a team effort. None of us could have produced what we produced as a team. She gives you the tools—she's a coach," says Shattuck.

Barnett's "coaching" approach stems from principles in her main research area: organizational learning. She gives her students daunting management problems to solve, a clear and thorough method of analysis, concrete evidence of their mastery, and a deep awareness of how they learn. As Shattuck puts it: "The difference between other classes and one with Professor Barnett is like the difference between falling

out of bed and falling out of an airplane at 30,000 feet."

— Larissa Mulkern, *University Publications*

The 7 Habits of a Highly Effective Carole Barnett

1. Set stretch goals.
2. Deliver on promises.
3. Buy more books than you can read.
4. Write incessantly.
5. Sleep little.
6. Practice what you preach.
7. Take time to talk with people.

Education and Research

B.A., psychology, with distinction, University of Michigan, 1989
M.A. and Ph.D., psychology (organizational), University of Michigan, 1992 and 1994

RESEARCH & TEACHING INTERESTS: individual and organizational learning; organizational change, adaptation, crisis and transformation; organizational culture; organizational theory; group dynamics and team leadership, safety and quality improvement; strategic human resource management

Richard Kushner

TEN YEARS AGO, RICHARD KUSHNER MADE a quality-of-life decision. He walked away from his position as a tenured professor at a small liberal arts college in southern California. "I loved what I was doing," he says, "but life was so fast-paced, and I didn't want to raise my kids in that environment. My dean told me not to resign. He said, 'I'll give you a two-year leave, and you'll be back.' But I knew I wouldn't be."

Kushner and his wife, Gail, packed up their two children and headed for New Hampshire. On a large lot of family-owned land in Milton, they built a post-and-beam home and settled into their new lives. Today, with his home and family in Milton, and a position as an adjunct faculty member in the psychology department, Kushner knows he made the right decision.

"I live in the woods, on a stream, in a house that we built," he says. "It's always been my dream. At UNH, I get to teach where I earned my master's and Ph.D., and I'm comfortable with my teaching load here. It really fits with how I see myself."

Kushner, who was honored with the Teaching Excellence Award in Liberal Arts this year, sees himself not only as a person who shares his own knowledge, but as a catalyst for learning. "To me, it's not just about imparting knowledge," he says. "It's also about engaging my students and making them determine for themselves whether the conceptual information we are studying fits in with what they are actually experiencing."

With a personal and academic interest in the developmental issues that undergrads face, and a genuine interest in the students themselves, he enjoys the time he spends teaching both his large introductory sections and his senior-level counseling course. They are vastly different teaching and learning environments, but the focus is the same—it is on the students themselves. And Kushner's goal is the same—to motivate students to learn.

Kushner seems to be meeting that goal, and his love for education is clear to students. Invariably, he needs to turn them away from his over-enrolled classes.

"I say the same thing to my students when I walk into my 'intro' course on the first day each semester," says Kushner. "I've got the greatest job in the world—I get paid to talk about my passion. 'Look to your left. Look to your right. There's our topic for the next 16 weeks. Human behavior.' How can they not be interested in that?"

Through his courses, Kushner wants his students to see each other, and he wants them to learn to see themselves. He says there's a place for lecture in teaching psychology, but he wants to make sure his students connect the concepts they learn to their lives. "Good teaching is as much about love as it is about knowledge," he says. "It's as much about passion as information. The ques-

tion is not what can I teach my students, it's how do I engage them?"

"Sometimes they leave class in tears, or they leave laughing. They leave rethinking their role in their families, or their role as a man or a woman," he says. "I want them to be engaged in what they are learning, and to do that, they need to participate. I always try to strike a balance between affirmation and opposition. I work hard to create a safe environment where they feel comfortable sharing. Students know that I really care about them."

And once they gain that comfort, and feel that level of caring, the sharing—and the learning—begins.

—Danielle Mostoller, *University Publications*

Building his dream in New Hampshire

Helping his students to build theirs



Kushner spends his free time at home (which he describes as his "sanctuary") with Gail and their two children, Rachel, who is 20 and a student at UNH, and Ben, 17. He says, "I derive a tremendous amount of satisfaction from belonging to my family."

Education

B.A., American International College, 1969

M.A. and Ph.D., University of New Hampshire, 1972 and 1974

Amy Chartoff

CHANCES ARE YOU'VE NEVER BARED ALL IN FRONT OF A CROWD, AND stood there—exposed for all you're worth—to be judged for every flaw. But that's exactly how many people feel when faced with the prospect of public speaking, according to Amy Chartoff, a veteran teacher of the popular course.

Whether it's a corporate board meeting or a class presentation, that feeling of vulnerability prevails in people who have yet to overcome the fear, she says. Some people are so phobic they try to avoid careers that involve any type of oral presentation. Good luck, says Chartoff.

"No matter how much you think you're going to hide from it, it's going to get you—whether you're presenting an idea to your boss or you're going for the initial job interview. Even if you think you're choosing a career completely safe from public speaking, forget it."

Chartoff recalls a zoology major who went into the field "so she would never have to interact with another human being. This person was incapable of making eye contact in everyday conversation." But, at the time, she needed Chartoff's course to graduate.

For her first speech, Chartoff asked the class not to look at the woman. For the second assignment, she had the student look only at the person with whom she had practiced the speech. "By the end of the semester she was looking around at everyone, and she worked like crazy to make sure everyone got her message," says Chartoff. "It was a remarkable experience to teach someone who was that phobic."

Chartoff's approach also includes the use of her own textbook, peer evaluations, and the intimidating self-analysis. "Students say the course is rigorous, I think, because of the self-critique."

By this she means students question whether they met the requirements of each speech, evaluating elements like making listeners think and delivering one message (not three or four). They also compare their work to their classmates', and many times "the light goes on" when they see a peer illustrate exactly what went wrong in their own speech.

It's an approach that is lauded by students and colleagues who nominated her for this year's teaching award. "She doesn't patronize students; she constantly challenges them to challenge themselves," says Associate Professor of Communication Mari Tonn. "She routinely receives the type of accolades from her students that any professor who cares deeply about teaching would envy."

The pedagogy on self-critique is based on English teaching principles, which Chartoff learned from UNH faculty emeriti and writing pros Donald Graves and Donald Murray. The public speaking application, she recalls, grew from an experience, which she describes as "an awful situation with a very good student."

The student had done meticulous research on her speech topic and came prepared with gorgeous, hand-lettered charts. "But the speech was crashingly dull," Chartoff recalls. "The students were totally bored, and she missed the mark because the assignment was to present material in a way that people could relate to it."

After suffering through the peer critique on the verge of tears, the student stormed out of class and retreated to the back row for the next week.

During a "cooling off period" as she watched other classmates with a critical eye, she saw in some what she had done wrong, and eventually asked to re-deliver her speech. Chartoff made an exception and let her try again—a decision that paid off for both student and teacher. In the process, Chartoff saw the value of self-analysis, eventually making the written critique part of the curriculum.

The spontaneity of teaching public speaking is what has kept Chartoff energized for more than a decade, teaching six sections a year. And her methods are explicit, right down to the scheduling. She says having the course three days a week is most effective. "Those epiphanies happen very slowly. You need to have this course in your face. You have to be haunted by it and always wondering about it."

—Tracy Manforte, UNH News Bureau

At the podium

Speak up or forever be in fear



Amy Chartoff has many mentors she's never met—E.B. White, Mozart, Shakespeare.... "Having respect for what genius is in any field is important," she says. "These people are all mentors because when I read or listen to their work I am inspired."

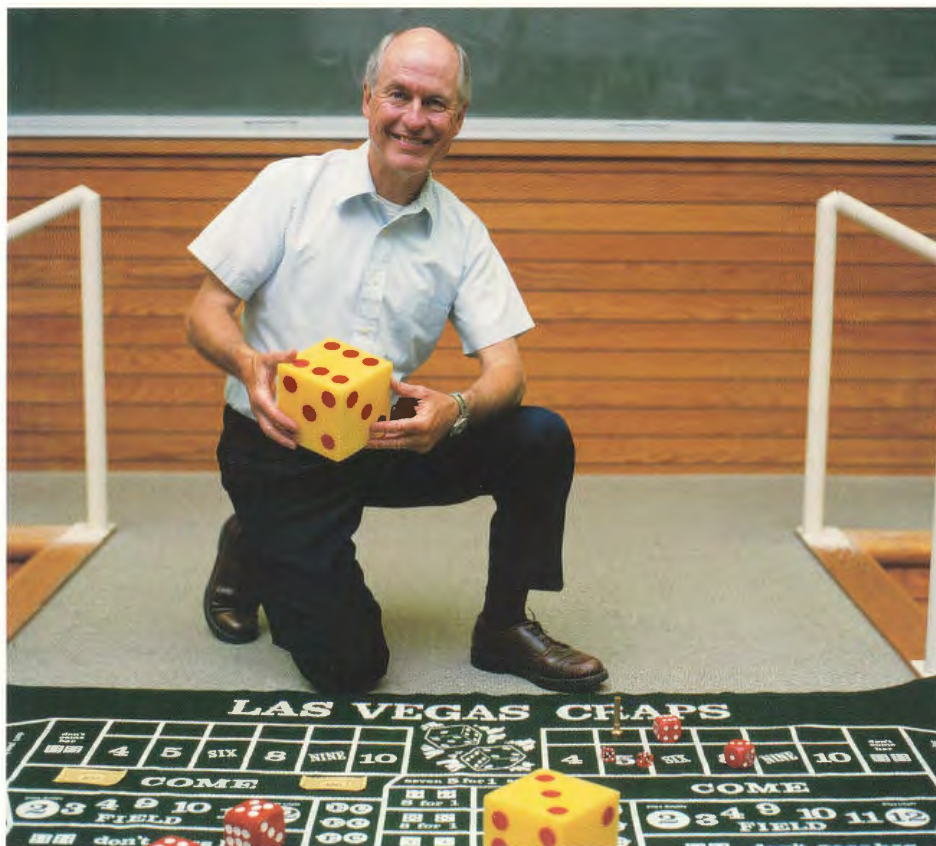
Education

B.S., speech (theatre), Northwestern University
M.S., education, University of Oregon

James Goodberry

Goodberry's real world

A vagabond career in mathematics



SWEEPING FLOORS AT SEARS IN THE MIDDLE of the night puts a lot of things in perspective.

But Jim Goodberry's self-described "vagabond" career—which has included stints as night janitor, restaurant owner, dishwasher, Air Force electrical technician, and quality control engineer—has only served to compliment his current job as a math teacher.

"I constantly think about my own experiences and let the knowledge gained from a long career feed the quest for 'real-world' mathematics," he explains. And it's real world math his students need and obviously appreciate: he's a two-time winner of the Thompson School of Applied Science Teaching Excellence Award.

But back to the real world, or the real world according to Goodberry.

During his years as a middle school teacher, Goodberry tried to take new students on long hikes as a way of forming solid relationships before classes began. Since college students' hectic schedules make this plan unworkable, he tries to make the personal connection by talking with them about his past jobs and whether they have a connection, however tenuous. Says Goodberry: "One form of respect comes, I think, from knowing that 'Jim has been there.'"

At the Thompson School, the two-year program emphasizes hands-on or applied education. As a result, Goodberry's students go from his general education math class to the drafting table or the sawmill or the computer terminal. Abstract theory is important, but applied mathematics should help students figure out how much lumber needs to be cut, how many yards of dirt will complete a horticulture project, or how much meat must be ordered.

"Thompson School students are using math daily in their various curricula," says Goodberry. "Here we can look at concrete models as opposed to the abstract problems that pure mathematicians enjoy."

As the Thompson School's only math teacher, Goodberry admits many students approach math with a little trepidation and, in some cases, outright paranoia. So he's come

up with novel ways to teach math and break down students' aversion to the subject.

One class in probability might include students swinging at plastic golf balls and predicting where they'll land as they career off classroom walls. A large "craps" table and giant yellow dice also might show the odds of tossing a winning pair of dice. Will it be lucky seven or snake eyes?

He also tries to ease students' fears in less obvious ways, like asking them at the start of each semester if they prefer *not* to be called on in class. Sometimes, he lets a student take a test twice. And he never marks anyone below 50, no matter how bad the actual score may be. It saves a student embarrassment and helps avoid discouraging someone to the point of giving up entirely.

"I'm just a plain Joe kind of teacher," Goodberry shrugs, "a blue collar kind of guy."

With almost 20 years in middle and high school teaching and administration—add that to his vagabond résumé—Goodberry's "plain Joe" philosophy extends to his views on education in general.

Talking quietly with a visitor about the Columbine High School shooting tragedy, Goodberry shakes his head. "That really struck a chord," he explains.

His experiences at the junior high and high school level made him realize that not all students fit into a pre-designed mold. "At about the seventh grade, students should be given choices. We should provide jobs for those who prefer not to continue their schooling at that point."

He suggests that the alternative, experiential philosophy offered "and done so well" by the Thompson School, be shifted to the lower grades. "Getting a job for a year at the age of 13—that would be a wonderful sabbatical," he says with a smile.

—Carmelle Druchniak, UNH News Bureau

Education

A.A., mathematics, Onondaga Community College, 1968

B.S., mathematics, State U. of New York, at Oswego, 1970

M. Ed., school administration, University of New Hampshire, 1974

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