

# UPDATE

UNIVERSITY OF MINNESOTA



photo: TOM FOLEY

## MEDICINE AND *Managed Care*

BY RICHARD BRODERICK

*In the midst of revolutionary changes, health care is undergoing some amazing developments—including the revival of general practice*

In the next couple of years, a new medical school may open on the West Coast. If established, its mission will be to train physicians and other medical professionals in the specific mix of skills and specialties most in demand in today's competitive environment, with its rapidly changing landscape of managed care operations, HMOs, and integrated service networks (ISNs).

What's that you say? There's nothing earthshaking about a new medical school. Don't we need more doctors?

For Alumni,  
Faculty,  
and Staff

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# MANAGED CARE

Well, yes and—depending on whom you ask—no. More family practitioners, nurse practitioners, and other “primary” caregivers, fewer doctors trained in specialties and subspecialties. But what’s so dramatic about the school currently under discussion is who might operate it: FHP Healthcare, a publicly traded, for-profit HMO based in southern California.

With 1.7 million members in 11 states (plus the territory of Guam) and 1994 earnings of \$60 million on revenues of \$2.5 billion, FHP is one of the biggest, fastest-growing HMOs in the United States. And while the idea of opening its own medical school is still under consideration, the very fact that an HMO is thinking of such a move adds yet another new chapter to the unfolding saga of American health care.

For those in the field, the prospect takes on the aspect of a good-news/bad-news joke. An FHP med school would fulfill what many see as the dream of a fully integrated, vertically integrated health care delivery organization, and what others see as the ethical and medical nightmare of a fully integrated, vertically integrated health care delivery system.

“Right now, FHP is just considering its options,” says Peter Coggan. Formerly the associate dean for medical education at the University of Nevada-Las Vegas, Coggan was hired by FHP a few months ago; his task: to undertake a feasibility study. “FHP’s board will decide what to do with it,” he says.

More than anything else—more than talk of a single-payer system or the mighty crash of the Clinton health plan—the FHP med school symbolizes the revolutionary change overtaking American medicine. No one knows what the health care “market” is going to look like in five years, not to mention ten. And more to the point as far as the University is concerned, no one knows exactly how the University of Minnesota’s academic medical center—a complex of units and institutions that includes the medical and nursing schools, University hospital, mortuary science, and more—is going to fit into the health care scene once all the dust finally settles.

The changes cut across the University’s medical center, but are particularly acute in three interrelated areas: the Medical School curriculum, the University hospital, and the relationship between the University’s faculty/clinicians and a highly competitive health care marketplace.

For example, one of the primary reasons why FHP Healthcare is considering opening its own medical school is because of the difficulty the organization has faced in recruiting primary care physicians. The problem is particularly acute because a high percentage of FHP members speak Spanish, not English, as their first language.

“We have a real concern about our future ability to meet our member needs,” explains Coggan. “FHP is having a tough time finding physicians trained to function in a managed care environment, and a tough time finding minority physicians who can reflect the composition of our membership.”



Even without language and cultural considerations, managed care has created a shortage of primary care doctors—the very kind of doctors who, for reasons of effectiveness and quality care, are expected to handle up to 90 percent of all patient problems, passing along only 10 percent of their cases to specialists and subspecialists.

Part of the reason for this shortfall is attributable to America’s peculiar medical culture.

“In the United States, the percentage of primary care physicians and specialists is dominated by specialists. In other countries, it’s the other way around,” explains Howard Brody, the director of the Center of Ethics and Humanities and a professor of family practice at Michigan State University. “In Canada and England, for instance, the culture of care is dominated by general practitioners. In those countries, general practitioners are valued members of the health care system.”

The same, however, has not been the case here—at least until now. Even today, Brody says, some medical schools are telling students that, in effect, the life of a general practitioner (GP) is one of treating “runny noses” and referring most patients to specialists. The reality is that in well-run HMOs GPs handle up to 95 percent of the patient load.

Although firm figures do not exist, everyone agrees there is a shortage of primary care specialists, nowhere more so than in Minnesota, where HMOs took root earlier than in any state other than California. Today, 40 percent of all Twin Cities residents are enrolled in a managed care program.

“With managed care growing the way it is, the shortage is a moving target,” says Edward Ciriacy, head of the Department of Family Practice at the University’s Twin Cities campus. “The cost-effective way of providing care is with a generalist physician at the front end rather than with a group of subspecialists.”

Ten years ago, Ciriacy observes, HMOs were not much interested in general practitioners. Now, he says, “They’re gobbling them up.”

“At the present time, no one projects a surplus of family practitioners,” he says. “Everyone agrees we need more.”

And, at long last, more are on the way. After nearly a decade of steady decline, the percentage of students graduating from medical school who plan to pursue careers in general practice—either in primary care, general internal medicine, or general pediatrics—rose two years in a row in 1993–94, from 14.6 percent in 1992 to 22.8 percent last year. However, it should be noted that even this figure is well below the 34.1 percent of students who planned to go into general medicine in 1984.

If, as some propose, half of all doctors in the United States should be generalists, it will take well into the next century before we can hope to achieve that goal even if the current rise in students choosing general medicine continues unabated.



In a system where doctors are expected to make decisions that balance level of care and cost control, one area where many feel medical students need a new kind of training is in the ethics and ramifications of making just those kinds of choices.

In a couple of celebrated cases involving for-profit HMOs on the East Coast, doctors joining the organization have been required to sign contracts enjoining them from revealing any information to

patients concerning financial issues related to their treatment course, including information about monetary incentives doctors are eligible to receive for holding down costs.

Such a provision flatly violates medical ethics—and the transgression came to light when physicians blew the whistle on the HMOs. But the ability of future doctors to navigate their way through this kind of brand-new dilemma concerns many in medical education.

“Placing cost before care has happened and will continue to happen,” says Roby Thompson, Jr., head of the Department of Orthopaedic Surgery. “It is not a commonplace occurrence that patients suffer as a result of managed care, but it does occur.”

Potential conflicts of interest exist in any form of health care financing. Fee-for-service, the traditional practice in the United States, has a built-in incentive for overtreatment of patients. In England, where doctors are salaried employees of the national health service, there is an incentive to be less than productive.

“People who think managed care is an ethical outrage haven’t studied other systems,” maintains Brody.

Even so, with an insurance industry that can add administrative costs of as much as 15 to 20 percent, and for-profit HMOs expected to return 5 cents on every dollar to stockholders, we are, Brody says, “going to have to do much more to train physicians on moral and ethical issues so they can go into managed care practices and act as patient advocates and not be seduced by managed care into giving up professional principles.”



In response to the changing needs of health care, the University’s Medical School has instituted a number of changes to its curriculum—and more are on the way.

One fairly dramatic example is the list of 14 primary care “competencies” that all Medical School graduates—whatever their intended specialty—will be expected to master.

Number four on that list is an understanding of ethical issues and potential conflicts in clinical practice. Graduates must be “aware of [their] own personal philosophy of ethical practices and how it affects practice; [have] skills for approaching ethical problems such as end-of-life care, informed consent, and confidentiality.” And they must understand “the inherent conflict in the allocation of resources and provision of care for a population...versus an individual...”

To help develop this kind of ethical sensitivity, first-year med students now attend a series of lectures, followed by group discussions. “The program,” says Robert McCollister, associate dean of curriculum in the Medical School, “gets students thinking about the problems doctors face in real life.”

Equally important, the competencies list mandates that graduates be able to establish relationships with patients that help patients involve themselves in decisions about and management of their own health. Toward this end, the Medical School has strengthened and expanded interviewing and communication skill courses. Student interviews with patients are videotaped and critiqued by doctors working in community settings who also serve as “preceptors” for medical students.

But the changes in the University’s medical curriculum go well beyond added emphases on ethics and communications. Many other changes have already been instituted with an eye toward exposing students to the real-life possibilities of general medicine. More are on the way.

Some of the biggest changes have occurred in the first-year curriculum. Some 90 physicians in the Twin Cities have volunteered to take on first-year students in community-based preceptorships. "The idea being," explains McCollister, "that the students will see the relevance of the research-educational model they are receiving."

First-year students also go on field trips to factories and other work sites—among other places, they have visited General Mills, the St. Paul Ford plant, and the Prairie Island nuclear facility—for a first-hand feel of occupational medicine. In addition, first-year students must take 15 hours of course work in preventive medicine.

Meanwhile, a primary care task force has recommended that the Medical School develop a new course in ambulatory medicine for third-year students. Such a course already exists for fourth-year students, and covers many kinds of issues, like principles of prevention, screening patients, nutrition, domestic and child abuse, sexually transmitted diseases, smoking, and more. "It's a generalist kind of education," says McCollister.

"Everybody is claiming the territory of family practice," he says. "This course dramatizes that there are a lot of players in this, cut across disciplines."



However research-based a given technology or drug might be, medicine is ultimately an art, not a science—a craft passed on from one generation of clinicians to another.

As part of their medical oath, doctors vow to help train new doctors as an inherent part of their professional obligations. But with increased pressure on doctors participating in HMOs to be productive and hold costs down, some fear the traditional practice of "preceptorships," wherein students work and learn from doctors working in the community, may be at some risk.

"As the margin of profit for physicians is compressed because of managed care," says Ciriacy, "it becomes increasingly a problem for people to take time to teach in clinics. Your overhead keeps going while you teach—and it is true that working with students in a clinical setting does cut down on the physician's productivity."

Although the Medical School has encountered reluctance to take on students only when dealing with HMO administrators, so far individual doctors continue to be as generous as ever with their time.

"They like to do it as long as they have discretionary time at their disposal," observes McCollister. "But I suspect that we will get to a place where there is more and more management involved with managed care and less discretion by physicians over their own time."

On the other hand, recruiting doctors can be difficult for HMOs operating in Minnesota. The rule of thumb is that most doctors practice in the state or region where they went to medical school. The University—at its campuses in the Twin Cities and Duluth—trains about half of all physicians practicing in Minnesota. That gives the University some leverage.

"Managed care organizations are in the business of recruiting doctors," says McCollister. "And I think being able to offer doctors the chance to work with medical students is a plus in recruiting them. Most doctors like to teach."

"We are extremely fortunate here in the Upper Midwest to have as many people volunteer as we do," says Ciriacy. "It's not the same in the rest of the country. But here, teaching has been a very high priority among practicing physicians." ■

## The Fate of University Hospital

The cover headline was dramatic. "Code Blue." The message sent out over hospital PA systems when a patient has gone into respiratory or cardiac arrest. The subhead was more temperate, but still overstated: "The U of M Hospital and Clinic has stabilized, but the patient may be terminally ill."

For a while a couple of years ago, "Code Blue" wasn't a bad way to describe things at the hospital. Operating in one of the most competitive health care markets in the country, the hospital was experiencing a drastic drop in its patient load: at one point, the obstetrics department almost lost its accreditation because the number of births at University Hospital had dropped to only 400 a year.

But as result of significant administrative and management changes, things look a lot better. The future is not entirely clear, but tales of University Hospital's imminent demise are clearly premature.

Two years ago—or just about the time things were bottoming out—the University organized University Health Systems. UHS integrates what had been the nearly autonomous operations of the hospital and the University of Minnesota Clinical Associates (UMCA), the group practice formed in the mid-eighties.

"The reason for forming UHS was that the market doesn't want to work with hospitals and physicians separately anymore," explains Greg Hart, president of UHS. "The market is looking for integrated operating systems bringing hospitals, doctors, and other services under one organizational structure."

Under its charter, UHS is empowered to negotiate with managed care organizations for UMCA and University Hospital. That puts the University in a position to provide a full range of medical care or to subcontract with a managed care organization to provide a selection of specialty services.

"I think many folks underestimate the amount of positive change that has occurred at University Hospital in the past two years," says James Ehlen, president of Allina Health Systems, the huge managed care organization formed by the merger of Medica and HealthSpan. "The forming of UHS is a symbol, but a very powerful one, of fundamental changes that have been difficult but have been accomplished. I am frustrated by the unwillingness of many people in the community to give the University credit for this. It is terrific work."

Since 1992, UHS has managed to cut \$40 million and sign contracts with Allina, HealthPartners, and Medica. Blue Cross Blue Shield Minnesota has agreed to form an INS (Integrated Network System) with the University. Those contracts and agreements are vital if the University is going to attract the kind of patient load necessary to train doctors.

"The real issue is that we need a certain spectrum of patients for education and research and a certain number of tertiary and quaternary [less-than-critically ill] patients to advance our education and research effort," explains health sciences provost William Brody. "The sources of those are drying up for us as they are for other academic medical centers."

"We need to increase our referrals. But to do that we must capture patients at the front end. That poses a problem for us. Either we must find a partner to affiliate with or try to do it ourselves."

Faced with a declining number of patients in the mid-eighties, the department of family practice began to create its own network of clinics and individual practitioners. Family practice now has six

community-based clinics in its educational program and has affiliations with 100 more in the seven-county metropolitan area. And remember how obstetrics was in danger of losing its accreditation? Well, that problem was solved by having University residents train at Fairview Riverside, a hospital that delivers about 4,000 babies per year.

Similar arrangements are either in place or proposed for other departments. Yet no matter how many residents train elsewhere, there is general agreement that the University still needs University Hospital if it is to continue training enough doctors to meet the state's needs.

"You have to have an inpatient facility where the chairs of all the departments in the hospital are University faculty so they can develop a teaching environment that is very controlled," says John Kralewski, director of the Institute for Health Services Research in the School of Public Health. "Theoretically, that could be done at another hospital, but *only* if it were reorganized as a University hospital."

Some top-rate medical schools do function without their own teaching hospital, like Johns Hopkins and Harvard. But those who argue that the same sort of situation could prevail in the Twin Cities are probably not being realistic, says Roby Thompson, Jr., head of the Department of Orthopaedic Surgery.

"In each case, these medical schools are associated with hospitals that have their own basic science and research units," he explains. "It doesn't seem practical to try to duplicate that in every community hospital we use in Minnesota to help meet our education needs. To my mind the presence of University Hospital has been pivotal to the success of our medical education—and will continue to be so."

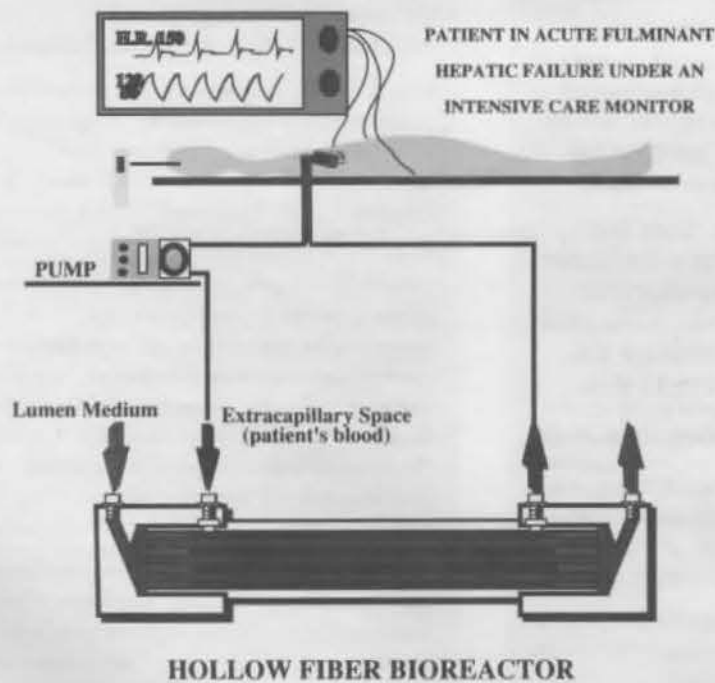
In an era where facilities must compete on the basis of cost as well as quality, University Hospital is expected to keep its rates competitive—but at the same time carry on teaching and research functions that do not in any way add to the bottom line. No matter how much budgetary efficiency UHS achieves, the University will still incur costs above and beyond patient care simply by discharging its other primary missions.

The state commissioner of health has appointed two successive task forces—Medical Education and Research Cost task forces I and II—to study the cost of medical education and develop strategies for collecting and distributing them to state institutions that train doctors. MERC II is also looking into how many primary care physicians, nurse practitioners, and specialists Minnesota is going to need in the future.

The report from MERC II is supposed to be presented to the legislature in February. As in other areas of health care, Minnesota is breaking new ground.

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## BIOARTIFICIAL LIVER



## ENTRAPMENT OF HEPATOCYTES

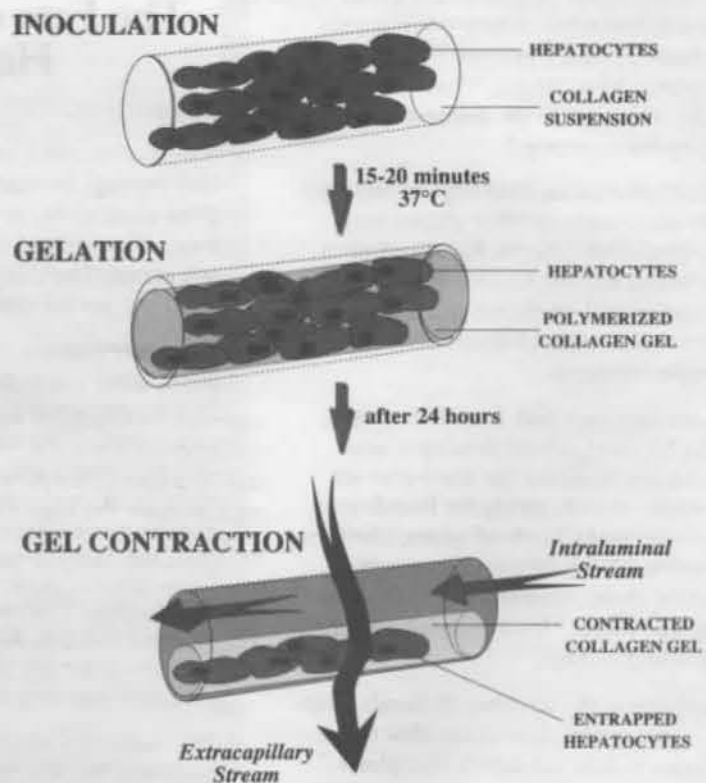


Illustration: FLORENCE WU

# The Art of Artificial ORGANS

A collaboration among many disciplines leads to a bioartificial liver

BY MARY MCKEE

Julia, a 37-year-old mother of two from Crystal, comes into the emergency room at University of Minnesota Hospital and Clinic (UMHC) complaining of general malaise. Two weeks earlier, Julia's doctor diagnosed hepatitis. According to her husband, she has been lethargic and confused for the last two days—signs of hepatic encephalopathy, brain disease due to liver malfunction; her skin has a yellow cast.

ER staff admit her to the intensive care unit. Julia is suffering from acute liver failure. Because of the severity of her disease, Julia's name goes to the top of the liver transplant list. But still she faces a wait of two to five days before a liver is available.

In two days, Julia is in a coma. A tube has been inserted into her airway to help with her breathing. Health care providers are faced with the challenge of keeping her alive until a liver arrives for transplantation.

Soon there will be a solution to this problem. This month UMHc doctors begin human trials of a bioartificial liver-assist device that they expect could bring temporary relief for thousands of people like Julia while they wait for a transplant or for their own liver to regenerate. (The liver assist has already been tested successfully on animals here.)

The device, called bioartificial because it uses live liver cells (from pigs) to treat the patient's blood, has been developed by an extraordinary multidisciplinary team of researchers from across the University.

The clinical need spurring development? Many people—15,000 in the United States each year—die of *fulminant hepatic failure*, severe liver failure that comes on suddenly in fairly young, healthy people and, more often than not, leads to a quick death.

"The therapy of choice is liver transplantation," according to Frank Cerra, professor of surgery and a key player on the team. "But a significant percentage of patients don't make it to a transplant. So there's a need to support the failing liver until either it recovers on its own [as happens after partial removal due to disease], or until we get a human liver to transplant into the patient. We coined the term *bridge device*: It bridges the gap, to recovery or transplantation."

Developing the artificial liver was a complex project, with researchers working on the cutting edge of medical and technological breakthroughs, as well as shepherding the project through myriad internal and external reviews to the point of human trials. The effort required an intense, seven-year collaboration among researchers in several areas at the University. That collaboration itself was a bridge, spanning Washington Avenue from the health sciences complex to the Institute of Technology (IT) and out to the private sector.

From the health sciences side of the bridge, the collaborators included liver cell culture researchers and surgeons, including Cerra, Joseph Bloomer, and William Payne; staff from the Biomedical Engineering Center; hepatologists (MDs specializing in liver diseases); clinical pharmacists; and other basic scientists interested in liver function.

Across the street, experts from biomaterials sciences, led by Wei-Shou Hu, associate professor of chemical engineering and materials science, worked out the engineering problems of the device.

Scott Nyberg, a medical fellow specializing in surgery who also has a Ph.D. in chemical engineering, had a foot on each side of the bridge. And the Office for Research and Technology Transfer helped find funding for the project, as well as a manufacturer for the device.

According to Nyberg, there were three major hurdles: 1) to get as many cells as possible, 2) to keep those cells alive and functioning, and 3) to protect the cells from the patient's immune system. And, besides getting the liver cells into the device, they had to make it work as a support system to provide oxygen, remove waste, and move the culture media, as well as the blood, in and out of the device.

In essence, Hu says, the bioartificial liver technology is "a marriage of cell-culture technology with hollow-fiber technology [an area of chemical engineering], which was well developed for hemodialysis." He credits former student Matthew T. Scholz with initiating the idea of suspending the liver cells in collagen, a fibrous material occurring naturally in tendons and cartilage. The mixture is pumped into a thin hollow tube, where the collagen hardens and contracts to roughly the diameter of spaghetti, leaving space between the collagen and the inside wall of the tube.

The bioartificial liver setup looks much like a kidney dialysis system. Tubes carry the patient's blood to the "bioreactor," which houses cylinders of hollow-fiber membranes filled with hepatocytes, colonies of cultured liver cells (in this case from pigs), in collagen. While blood flows outside the semipermeable membrane, nutrients that feed the hepatocytes circulate inside.

The hollow tubes are bundled together and placed in a machine that regulates the flow of nutrients, blood, and waste, as well as temperature and pH level. The semipermeable membrane of the hollow fibers allows oxygenation; filters out toxins, like those resulting from Julia's hepatitis; guards the

liver cells against antibodies from the patient's immune system; and allows for the addition of nutrients before the blood is returned to the patient, mimicking the healthy human liver.



The search for a way to keep people with severe liver failure alive has gone on for decades. Many unsuccessful approaches have been tried. In 1988, Nyberg, then a University doctor studying engineering, was interested in liver cell cultures and what was necessary to culture liver cells in the laboratory. He approached Hu, whose specialty is hollow-fiber technology (putting cells into hollow fiber tubes), and Cerra, who had been studying liver cell malfunction for nearly 20 years. Nyberg wanted to see if they could make an artificial liver by putting liver cells in a culture medium into hollow fibers. The topic became the basis for Nyberg's Ph.D. thesis.

By 1991, the investigators were rolling along in the lab, when another player—the Office For Research And Technology Transfer (ORTTA)—got involved. Anton Potami, associate vice president for research and technology transfer, put the researchers in touch with Cellex Biosciences, Coon Rapids, to help put theory into practice. "Through ORTTA, we wrote a contract to bring this company and the University together in a research project.... We're now in the final stages of getting patents on the technology, which the University will hold," Cerra says. REGENEREX, Inc., a Cellex spin-off, will manufacture and market the device. Cellex and REGENEREX have also provided funding for the clinical development. (Other money, supporting basic research, has come from the National Institutes for Health, the National Science Foundation, and the Whitaker Foundation.)

By early last year, the team had completed studies on cell culture, on the reactor itself, and had studied two animal models of liver failure. From that they had enough evidence of safety and efficacy to receive approval for human application—from the Institutional Review Board, the hospital, and the University's Conflict Review Committee. In June, they applied to the Federal Drug Agency (FDA) for approval to do Phase I human trials. In November, the team got the word that the FDA had given the green light. Phase I testing begins this month.



Julia's story does not end well: She died of cerebral edema (brain swelling) three days after her hospitalization—hours before a suitable liver became available for transplant.

One of the reasons liver failure so often leads to death, says Hu, is that, unlike the heart, the liver is a complex organ with a number of functions essential to survival. When the liver fails, even temporarily, other major organs shut down. Multiple organ failure syndrome is a leading cause of death on intensive care units.

With the bioartificial liver, patients with conditions like Julia's have a new hope of staying alive until they have a functioning organ.

The development of modern medical technology takes the combined efforts of many disciplines to achieve breakthroughs, and to shepherd them through to successful clinical use. As Cerra says, "We are a major research university; we have the expertise. But, in the final analysis, it takes the initiative and creativity of individuals willing to work together toward a common goal.... In terms of building collaborative bridges between disciplines, [this project] is symbolic of where, as a research institution, we need to go, what can be done, that we can have fun doing it, and that everyone wins, most especially the patients." ■



Photo: TOM FOLEY

MDs Mike Hu (left) and Tim Sialaff, in the liver cell culture lab, have been involved in the bioartificial liver project for the last two and a half years.



PHOTO: TOM FOLEY

A NEW PROGRAM TEACHES  
GRADUATE STUDENTS HOW  
TO TEACH

# TOPDS IN THEIR CLASS

By Maureen Smith

**U**ntil last year, Jane Dorweiler never liked the way the University prepared graduate students for their role as teachers. "They take you and plunk you into a classroom and say, Teach. It's not second nature to everyone. Some of us feel a little nervous," she says.

Like Dorweiler, most graduate students are hoping for careers as college professors, with classroom teaching at the heart of their work, and most have been expected to learn by watching, or doing.

So it was for current faculty. In 1989 a survey of tenure-track faculty at the University revealed that 44 percent had no formal preparation for their teaching responsibilities, and 34 percent had no experience in teaching before their first faculty appointment. The percentages would probably be similar for faculty across the country, including those who earned their Ph.D.'s at Minnesota.

Today's Ph.D. students, however, have something better than getting plunked into the classroom unprepared: Teaching Opportunities for Doctoral Students, or TOPDS (pronounced just "tops").

"From everything I've seen, we've had rave reviews," Mark Brenner, acting dean of the Graduate School, says about TOPDS, a program that began last year with funding from the Bush Foundation. "It was immensely helpful. I couldn't say enough good things about it," says Dorweiler, a Ph.D. student in plant biology and now a TOPDS graduate. "It gave me so many ideas and resources and experiences."

The program includes four parts: a course on teaching in higher education, teaching experience with a faculty mentor and a teaching consultant as observers, development of a teaching portfolio, and participation in a faculty development workshop. The result has been "an explosion of creative energy and community building when the participants meet like-minded people from other disciplines," says Jan Smith, who taught all sections of the teaching course in the program's first year.

The TOPDS process "helps usher the doctoral student into a new peerdom," Smith says. Instead of thinking of themselves as students, participants are "encouraged to look at themselves as the future faculty and imagine what it will be like to have their own classes."

Getting serious about teaching future faculty to teach will require a cultural change at the University, involving not just the committed people at TOPDS but the graduate students' faculty advisers. Another needed change is getting real about where these future teachers are going to teach.

"Graduate faculty need to believe what they're doing is important, and it is important," Smith says. "But if the only way they can see themselves succeeding is to replicate or clone themselves, it isn't going to work. There isn't room in this country for much more cloning of research faculty."

"The best students can't get research positions. They end up teaching at a state university or a liberal arts school or a community college. I've heard reports of people working at those institutions who have been cut off from the mainstream of research and even from their doctoral advisers. There is such a pecking order," she says.

"There has been a stigma perpetuated by some of our faculty that you're not a success unless you go to a research university," Brenner says. "We need to allow students to find the fit that is best for them. At most of these places they still are doing scholarly work."

"The market may drive a change," Smith says. "You can't put your doctoral students in tenure-track positions at MIT, and at the same time the community colleges are saying, 'We don't want to interview your students because they don't know how to teach.'"

One reason for TOPDS, Brenner says, is that "we believe the students will be more competitive in the job market."

When he was interviewing for faculty jobs 15 years ago, John Beatty remembers that people asked him what topics he could teach but hardly cared if he showed signs of being a good teacher. "They were only slightly interested in what my experience was. They just wanted to know what holes I could fill."

Not any more. "Being a good teacher is more and more important in getting a job. Graduate students know that. The faculty should know it, too." Beatty, an associate professor of ecology, evolution, and behavior, was a TOPDS mentor for two doctoral students.

Making herself more marketable was "one of the selling points" for Dorweiler. More immediately, she wanted to build skills and confidence for her duties as a teaching assistant.

Although she had hoped to take the class before teaching for the first time, Dorweiler wasn't able to take it until winter quarter. Still, she says, she took it soon enough that "I hadn't developed a lot of bad habits," and "it was nice having something to draw on so I knew what kinds of things I wanted to get out of it."

"She modeled a lot of the techniques that she was trying to teach us," Dorweiler says about Smith. "I went into it as the student I've always been, the student who expects the teacher to give you all of the knowledge and then you go out and use it. The neat thing about it is that she didn't teach that way."

"There's no one right way to do it. You have to show people that there are different ways to do it. She didn't say, 'This is the way to do it. Now go do it.' She'd say, 'Here's one way you could do it. Here's another way you could do it.' She did it more by modeling than by lecturing every single time," Dorweiler says.

Working with her mentor was also important, she says. Dorweiler chose plant biology associate professor Iris Charvat, "somebody I'd never had, but I'd heard a lot of good things about her teaching, and she was familiar with the class I was teaching."

"She came in and was real enthusiastic about the things I did well, and real gentle in giving me comments and feedback about things she thought I could improve on."

"For me it was pretty exciting," says Helen Globus, a Ph.D. student in veterinary dermatology. Globus says she especially valued the comments from her two mentors, one from her discipline and one from TOPDS. "I got so much out of having these independent people come in," she says.

Did it make a difference? "I've come a long way," she says. "I incorporated a lot of active learning into my class. My last group of students came and told me they loved me."

The program has also been exciting for the faculty mentors. "It was very satisfying to work with a young, bright, enthusiastic person who was very upbeat about the prospect of being a college teacher," says Gail Peterson, associate professor of psychology.

The faculty mentors meet several times as a group, and "that is a very rare event for college professors to talk about college teaching," he adds. "One couldn't help but pick up a lot of ideas from one's colleagues. It was also a good social experience. I met people I'd never met before, even though we'd all probably been here a couple of decades."

"I'm sure there's this not-too-well-concealed goal" to improve the teaching of the mentors as well as the Ph.D. students, John Beatty says. "I certainly enjoyed that. It was a terrific experience."

As a mentor for two graduate students, Beatty had "very intense discussions" with them about teaching. "There's no way you can do that without being self-reflective about your own teaching," he says.

With both of his students, Beatty especially enjoyed the chance to applaud their successes. "In this program you're trained what to look for, and then you watch very carefully. The graduate students do well in many respects, and it's nice to be able to tell them. That kind of affirmation is important."

"Of course, you're also looking for ways they can improve, and it goes without saying you can find some, but I was especially glad to tell them what they were doing well. These young people, just as I was when I was starting, are anxious about their teaching." Beatty says the students, Rachel Budelsky and William Lamberts, are "both excellent teachers."

The TOPDS experience led both Peterson and Beatty to think about what has been missing in the preparation of graduate students. "Graduate training is a very intimate process between a professor and student, but it almost never has anything to do with college teaching," Peterson says. "In psychology it has to do with research and experimentation."

"I really want to start being a mentor to all my graduate students in a different way," Beatty says. "I've always gotten together with them regularly, once a week, to talk about the subject matter. I take that very seriously. Now I think I should be talking to them about teaching."

"That weaves in, in a tight way, with the subject matter. You don't know something unless you can communicate it, and when you talk about how to communicate a subject, you often get back into a discussion of the subject matter itself."

TOPDS is now in its second year. A new program this year, with a similar but broader mission, is Preparing Future Faculty, funded by the Pew Charitable Trust.

In a nationwide competition with 70 schools, the University was chosen as one of five to lead a regional cluster of schools in preparing faculty for all of their roles, in and out of the classroom. Also in the cluster are Macalester College, Metropolitan State University, Minneapolis Community College, St. Olaf College, and the University's Morris campus. Thirty top doctoral students will be assigned to internships and faculty mentors on participating campuses.

"It's not just the teaching experience," Brenner says. "They will follow the faculty through their activities, to understand what it is to be a faculty member in a different setting. Many of our Ph.D. students do go to these other places."

The University is now "one of the lead universities in the country" in preparing doctoral students to teach, he says, and this new program is "a very exciting reach even for us."

Both TOPDS and Preparing Future Faculty are intended to improve the quality of college teaching at all levels. "We provide 25 percent of the faculty to the region," Brenner says. "That was what the Bush Foundation was so excited about. We could have a major impact on the quality of instruction in the region."

TOPDS participants typically "came to doctoral education with a desire to teach," Jan Smith says. "They've struggled to acquire skills as a teacher, they want to see themselves as effective in the classroom. Some get support. Often they feel quite lonely."

"Many of them came from a background where they had effective teachers, and they wanted very much to give something back. They see teaching as something vital for our culture, and they want to make a contribution but they are not sure how."

"I believe just about anybody can be a good teacher, and they need to find that spark within themselves," Smith says. Besides the subject matter, a good teacher will "care about students and wish them well in the world and open doors for them."

"Without that it's not teaching, it's transferring knowledge." ■



# RETURN OF THE NATIVE



IN HER LATEST NOVEL,  
**VALERIE MINER**  
SPINS A POWERFUL TALE ABOUT THE  
DIFFERENT MEANINGS  
OF LOYALTY AND LOVE OF COUNTRY

WRITTEN BY RICHARD BRODERICK

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PHOTOS BY TOM FOLEY

She was teaching at Arizona State University, having doubts about the relevance of her novel-in-progress, when world events demonstrated to Valerie Miner that the issues addressed in her book were still very much germane.

This was February 1991, and the United States had just initiated the aerial attacks on Baghdad that signaled the televised outbreak of the Gulf War. As Desert Shield erupted into Desert Storm, Miner's book, with its examination of a family disrupted by the passions and politics of the Vietnam War, took on renewed urgency: *A Walking Fire*, published this year by the State University of New York Press, was suddenly as fresh as the latest update from the Middle East.

"I was trying to work on the book and grappling with questions about whether it was too political or passé: have we had enough history of this period,

will anyone read it? And then here I was in this desert while half a world away in another desert many Americans were gathering to fight another war," recalls Miner, an associate professor in the Department of English on the Twin Cities campus. She remembers timing her work breaks to reports on National Public Radio and listening to news from Riyadh and Baghdad with a growing sense of irony and anger.

"It was amazing how the names one heard in the sixties washed into the names you were hearing then," she says. "It was amazing the way 'swamp' flowed into 'desert,' and 'Southeast Asia' flowed into 'the Middle East.'"

She began writing the book in 1988 while reflecting on the parallels between U.S. involvement in Vietnam and U.S. involvement in Central America. With the outbreak of the Gulf War, she says she "felt a deeper conviction about writing the book.

"The parallels between what was happening at that time with what happened before were made even more profound by the way the media was quoting people from all corners saying that we must support the troops in the Gulf because we didn't in Vietnam," she says. "The clear implication was that the national tragedy of Vietnam was somehow caused by people protesting the war. It seemed to me that not a lot has changed. That makes me very angry, but also elicits an emotion I did not feel so much when I was younger—a deep sadness."

A retelling of the King Lear story from the point of view of Cordelia, *A Walking Fire* relates the story of Cora, a woman from a blue-collar family who goes to college and becomes an antiwar activist. Her objections to Vietnam bring her into conflict with her father, Roy, a hard-drinking, overbearing man who is proud of his own service in the military and proud of the way his two sons support the U.S. war effort.

Eventually, Roy disowns Cora, whose deepening radicalism leads her to participate in the torching of a selective service office. After setting the fire, Cora's colleague deliberately remains in the office and burns to death. His suicide is meant to dramatize his opposition to the war, but when his family demands that the official cause of death be ruled a possible homicide, the probability arises that Cora might be charged with felony murder—a wrongful death that occurs during the commission of a felony. Fearing arrest, Cora flees Oregon for Canada. The story begins 20 years later, when news of her father's terminal illness brings Cora and her 19-year-old daughter Fran back to the States.

At heart, the book is about the conflicting demands different sets of loyalties place upon us: allegiance to conscience versus allegiance to one's country and to one's family. It is also about our largely unexamined assumptions about loyalties between and among family members: the loyalty children owe their parents, but also the loyalty parents owe their children.

As in her previous novels, Miner offers no answers to these complicated questions, no easy resolution to the issues of Cora's life. In the end, Cora and her father effect a reconciliation of sorts; she discovers that it is possible, at least on a provisional basis, to go home again. At the same time, she finds herself facing the very murder charges she has spent 20 years in self-imposed exile to escape.

"*King Lear*," she says, "is an archetypal story about families and family loyalty, which is why Shakespeare borrowed it from others. I have a great deal of sympathy for Lear—I think that, like Roy in my book, he is ultimately a fragile character who finally comes to have some understanding, but the story is always presented from his point of view. I was interested in the question of loyalty from Cordelia's perspective."



\* \* \*

When asked to describe her, friends and colleagues invariably describe Miner as diligent and conscientious—the kind of writer who works every day, the kind of person who tries to think through the implications of her actions and life. “Personally, I think it would be impossible for her to commit a thoughtless act,” says Jeffrey Paine, literary editor of the *Wilson Quarterly* and a fellow member of the National Book Critic Circle board of directors. “A very dedicated, earnest person,” is how a former student, Sharon Lebel, describes her.

To the composition of *A Walking Fire*, Miner brought that same diligence. She began writing it in Australia during a period when she was writer-in-residence at a college there. Day after day, she would walk the beaches of the Indian Ocean, imagining that she was strolling the beaches of Oregon, while carrying on conversations in her head with Cora. “That made it more her book,” she explains. “I felt as if she were telling it to me.”

At the same time, she read *Lear* again and again, as well as criticisms of the play. She also refreshed her memory of the Vietnam War era by reading, among other works, Todd Gitlin’s compendious book *The Sixties* and Gloria Emerson’s *Winners and Losers*.

As always, she wrote out the first draft in long hand, which she then typed—herself—into a computer, as she did all subsequent drafts. She does this because, she explains, “I care a lot about language and how one word fits another and it’s important that I have the whole book go through my bloodstream.”

She figures that she composed seven drafts of *Fire*, not counting all the redrafting and editing that took place each time she retyped the book. After completing a draft, she distributed copies of it to several readers and technical experts; for the details of felony murder laws in Oregon, for example, she consulted a lawyer.

“Inevitably, the person I consult about legal issues gives me feedback on the language, and the writers I consult give me feedback on technical issues,” she laughs. After mapping out her own revisions, she would read the comments offered by her readers, incorporating some of their suggestions into the next draft, rejecting others. “Ultimately,” she explains, “a novel is my own vision.”

Finally, just to make sure that everything was right, she returned to Oregon and checked on the locales where much of the novel’s present action is set.

Despite the carefully organized manner in which she went about writing *Fire*, the book still contained some surprises for Miner; Fran, Cora’s daughter, was not originally conceived to be such a major character. “But Fran had such a wonderfully idiosyncratic character, she was such a force of nature—somewhat like Cora’s father—that she became much more central than I had envisioned,” she says.

\* \* \*

Miner balks at attempts to read autobiographical material into fiction. Still, many parallels exist between *A Walking Fire* and events in her own fairly eventful life.

She too grew up in a working-class home that was in some ways similar but also very different from other working-class homes. For one, her parents’ marriage cut across religious and cultural boundaries; her father was Irish Catholic, her mother a

Presbyterian who’d emigrated from Scotland as a young woman.

Miner grew up in New York City, Seattle, and San Francisco. Two things led her to begin writing while still in grade school—the “conflagrations,” as she calls them, at home, the result of the “very different world views” of her parents; and the “painful and complicated secrets” of her family’s history.

*Cora knew it was a dream. She kept waking and falling back over the blurred lines. She was walking to the beach, as she had done a thousand times. As she had not done in twenty years.*

*Sharp rocks penetrated the thin soles of her veteran running shoes. The wind was high and cold and the sun low enough in the sky to strike her chest. A perfect/imperfect Oregon evening. While her Toronto friends lusted after luscious Caribbean beaches, Cora ached for the rugged Pacific coast. Her pleasure was fused with fear and she reached for a deeper sleep.*

*Cora timed her breaths to the rise and fall of the waves. In...out. In...out. The separation of ebb and flow was too long, the reflex for air too strong. She inhaled, gulping—a pathetic land animal devolved from her ancestral amphibian—still, she belonged to the water. The pungent brine was tinged with scents of Pacific fir and pine. How often she had walked alone here as a girl, away from the voices. How old was she now? Surely no longer a child. Cora shook her long dark hair, mostly dark save for what Jacques called the lunar streaks. She reminded herself she was a mother, a lover, a writer, a daughter returning of her own volition. She had a new country and after twenty years, three new layers of skin. She would not be imprisoned. She had created a new life for herself. And when she walked along the Oregon beach, she would be free.*

*Cora picked across the gravel and boulders, careful not to trip or twist an ankle. If anything, the beach was more rocky than during the misty gloom of her girlhood summer afternoons. She had always missed the sea, had never felt truly safe midcontinent. She yearned for these soft, moist movements and rich aromas, for the brisk climate and the enveloping waves. When she made love she returned to the Pacific rhythms.*

*Scanning the southwestern sky for predictions of sunset, Cora prayed the cumulus clouds would scatter long enough to streak sacramental blood across the sky. Sunset on the water: mirror image of the host ascending over red wine. Cora imagined herself in an organdy communion dress kneeling on a nurse log. The girl wondered if she were a witch. The woman wondered about the coast between originality and madness. Meanwhile, which way was hubris?*

—from *A Walking Fire*

“Neither of my parents was ‘educated’ but I think they were both very smart people,” she recalls. “My father was always interested in political events and my mother loved telling stories—she had a wonderful way with language as a lot of Scots do. That’s where my interest in language comes from.”

In the early sixties she attended Berkeley, where she worked with a poverty program and became involved in the antiwar movement while taking degrees in English literature and journalism. “Berkeley,” she says, “woke me up. Part of my transformation there had to do with my new awareness of class, part of it was political in other ways.”

Although as a writer she now considers herself primarily a novelist, Miner began her career in journalism. Journalism, she explains, seemed at the time to be more relevant, more “useful.”

“I felt it was impertinent to write fiction, whereas journalism could serve a purpose,” she says. “Like a lot of young people, I thought the answers lay outside myself.”

In 1970, disillusioned by the continued fighting in Vietnam, she emigrated to Canada, determined to give up her U.S. citizenship and become a Canadian citizen. “I didn’t have the courage to burn down a selective service office, but I felt very strongly about the war and wanted to build a new life in Canada,” she says. “I was amazingly naive. But I managed.”

She did so by earning a small income from teaching and journalism, for four years in Canada, then in England. Her work appeared in *Saturday Review*, *Maclean’s*, *Saturday Night*, the *New Statesman*, the *Economist*, and other respected publications and journals.

Her three years in England proved critical on two fronts. For one, it was there that she began writing fiction as part of a writers group that went on to publish an anthology of its work. “It was through that group I was able to develop the confidence in myself and the courage to publish fiction,” she says. “I began to see that I could play with language in a different way in fiction. And there are emotional depths that are quite difficult to write about in journalism, at least the kind I was doing. I began to see that it was possible to write about social issues and personal moments.”

And it was in England that she came to realize that it was time to return to her native country.

“I came back because I wanted to see if I were still an American,” she explains. “I was hoping to find that I wasn’t. But by the end of the time I spent living in England I would find myself on a march supporting abortion rights in London or sitting in on a stockholders meeting at Barclays Bank [Miner helped organize a boycott of the bank to protest its investment in South Africa] and I’d think, ‘You know, American institutions invest in South Africa, people there are having trouble with their reproductive rights.’ I came to feel that I was not really taking responsibility; I was not voting in the United States but hadn’t become an English citizen either.”

Plus, she admits, “I knew that it mattered more to me to see my books displayed in the window of Cody’s Books on Telegraph Avenue [in Berkeley] than it was in the window of a London store. From all this I knew I would be more comfortable in this uncomfortable place.”

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PHOTO: TOM FOLEY



## President's *Letter*

*The University of Minnesota is a vital institution that has been for years the long-term solution to many of Minnesota's problems.*

That's the central message, rich with meaning, in Vice President Mel George's remarks elsewhere in this issue. It's also the University's central message as we build public support for Minnesota's oldest and, by far, most productive partnership—between the people of Minnesota and their University.

I've studied languages most of my life. A word such as *vital* stops me right away. *Vital* as strong, full of life, energetic? Or *vital* as indispensable, necessary? Our answer? Both, definitely!

It takes a vital, strong institution to recognize its strengths and problems, and to solve its own problems in order to pay attention to building its strengths. It takes an institution full of life to recognize its external challenges, to plan strategically to meet them, and to transform itself. It takes a vital, energetic institution to carry out truly comprehensive self-study and make quality-improvement choices throughout the institution.

Minnesota simply doesn't have a more indispensable public institution. The University of Minnesota is, by far, the greatest single source of strength to the state's economy and culture. It has been that source of strength, that source of long-term solutions, for nearly 150 years.

Developing talent, discovering and developing knowledge and know-how, and sharing that talent, knowledge, and know-how with the state has been the three-part mission of the University as a land-grant institution. There is very little in Minnesota's economy and culture that has not depended on, or been influenced by, the University's teaching, research, and outreach efforts.

Political leaders talk often about "growing the economy and growing jobs." Ours have been grown in large measure by 470,000-plus University of Minnesota graduates—the combined populations of Minneapolis and Duluth. Every year for the past 20 years, we've awarded more than 10,000 degrees—and added large numbers of talented graduates to the Minnesota work force.

Every industry based on Minnesota's natural resources has depended upon University graduates, University research and development, University outreach and technology transfer. In mining, in forestry, in agriculture, in lakes, fisheries, and wildlife, the University of Minnesota has been indispensable, not just developing those industries in the first place, but more important, sustaining them, through long-term solutions and educated talent.

Without the University's long-term efforts, there'd be no mining industry today. Forests, lakes, and rivers would be unmanaged or ill-managed. More than 80 percent of our agricultural exports wouldn't exist, and the remaining 20 percent would probably be so damaged by disease and weather that we'd have nothing to export.

Likewise, the University is vital to the industries, human services organizations, and cultural life that are based on Minnesota's human resources. Our computer and technology industries, our medical devices industry, and our service industries are staffed and often started by University graduates. Their ideas are often the product of University research and classroom/laboratory experiences, and these grads keep up with global and national competition through University classes, University libraries, and University experts. Many of our governmental and nonprofit agencies look to the University for research, education, and forums for policy leadership. And University fine arts and performing arts programs have long been at the core of Minnesota's artistic reputation.

*Long-term solutions already make up a great record of partnership, but past accomplishments and their impacts on the state will not meet the challenges of the 21st century—challenges we are already beginning to face today.*

- Rapid change in the workplace means changing expectations for degree programs and continuing education alike.
- Demographic change poses new challenges in terms of the size and diversity of student populations to be served.

- > Increased demands for cost-effectiveness, quality, and accountability challenge old ways of managing and delivering services.
- > Global competition challenges us to internationalize teaching and research.
- > Meeting all of these challenges depends on attracting and keeping talented faculty and staff in an increasingly competitive marketplace.

Most challenging of all, Minnesota's economic problems have forced deep budget cuts that have reduced the state's commitment to higher education, undercutting long-term investments in quality improvements. The proportion of the total state budget invested in higher education has declined by 21 per cent since 1987.

To the University of Minnesota, state budget cuts have meant the cumulative loss of \$78.8 million in state support since 1991. Coming on top of the University's own reallocation commitments, there's no doubt that budget cuts have put severe stress on University budget decisions—no doubt that some of our reallocation investments have been undermined.

We are at the watershed right now. Our partnership with the state is threatened, and the University—indeed, all of Minnesota's public higher education—is in jeopardy. We simply cannot continue to deliver both the programs that Minnesota needs and the quality improvements of University 2000 without a greater investment from the state.

*The University's response to these challenges is University 2000, a strategic plan to ensure that Minnesotans will continue to benefit from having a premier, world-class university, backed up with a solid commitment by the Board of Regents to make the required investments.*

University 2000 is not some theoretical plan for the future. It is being implemented now, and campus- and college-specific plans will continue to be at the heart of budgeting decisions for the next several years. There are and will be far too many campus and college initiatives to capture now with just a few descriptions. University 2000 is a comprehensive, University-wide effort, and all our decisions must address U-2000's six strategic directions:

- > Research
- > Graduate and professional education
- > Undergraduate education
- > Outreach and access
- > User-friendliness
- > Diversity

Four of these areas—research, professional and graduate education, undergraduate education, and outreach and access—are the essence of the land-grant mission of the University. The University 2000 planning process implies investments and "disinvestments" in each of these areas and their many components in order to increase their excellence, quality, responsiveness, and cost-effectiveness, while ensuring the strength of the essential core of the institution.

The two other strategic areas—user-friendliness and diversity—emphasize the need for the institution to improve its customer service orientation and to address the importance of making its resources accessible, in an effective manner, to underrepresented populations.

In the area of research, the goal is to sustain the University, within a most competitive environment, as one of the major research institutions of the nation. This is an essential goal for the economic and social well-being of the state and its citizens. It is a goal that is intimately tied to the quality of our professional and graduate programs, for which the University has, within the state, almost exclusive responsibility. University 2000 challenges the University to respond to changes in demands and expectations of society for high-quality graduate and professional education.

During the past five years the University has revitalized many of its undergraduate programs. More remains to be done. University 2000 directs us to significantly increase retention and graduation rates, broaden participation in research, honors programs, and study abroad, and assist our students, faculty, and staff to set higher expectations and standards of performance. Increased importance will be placed on career counseling and placement.

Outreach activities are an integral component of the University mission and are closely tied to our research and teaching missions. They touch almost every aspect of our state in areas as diverse as health services, communities, families, agriculture and related industries, technology transfer, economic development, and the K-12 educational system. The planned evolution of Continuing Education and Extension to the newly proposed University College, and the development of cooperative partnership programs with community colleges, vocational technical colleges, state universities, and K-12 education represent a redirection of resources that will significantly improve the use of educational assets across the state.

University 2000 directs a major effort toward the improvement of both the physical environment and the administrative structure that support our education, research, and outreach programs. To accomplish this goal, the University will strive for administrative simplicity, effectiveness, and a positive customer orientation (**user-friendliness**). The University is committed to minimizing its bureaucratic structure.

Diversity is a sixth strategic area with clearly articulated goals and objectives in the areas of K-12 education and the recruitment and retention of students, faculty, and staff. Diversity goals are integral to each of the other five strategic areas. Changing demographics and the demonstrably increased needs of underserved populations require a higher level of performance in this area by the University.

*To stay on course with University 2000's strategic directions for the next two years, the University has made an investment commitment and proposed a financing partnership.*

The commitment by the Board of Regents is to invest \$143.7 million over the next two fiscal years:

- > Starting with the base budget defined by the State Department of Finance (which assumes a \$16.2 million biennial budget cut), we need that \$16.2 million to maintain current levels of program and quality.
- > Salary and benefits adjustments for University employees who have had salaries frozen for two of the past four years will require \$51.4 million.

- > Investments in University 2000 initiatives will total \$43.1 million, which includes:
  - \* Enhancing the working and learning environment
  - \* Investing in educational equipment and technology
  - \* Improving library resources
  - \* Providing indigent care in the dental school
  - \* Investing in the learning community
  - \* Investing in student services
  - \* Investing in education/systems infrastructure
  - \* Investing in the Cancer Center
- > Building maintenance, new building operation, capital debt payments, and adjustments for inflation on building maintenance and utilities require \$33 million.

The proposed financing partnership shares responsibility between the University community and state government.

The University is committed to reallocate \$28.2 million over the next two years, shifting existing funds to the investment commitments above.

University students will provide \$26.3 million through total tuition revenue increases of 4.8 percent per year. (That total revenue increase does not mean that an individual student's tuition will increase at that rate; the actual rates will vary by college and by level.)

Other revenue increases within the University will provide \$1.5 million.

The state is asked to provide \$87.7 million, an average increase of 6 percent per year.

"They're going to measure." More than a few alumni and friends will remember those words from the late Julius Perlt, longtime public-address announcer for Gopher athletics. They still fit. It's a key part of University 2000 and our partnership proposal to measure our progress carefully and publicly. Those who invest in University 2000 deserve to know the results. We'll know those results, and we'll keep everyone fully informed.

"Because this place is important for each of us to own." University of Minnesota Alumni Association National Board member Bruce Thorpe captured the essence of the University 2000 partnership in a single phrase.

The Board of Regents has already made it clear that the University of Minnesota is simply too vital to all of Minnesota's citizens to allow continuing state budget limitations to block investments in the future. The \$143.7 million of investments will be made, even if it takes much larger internal reallocations and much larger increases in tuition and other revenues. As Board of Regents chair Jean Keffeler put it, "Without a strong infusion of state support, we will be forced to make severe cuts and painful reductions—which none of us wants. The burden is on each of us to present a compelling case for a renewed partnership between the University of Minnesota and the state of Minnesota." ■

PHOTO: TOM FOLEY



# Crunch Time at the Legislature

THE U SEEKS A PARTNERSHIP WITH THE STATE

By Maureen Smith

"Investment, investment, investment" is the theme of the University's legislative request, says President Nils Hasselmo. The request, a \$143.7 million Partnership Proposal, includes \$87.7 million in increased state funding.

The University itself, and students and parents, would share in the partnership with \$28.2 million in internal reallocations and \$26.3 million in increased tuition revenue. The plan thus proposes \$115.5 million of net new money and calls for key investments in high-quality programs, improvements in overall quality, and competitiveness.

Initial responses from state leaders have been positive. Governor Arne Carlson said in an October interview with *St. Paul Pioneer Press* writer Nancy Livingston that he was looking at a \$70 million increase in state appropriations for the University, and said later in Duluth that the amount might be higher. Legislative leaders have also commented favorably. But the demands on the state's resources are huge. "The legislature will need to know that the University is a priority in the minds of the citizens," says Mel George, vice president for institutional relations.

Investments in the University's future, in the University 2000 initiatives, are so imperative, Hasselmo says, that even if more state funding does not materialize, he will urge the University to move ahead on its own. But this would require much

steeper tuition increases and more than \$61 million in painful internal reallocations.

"The University is at a critical moment in its history. It's an institution in some jeopardy," says George, who stepped down as president of St. Olaf College June 30 and had been ready for retirement until Hasselmo persuaded him to accept the University vice presidency. George says he agreed because he believes so much in the value of the research land-grant university, and the University of Minnesota in particular. "I'd planned to stop and smell the proverbial roses after leaving St. Olaf, but the roses are going to have to wait," he said when he was named to the job.

"The University is a vital institution that has been for years the long-term solution to many of Minnesota's problems," George says. Now it is in jeopardy, and its strategic plan, called University 2000, is "designed to help it get through this time of external challenge" even stronger than it was before.

The plan was shaped by the people of Minnesota through a process called *Conversations With Minnesota*, he says. "It's now time to tell the people that the University can't succeed without their help. The legislative request is an important step in that partnership."

What can alumni and other University supporters do to help? George is ready with some suggestions.

"We're specifically asking them to let their elected officials know that the well-being of the University is important to them, and that it deserves a strong level of partnership support.

"We'd like them to encourage good students to come to the University. When they have occasion to talk to groups, or sit around a coffee shop or restaurant table, we'd like them to speak well of the University.

"If they're not [connected], we'd like them to get reconnected with the University and find out what's happening on all of its campuses. We hope very much that they will pass on their own concerns and suggestions so we can be aware of experiences both good and bad.

"Those are several things we hope alums will do, alums and all the readers of *Update*, people who care about the University," George says.

If state leaders are persuaded to give the University the support it seeks, will the University be able to move forward, or will it just be saved from falling down a dark hole of mediocrity?

"We would absolutely make progress," George says, in all six strategic areas of the University 2000 plan: undergraduate education, graduate and professional education, research, outreach, a user-friendly community, and diversity.

In fact, he says, important gains have already been made, especially in undergraduate education. "People don't realize it, but the average class size has been reduced significantly. The number of endowed chairs has grown enormously. A lot of good things have happened. This is not just all something that is promised in the future."

What about the budget cuts that will be part of the internal reallocations even if the legislature gives the University its full request? "We will be more focused," George says. "We might not have fewer students, but we might concentrate on fewer areas. It will be a more focused University, doing superbly the things it does. We are being very strategic about the areas that are going to be built up and supported, so that we don't try to do every single thing in the world."

The strategic planning and internal reallocations that have already been done are apparently paying off. In his comments to the *Pioneer Press*, Governor Carlson said, "We are impressed by the fact that there has been a reasonable increase in productivity at the University and a willingness to define long-

term goals. That's helpful. There also appears to be a greater willingness to eliminate those academic ventures that are not productive."

The University is grateful for those supportive words from the governor, George says. Legislators, too, have been responding positively, says Donna Peterson, director of state relations. "They like the way the University is expecting itself to reallocate and reprioritize as part of the partnership in asking the state to make an increase. They like that combination."

Legislators have also been impressed with the University's commitment to accountability and the performance goals it has set for itself, Peterson says. "They want to know the tax dollar they're investing is productive for the people of Minnesota." One performance goal, for example, is to graduate, within five years, at least 50 percent of the freshmen who enter in fall 1996.

Whether words of praise from the governor and the legislators will translate into dollars in the end cannot be taken for granted, University leaders agree.

"It is important that we should be united in our efforts to secure the future of our University," Hasselmo says. "There are many constituencies within the University, with different aspirations and concerns. Our request is not perfect, but it is a good plan to which many have contributed over a period of a full year—regents, faculty, staff, students, community leaders from across the state. United we have a good chance to succeed."

"The state has to be a partner in the future of the University," Peterson says. "Now is the time to come forward to stress that point to our state elected officials." If funds are not appropriated and the University is forced into severe reallocations, she says, "it will be an entirely different kind of university."

George says he sees it as his job to "help see that the message gets out as widely as possible and as simply and clearly as we can make it." Part of that, he says, is "helping people truly understand that if the University of Minnesota is allowed to erode away its quality, this will be a disaster for the state of Minnesota, but one that won't be evident for quite a while. It's not something that will show up tomorrow. It's not something that will show up next year."

One reason the state has fared so well, George says, has been the contributions of the University—"the research that led to the development of more than 80 percent of Minnesota's agricultural exports, the role in the creation of new companies employing thousands, improving the quality of life, educating a broad spectrum of leaders in the state.

"Not to mention the enormous number of dollars the University has brought into the state," George adds. The state provides only 28 percent of the budget. The rest comes from the federal government, from foundations and corporations, from other sources. "A state investment of 28 cents produces 72 cents in research funding, so it's a pretty good deal," he says.

"The people who read *Update* need to know that the University very much appreciates the interest and pride that Minnesotans have taken in the University. It is a pride that has been well founded, because of the good work of the faculty, staff, and students. It is a pride we will continue to work hard to justify in the future. With their help we can do it." ■

## RETURN OF THE NATIVE

continued from page 9

★ ★ ★

In the past 20 years, Miner has published seven books of fiction and a book of essays, reviews, and reportage, and has coedited or coauthored several other books. In literary terms, she would best be described as an engagé writer—one whose work actively engages the real world of politics and social issues. Not for her the ivory tower of Flaubertian aesthetics. She wants her novels, nonfiction books, articles, essays, and short stories to reach people by raising questions and questioning assumptions.

"A lot of people move into careers and lose a sense of why they went into a certain kind of writing, what social conditions they were trying to change," observes Douglas Foster, the former editor of *Mother Jones*. "She has never lost that sense."

Of her writing, he says, "She is one of the few people I know who can excel in journalism and fiction, which, in some ways, require use of different parts of the brain. Her best fiction is informed by the best qualities of her journalism—its clarity and directness—and vice versa."

"I think she is the best kind of political writer," says two-time O. Henry Award-winning author Janice Eidus. After reading an article by Miner that appeared in the *Village Voice*, Eidus, whose new collection of short stories, *Urban Bliss*, has just been published by Fromm International, was so energized by what she'd encountered that she went to a store and bought some of Miner's novels.

"Politics informs her work: she lives it and breathes it. Yet at the same time, her fiction is venturesome and exciting and her characters are deeply felt. She is not a didactic writer, yet her fiction does educate and show passion and intelligence."

Miner says she has "a lot of social aims and artistic goals" for her work, among them a desire to raise "people's awareness of how our lives interconnect with the people who live next door and on the next continent."

"I hope in the long run that my books will touch people's lives and lead them to ask questions about the world," she says. "I am not as interested in providing catharsis as I am in raising questions and pointing out contradictions."

Another aim is to remain true to her origins.

"I would like my work to have the accessibility of a Robert Burns and the universality of a Shakespeare," she says. "I would like to reach a really broad range of people and to write fiction that the people I grew up with might read and feel speaks to them and their lives." ■

## The Fate of University Hospital

continued from page 3

"We have been taking testimony and reviewing the literature—but there isn't very much to review," says William Jacott, assistant vice president for health sciences and a member of MERC II. "What we are doing here is a pioneering effort. The whole nation is watching us."

But even if a mechanism is created to defray the cost of teaching and research, there is still another issue confronting University Hospital—an issue that stems directly from its unique role in the state. As Provost William Brody puts it, "academic health centers have always been the court of last resort for those needing the care that we offer."

In other words, the University Hospital is not in the business of turning away patients desperate for the tertiary and quaternary care the facility offers simply because they do not belong to the right HMO or INS.

That universal access flies in the face of provider and patient membership in managed care organizations. Yet it is a role the University is determined not to give up.

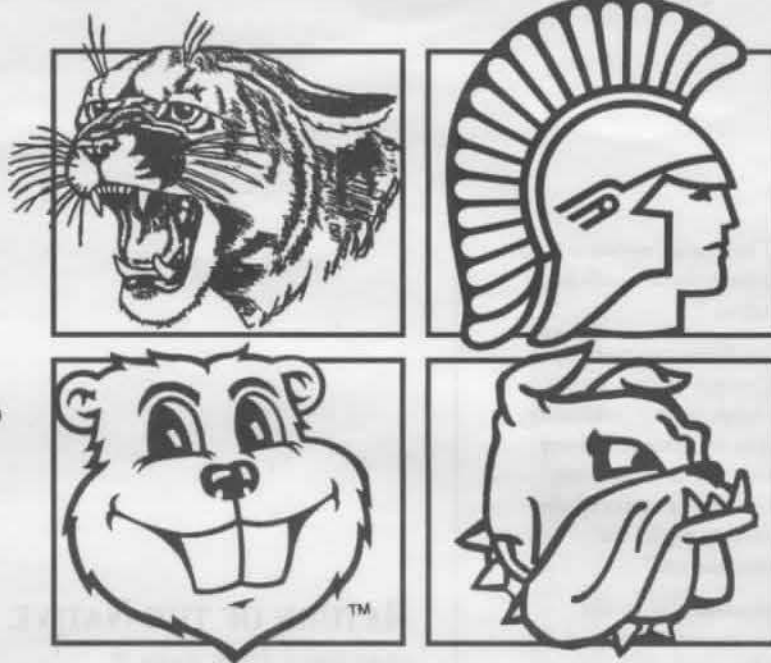
"We are in a Catch-22 situation," says Brody. "Our mission is to be a state resource and sometimes even a national resource as well. But reform is forcing us to be a part of a proprietary network that is not open to everyone."

Yet even on this point there is a growing willingness among managed care executives to concede that the University should continue to serve all.

"Dr. Brody's concerns about exclusive relationships is a valid one," says Ehlen. "I believe that we need to engage in a dialogue between INS organizations and the University to push us toward a mutually acceptable system in which patients flow to the University from all of us, and for us to take some responsibility for the teaching and research mission there."

"Both parties are at fault for the fact that this dialogue has not taken place," he adds. "When it does, I believe we can find solutions."

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## SHORT TAKES

**Robbie the Robot,  
pharmacy assistant**

There's a new helper at the University's Hospital and Clinic pharmacy—a robotic medication dispenser.

Manufactured by Pittsburgh-based Automated Healthcare, the Automated Pharmacy Station™ can reduce human error in dispensing medication while lowering personnel costs. Linked to a central computer, the dispenser can read bar-coded patient files to determine medication needs; select individual-dose medications from a storage station and place them in a patient's medication drawer; remove expired and return unused medication; and track, restock, and monitor meds, among other tasks.

The hospital is one of the first six sites to purchase one of the robots, which is expected to pay for itself within three years.

**no more lost moose**

Beginning next month, University wildlife researchers will be able to use satellites to help track six moose in Voyageurs National Park. The information will be used as part of a five-year study on the interactions between foraging moose and the surrounding forest. The study is being funded with a \$765,000 grant from the National Science Foundation.

The moose are slated to be given satellite-tracking collars. From there, information on the moose's whereabouts and other data will be recorded by a global positioning system. The technology is less intrusive than other methods and is not, as with the use of tracking collars monitored by airplanes, subject to weather conditions.

"This is the first time we'll be able to predict numbers of moose by examining how their interactions with the environment affect the landscape," says Yosef Cohen, a professor of fisheries and wildlife and codirector of the study.

**does your car  
remember when it  
was new?**

Remember the TV commercials about pantyhose with memory? The fibers "remembered" the shape of a woman's hips and legs and returned to it after washing.

It's possible that one day you'll drive a car with a body made of "memory metals"—alloys that, when bent, remember their original shape and snap back to it when heated or cooled. Is this the miracle that might actually bring your auto insurance rates down?

The beginning of such a miracle is happening now in the lab of Richard James, professor of aerospace engineering and mechanics. James has been unlocking the secrets of memory metals, most commonly nickel-titanium alloys, which are already used for such ordinary things such as bendable eyeglass frames and wire for orthodontic braces.

Another possible use of shape-memory materials, according to James: antennas on spaceships. The antenna could be collapsed to save room on the trip out, but when put in place and turned toward the sun would heat up and extend.

James is now working with Manfred Wange, University of Maryland, to find metals that transform in response to magnetic fields. "We'd call such a thing a 'magnetomemory' material," he says. It could be used for noninvasive surgical probes or to move microscope stages.

**competitors unite**

Two Minnesota competitors in the medical device and technology market have decided to work together—to help the University.

St. Jude Medical, Inc. of Little Canada recently pledged \$500,000 to the University's Biomedical Engineering Center (BMEC) as a matching grant to create a new professorship. The BMEC was launched with a gift from St. Jude's biggest competitor, Fridley-based Medtronic, which has also pledged \$250,000 toward a \$12 million gift drive that will be chaired by St. Jude's CEO, Ron Matricaria. One of the cochairs of the gift drive will be Medtronic founder Earl Bakken.

In addition to gifts from major medical corporations, the University is hoping to enlist support from emerging companies that benefit from the kind of cutting-edge research performed at the BMEC. Already, Augustine Medical, Inc. of Eden Prairie has pledged \$50,000, which will be matched by \$25,000 from Medtronic.

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UNIVERSITY OF MINNESOTA



VALERIE MINER | PAGE 8

# UPDATE

For Alumni,  
Faculty,  
and Staff

VOL. 22 NO. 1  
**JAN 1995**

Volume 22 January 1995 Number 1

*Update* is published six times a year. Three issues a year are directed to faculty and staff of the four-campus University system. Three issues a year address subjects of broader interest and are also sent to alumni and friends of the University.

*Update* welcomes ideas and letters from all readers. Write to *Update*, 6 Morrill Hall, 100 Church Street S.E., Minneapolis, Minnesota, 55455-0110, or call 612/624-6868.

The opinions expressed in *Update* do not necessarily reflect the official policies of the Board of Regents or the University administration.

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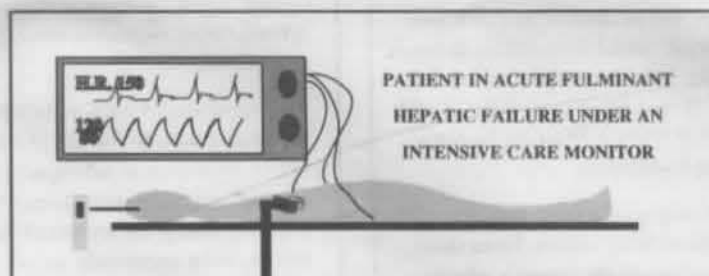
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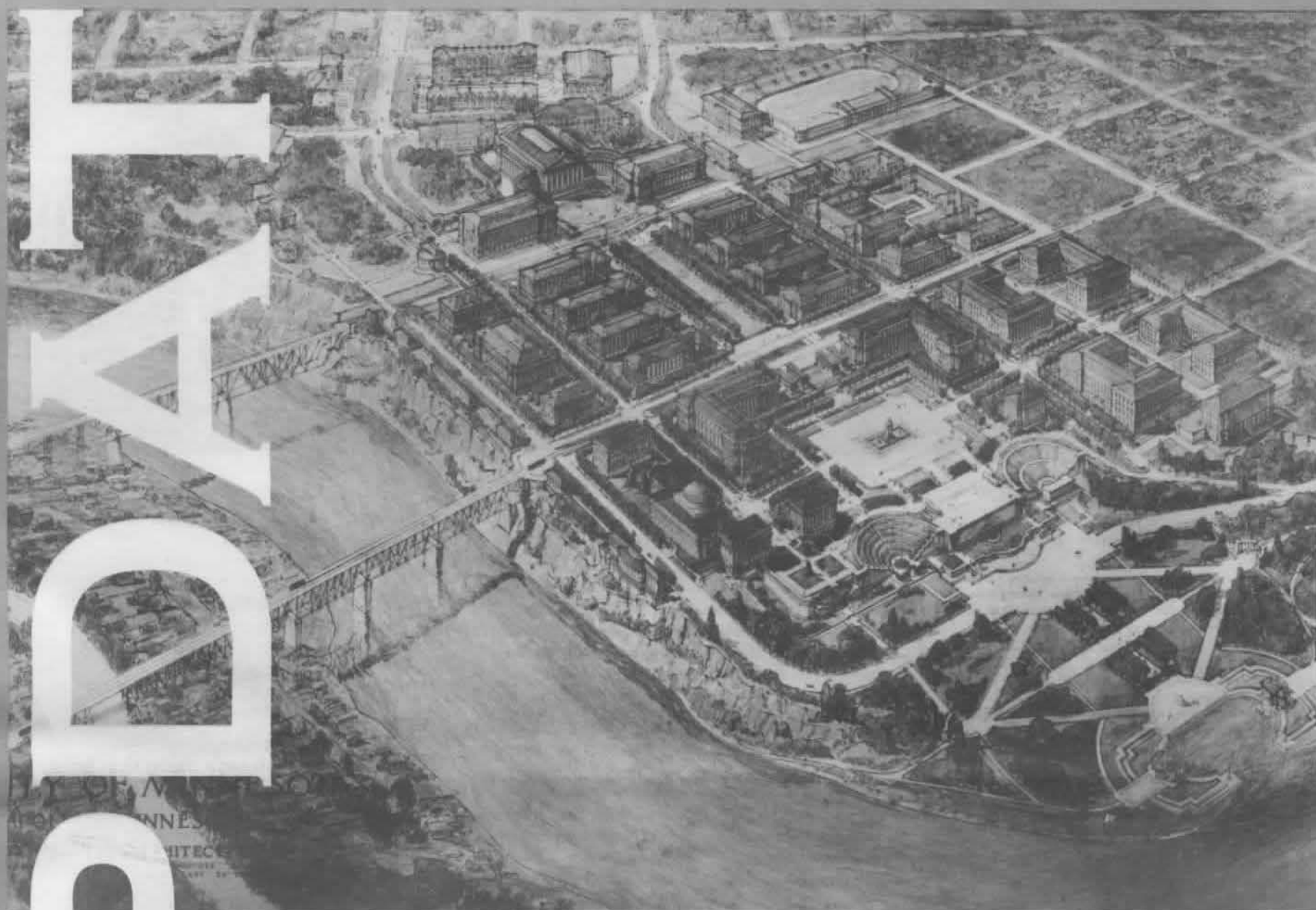
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## CAMPUSES BY DESIGN

BY RICHARD BRODERICK

COMING SOON:  
THE FIRST EVER, COMPREHENSIVE  
UNIVERSITY MASTER PLAN

The campus plan architect Cass Gilbert envisioned for the University of Minnesota looked very different from the campus we know today.

Winner of a nationwide design competition in 1907, Gilbert submitted a design that embodied elements of the then-fashionable "City Beautiful" approach to public architecture. On the large tract of land the University had just acquired for its Minneapolis campus, Gilbert saw large neoclassical buildings arranged around a system of arbors and walkways. The centerpiece of his design scheme, its focal point, was a long mall beginning at the steps of Northrop Memorial Auditorium and sweeping all the way down to the river bluffs, descending in a series of terraces to the Mississippi itself.

For Faculty  
and Staff

VOL 22 NO 2  
APR 1995

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previous page: AERIAL VIEW OF CASS GILBERT'S 1907 MASTER PLAN FOR THE UNIVERSITY'S MINNEAPOLIS CAMPUS.

above: GILBERT'S 1907 MASTER PLAN LOOKING TOWARD NORTHROP MALL FROM THE MISSISSIPPI RIVER; TODAY COFFMAN MEMORIAL UNION WOULD BLOCK THIS VIEW.

next page: 1904 ILLUSTRATION LOOKING SOUTH, TOWARD THE RIVER, OF THE "KNOLL" AREA OF THE UNIVERSITY DESIGNED BY HORACE CLEVELAND. IN THE FOREGROUND IS THE PILLSBURY GATE AT UNIVERSITY AVENUE AND 14TH STREET SE; IN THE BACKGROUND ARE PEIK HALL, PATTEE HALL, BURTON HALL, SHEVLIN HALL, AND EDDY HALL.

Gilbert's was the first comprehensive plan for the University. Twenty years earlier, Horace Cleveland, noted for his design work for the park systems in the Twin Cities and Chicago, had put together a plan for the "knoll area" of the Minneapolis campus that incorporated neoromantic ideas about architecture's ideal relationship with the natural world. But it was Gilbert's plan that was to make the University ready to move into the 20th century.

Eventually, some elements of Gilbert's plan would be realized. The current mall reflects his vision—at least from Northrop to Washington Avenue. But economic and political considerations conspired to thwart a complete realization. State and University officials ultimately decided that the terraced descent to the river was frivolously expensive. In 1939, construction of Coffman Memorial Union closed off the avenue to the river, apparently sealing the fate of the Grand Mall concept. In the absence of any other comprehensive long-range or master plan, development for the next 30 years took place piecemeal.

Now for the first time, the University is undergoing a master planning process that is truly comprehensive, intended to lay out governing design principles not just for the campus in Minneapolis, but for St. Paul, Duluth, Crookston, and Morris as well.

It is an ambitious scheme—as ambitious as U2000, whose strategic objectives the master plan is supposed to support and facilitate. When the process is complete, and the master plans for all four locations are coordinated under the rubric of a single comprehensive plan, the University will have a long-term design that will govern future development. On the Twin Cities campus it may also revive Gilbert's vision of an open space connecting the heart of the Minneapolis campus to the Mississippi River.

ULTIMATELY, THE LOOK AND  
FEEL OF A CAMPUS HAS BEEN  
DISCOVERED TO HAVE A  
PROFOUND IMPACT IN AN UNEX-  
PECTED AREA: RECRUITMENT—OF  
STUDENTS AND FACULTY.

"To be fair, there was planning after 1910," says Clint Hewitt, associate vice president for campus master planning and real estate. "For example, the Long-Range Development Plan for the St. Paul campus in 1972. But the key word here is 'comprehensive.'"



Late in 1992, at President Hasselmo's urging, the Board of Regents created a master plan steering committee with responsibility for recommending a set of broad principles that would govern master planning on all the campuses. The following spring, the committee submitted its proposed planning principles. There are four in all.

The first principle calls for a planning process that creates a distinctive and inspiring vision for the physical development on each campus. The second—which ties directly into one of the strategic initiatives of U2000—calls for planning that enriches the experience of everyone who comes to campus, and makes clear immediately that the University is a place where learning is both pursued and revered. The third principle adopted by the regents calls for maximizing the value of the University's existing assets while responding to emerging and changing needs. The last, and in some ways most crucial principle, mandates an accountable and timely process for creating and implementing a comprehensive master plan.



"The University realized that if you looked at the capital budget each year, a tremendous amount of money was being spent without a comprehensive framework guiding that allocation," explains architecture dean Harrison Fraker; Fraker chaired the master planning steering committee and is currently chair of the committee formulating a master plan for the Twin Cities campus.

"People began asking whether things were adding up and were we meeting our strategic goals," he says. "It was time to take a look and integrate the new strategic goals into planning."

Master planning committees are now at work on each campus devising plans. Both the UMD and Morris committees chose a Minneapolis firm, Hamel Green and Abrahamson, to provide design assistance. Crookston's committee chose Rafferty Rafferty Tollefson Architects of St. Paul, and the Twin Cities committee a design firm from Toronto, Berridge Lewinberg Greenberg Ltd. (BLG).

The firms consult with the committees on the special issues germane to each campus. In Duluth, for instance, the design team must work with the interconnection between buildings on campus—a specific response to UMD's proximity to the wind and cold blowing off Lake Superior—as well as the site's "north woods" character. In Crookston, an important consideration is the key role the campus plays in the life of a small town whose residents look upon the campus as a community facility as well as a seat of higher learning. In the Twin Cities, one of the biggest issues is the urban setting and the lack of "definition" at the edge of the Minneapolis campus.

Recognizing that the University is not just a statewide resource but also an integral part of five very different communities, the master planning committees have, in addition to soliciting the help of designers, sought input and participation from representatives of key stakeholders: faculty, students, adjoining neighborhoods, K-12 educators, and city leaders, among others.

In addition to ensuring that there is adequate consultation with those stakeholders, the planning process is also strengthening the University's ties to the communities it calls home.

"The planning process has helped build a sense of community for us," says Wendell Johnson, a biology professor and chair of the Crookston planning committee. "The campus is not just the focal point of education, research, and outreach in the region. Probably in the same way as the other coordinate campuses, we are an intimate part of the community."

IN AMERICA, AS THROUGHOUT  
THE WESTERN WORLD, COLLEGE

CAMPUSES REMAIN ONE OF THE

FEW GREAT VENUES FOR COORDI-

NATED, LARGE-SCALE PUBLIC

ARCHITECTURE AND DESIGN.

The master plans for all the campuses should be complete by next year. Along the way, they will be reviewed by an oversight committee to make sure they conform to the master planning principles adopted by the regents. It's too early to tell what, if any, dramatic changes will result from the process—although it has already had an effect. In Minneapolis, for example, the committee and its design firm reviewed some 10 projects scheduled or under way to assess whether they might tie the hands of the master planners.

"We asked our consultants to judge the 10 projects on whether they should be put on hold, go ahead, or be redirected," says Fraker. Completed last fall, it was this review that led BLG to suggest that instead of going ahead with a \$30 million repair and rehabilitation project on Coffman Union, the University consider reviving Gilbert's idea of connecting the campus to the river.

Another preliminary recommendation prompted by this review was the idea of putting the light rail transit line proposed for Washington Avenue at street level rather than underground and to widen the Washington Avenue Bridge between the east

and west banks and make it a single-tiered, rather than two-tiered, structure. Both suggestions are aimed at turning Washington Avenue into what Fraker describes as a "great urban street with multiple functions."

"These are pretty radical proposals," says Fraker. "So far, the response from the administration has been very positive."

In America, as throughout the Western world, college campuses remain one of the few great venues for coordinated, large-scale public architecture and design. But at a time when the postwar boom in students and building has reached its end, comprehensive master planning is also an issue of financial efficiency and effective space management.

Ultimately, the look and feel of a campus has been discovered to have a profound impact in an unexpected area: recruitment—of students and faculty. Surveys show that one of the biggest factors in how students choose their undergraduate campus is appearance. And while not as big a factor, appearance—and all it implies—also affects faculty decisions whether to teach at a given institution.

So the need for the University to put its house in order, to adopt master plans and a master planning process that will govern building and landscape decisions now and in the future, is more than a matter of aesthetics. It will play a critical role in determining whether the University continues to be a vibrant institution.

"I think," says Hewitt, "that by bringing the master planning and strategic planning together we can maximize investment in all aspects of the University, academic, financial, and physical." ■



PHOTO: TOM FOLEY

# The Road to U2000

*Hasselmo, faculty exchange concerns and challenges*

By Maureen Smith

Universities are going through sea change, President Nils Hasselmo said in an impassioned talk to the Faculty Consultative Committee (FCC) February 2, and faculty need to understand that defending the status quo won't work.

"The future of every faculty and staff member at the University, and every student, depends on the success of the agenda" in University 2000, he said, and "we clearly do not have the kind of buy-in from faculty and staff" that is needed.

FCC members applauded Hasselmo's passion but reminded him of the reasons faculty morale is low.

At a February 9 meeting with the FCC and the Senate Committee on Faculty Affairs, Hasselmo said he had spoken of the lack of faculty engagement as a failing on his part and had not been making accusations.

Vice President Mel George told the FCC February 16 that he had had "an epiphany experience" about what has been missing in University 2000. On one side is a vision, a set of six strategic areas, and a sense of what the University might become, he said, and on the other side is a set of critical measures. "What is not clear to most people is what's in the middle," or "what we need to do today to get there," he said. FCC members said they agreed.

The change universities are facing is "every bit as dramatic as what happened after World War II," Hasselmo said. "What is at stake is the role of universities in providing the scientific and scholarly basis for the nation's future." If universities do not perform this role, he said, it may be taken over by private corporations, government laboratories, or other agencies. "We are locked in battle at this point about that future."

Safeguarding the future will not happen "if we stay with the status quo and think everything is going to go on its merry way" and think "if we just pour a little money into it everything will be fine," he said.

What is needed, Hasselmo said, is to "preserve the scholarly communities" but "link them with delivery systems of an entirely new kind. In meeting the needs

***Safeguarding the future will not happen "if we stay with the status quo and think everything is going to go on its merry way."***

of "a knowledge-hungry society," he said, universities must be part of a distribution network and "radically change the way we share knowledge and skills."

The University's Partnership Proposal is turning out to be "a good vehicle in the legislature," Hasselmo said, and he is meeting with several legislators a day. "The problem, of course, is money," he said. The University will lose out if we "fight among ourselves over spoils that may not even be there." The University must "put its priorities forward."

In the planning process, it is imperative "to bring forward the kind of options we need," but the signals he is getting from the colleges suggest that they are "tinkering in the margin and looking for the loose cash again," he said. "That is exactly what we don't want to happen."

Cluster planning was an attempt to engage the faculty in discussion and debate across disciplines, he said, but it never caught on. "We have to rally the faculty to sit down and engage in that debate. We can't sit in central administration and try to restructure a college."

The process of priority setting will inevitably be "difficult and acrimonious," Hasselmo acknowledged, but it has to happen. "There are herds of sacred cows that have to be slaughtered in order for the young calves to have an opportunity."



"I like the notion of your being more assertive and getting things off your chest. It's helpful to have someone at the top have passion," said Carl Adams, chair of information and decision sciences and vice chair of the FCC. "You have a right to look at the faculty leadership and say something has to be done. Let me tell you where I think the slippage is."

The evolution of Continuing Education and Extension into University College, as it has been described so far, sounds as if "we've sort of created Metropolitan State [University] within ourselves," with the connections to the community in one unit and "the rest of the University over here," Adams said. "The mainline units have to be intimately involved."

"The University of the 21st century is already here," Hasselmo said, with "students in wonderful apprenticeships" and relationships to industry. He cited the Center for Interfacial Engineering, the Consortium of Children, Youth, and Families, and the Design Center for American Urban Landscape.

## EARLY RETIREMENT PACKAGES

ENHANCED RETIREMENT PROGRAMS GIVE DEANS FLEXIBILITY IN RESHAPING UNITS

By Maureen Smith

"I, too, am glad to see you preach more," said history professor Sara Evans, but "what I see is that the faculty experience transformation as primarily punitive," rather than feeling a sense of possibility.

"What you were saying, I agree with 100 percent," said physics professor Kenneth Heller, but he had another concern. "The models you gave for the 21st century are all wonderful," but they leave out the departments that handle big teaching loads and big research loads.

"An old saying comes to mind," Heller said. "When you're up to your ass in alligators, it's hard to think about draining the swamp." Faculty have a hard time being creative and visionary when they keep being asked to do more and more with less and less.

"You don't have any secretaries. You've already given those away. Those things aren't glamorous." Overburdened faculty in the regular departments can't expect to respond positively to University 2000 "unless you beat off some of those alligators," Heller said.

"We can't afford to continue in the medieval mode, which was instituted because there weren't books," Hasselmo said. Students must be expected to learn certain things, not to sit a certain number of hours.

"It may well be that we use technologies in new ways to serve students in ways that are more cost-effective. There may be elements in courses that can be prepackaged." As the President's Forum on Teaching has shown, "we have all the expertise we need right in our midst."



"I believe the message is the right message," said John Adams, geography professor and FCC chair, but "people feel they're dying rather than feeling challenged."

One good model of how to redeploy resources might be the College of Education, which faced "shock therapy" but now seems to show "an optimism that a corner has been turned," Adams said. "They really have responded in an outstanding way," Hasselmo agreed.

In the College of Education "there was always the threat of not having a college at all," said faculty member Geoffrey Maruyama. Once people "got past defending the programs they had," they were able to start thinking in terms of "let's get smarter."

One force working against creative thinking is the formula for tuition revenue targets, said political science professor Virginia Gray. Units are getting the message that "unless you pack them in the lecture room" you will lose out.

The idea is not to pack students in, Hasselmo said, but "to get ourselves out of the bind where colleges think God owes them students, or at least central administration." Colleges must take responsibility for setting realistic enrollment targets and then for recruiting and retaining students, he said.

"All I know is the colleges will be punished if they don't meet the targets," Gray said. "All your examples are places that have relatively few students."

Faculty members cannot be exploring creative possibilities when "you need to be in your department bringing in students," said Sheila Corcoran-Perry, professor of nursing.

One problem is the "pass-down philosophy," Heller said. "The deans get the targets and pass them down to the departments. That's just wrong."

*continued on page 10*

By any scenario anyone can imagine, no matter what happens in the legislature, the University is going to get smaller. Some people who have jobs today will not be in those jobs next year.

For the faculty to get smaller, people have to retire. An enhanced early retirement option was approved by the regents in January "as a tool for deans and major administrators to have flexibility to reshape" their units, associate vice president Carol Carrier explains.

Staff reductions will mean layoffs, at a level still to be determined. A layoff policy that has been offered for four years, with some modifications, is still in effect.

Neither program is offered automatically to people who decide they want to leave the University. The enhanced early retirement option is for faculty in units targeted for reshaping or downsizing. The layoff program is for civil service, union, and professional and academic (P and A) people who have received a layoff notice or a notice of nonrenewal.



The enhanced early retirement option includes one to two years' pay, depending on length of service, plus the 13 percent that is equal to the retirement contribution that would have been made, and subsidized medical and dental coverage.

To be eligible, faculty members must be at least 52 with at least 10 years of service at the University. The benefit would be one year's salary after 10 years of

### "I can't imagine that there will be a program like this for a very, very long time."

service, then 10 percent for each additional year up to 20 years. The maximum payment, including the retirement plan contribution, is \$175,000.

By now, the deans have decided whether to offer packages in their colleges and how many to offer. A target group can be as big as the whole college or as small as a formal program within a department, Carrier says. Once a group has been identified, the dean or other administrator cannot make individual decisions about who can take early retirement.

"If you have five packages, and seven people who are both eligible and interested, what rules is length of service," Carrier says.

Deans might have a chance of persuading someone, she adds, if they don't want the person to leave. "The dean could say, 'What could I do to make life a little more interesting for you to stay here for a while?'"

In deciding how many early retirement packages to offer and where, the deans had to think carefully about their plans. "They've been through their planning process. They are well prepared to be thinking about where areas need to be replenished or grown or downsized.

"We don't see this having any connection to performance," Carrier says. The decisions will be about program priorities and whether "we need less resources in this area and more over here."

When news of the program was announced, she says, her office got about 60 calls from interested faculty. They were all told that their deans would be telling them whether their college would make the option available.

In total, she says, a maximum of 200 packages will be offered throughout the University. The program does not include unionized faculty at Duluth. For them to be included, a policy would have to be negotiated.

A phased retirement program, also approved by the regents, has no limits on how many faculty use it.



In putting together the early retirement plan, Carrier says, "we really tried to listen to the concerns and suggestions of a variety of groups," including faculty and deans.

"There wasn't a single opinion about how this ought to work. That is an understatement," she says.

Enhanced early retirement options were one topic when President Nils Hasselmo met with the Faculty Consultative Committee January 5. Physics professor Kenneth Heller said some enhancements might be offered to all faculty as they near retirement, especially items that would continue bonds with the University without costing much money.

Political science professor Virginia Gray, chair of the Senate Committee on Finance and Planning, said her committee had concerns about costs. If people who would have been retiring anyway take the options, she said, "we might be kind of wasting money."

But Gray said the targeting of the offer was not clear in the presentation to her committee. "That sounds better," she said.

Some faculty who take the option might have retired anyway, Carrier agrees, but "in other cases people might have stayed a lot longer without an opportunity" like this one.

The program has a limited window of opportunity, ending May 31. At the University of California, Carrier says, several windows of opportunity were offered over a period of several years and "they did lose a tremendous number of faculty." The California program was "not in any way as focused as this program is."

Will another window of opportunity be offered another year? "We're anticipating that there won't be any program like this again," Carrier says.

"I can't imagine that there will be a program like this for a very, very long time."



When the layoff policy was set up for civil service, P and A, and union people in 1991, it, too, had a window of opportunity, but it has continued in a somewhat scaled-down form.

The two situations are, of course, dissimilar. In all of its retrenchments and even with the Waseca campus closing, the University has held to its contractual obligations. No tenured faculty have been forced out against their wishes. To make a difference in encouraging faculty to retire, the enhanced option has to be reasonably generous.

For staff members, who don't have tenure, the idea is not to encourage them to leave but to cushion the blow when their positions are cut.

The severance package offers one week of salary for every year at the University, plus continuation of health coverage for up to 18 months, depending on length of service. The full amount, 18 months, is given to people with ten years of service or more. What people give up if they take the package is their right to be on the layoff list.

"It's been quite heavily used," Carrier says of the layoff package. "It's been quite a nice program for people. It gives them a little transitional income." ■



photo: TOM FOLEY

By Richard Biederick

# The Measure of

RICHARD LEPPERT PUTS MUSICOLOGY TO THE BEA

*"Richard is resetting the debate in art history and musicology. He is constantly forging links between two different ways of looking at the world—music and the visual arts."*

From the vaulted ceiling of his North Shore cabin hangs a singular tribute to Richard Leppert's skill as a woodworker—whirligigs.

Wind-driven, whirligigs usually depict some mildly amusing, mildly nostalgic image of bucolic life, like a farmer hoeing a row of vegetables or a farm wife watering flowers; or they are given over to things like wooden ducks flapping their wings in tempo with the breeze.

But for his inspiration, Leppert, the head of the Department of Cultural Studies and Comparative Literature (CSCL), looks to a different field. His whirligigs portray images that offer humorous comment upon life in academia.

"I got the idea from a story in the *New Yorker* about a Baptist preacher down south who makes whirligigs on topics relating to the peculiarities and proclivities of his parishioners," he explains. "The

description was so captivating that it occurred to me there were many opportunities waiting to be exploited in the academic world."

So far, Leppert has made a half dozen of the wooden contraptions. Like the Baptist preacher, he is politic enough not to put his handiwork on public display. But at the same time, he already has plans for more.

"I'm pretty sure there is a cottage-industry retirement project there that could keep me busy and out of trouble for a long time," he jokes. "I am not likely to run short of topics."

The whirligigs, like the pleasure he takes in working on cars, give evidence of Leppert's multifaceted interests. As a scholar, he has helped revolutionize musicology, bringing to the field the kind of controversial theoretical approach that began to take root in literature and art history about 15 years ago.

Yet for all his theorizing about art and music, he has a deeply practical side as well, a reputation as someone who gets things done. CSCL was formed out of elements of the old humanities department, dissolved in 1991. The original plan for the humanities faculty was to distribute them in other departments throughout the College of Liberal Arts. Leppert's colleagues agree that without his leadership—and the moral authority he commanded as a result of his scholarship—CSCL would never have come into existence as an autonomous department.

"There would be no department without him," declares Gary Thomas, a long-time friend and colleague who at one time was chair of humanities. "He is the closest thing I know to a Renaissance Man. He can go from writing a fascinating chapter on some aspect of music history to taking his engine apart with skill and savvy in both pursuits."



"I like aphorisms," Leppert declares. "I like the condensation of thought that can be located in an aphorism, despite the fact that to make sense of them aphorisms have to be unpacked."

And as if to demonstrate that fondness, he explains that his approach to music, the way he tries to understand music's significance in culture (his area of specialty is in west European and American culture from the 16th to the 20th centuries) can be summed up in several aphorisms.

Two of them come from Walter Benjamin, a German writer and critic who died in 1940. The first is that history belongs to the victors; the other is that there is no work of civilization that is not at the same time a reflection of barbarism.

"The first is an insight that, when it comes to history, those who 'win' get to tell how they got there," Leppert says. "The second aphorism expresses the fact that the great works that are justifiably termed 'marks of civilization' have come at

what Leppert calls "the historical paradox of the pain in civilization."

The aphorisms that guide Leppert's work, however, offer no clue as to how exactly a music historian should go about reading the cultural discourse embodied in a piece of music. Music is, after all, highly abstract; much of it is nonverbal.

One place to look—the place Leppert has made uniquely his own—is in visual representations of music, either in paintings of musicians or from more popular forms of visual expression, like broadsides, illustrations for sheet music, even engravings of "ordinary" life from journals and newspapers.

Another place where Leppert looks for meaning in instrumental music from, say, the 19th century, is in how similar musical procedures and sonorities were used in contemporaneous operas that did include a written libretto and that assigned certain kinds of melodies and tunes to singers of different genders.

"Richard is resetting the debate in art history and musicology," says Thomas. "He is constantly forging links between two different ways of looking at the world—music and the visual arts. He is attempting to look at the connections between these two worlds within a broad historical and sociological grid. Finally, musicology is being given a broad history related to human life."

At the moment, Leppert is completing work on his most ambitious attempt at "forging links" between visual arts and music with a new book—his sixth—called *Art And The Committed Eye: Culture, Society, and the Functions of Imagery*. Even in manuscript form, the book is exciting interest among not just musicologists but art historians as well. Thomas Willette, an art history professor at the University of Michigan and former humanities major at the University of Minnesota, has reviewed the manuscript.

"There is nothing really comparable by any art historian that I know of," he says. "I can only marvel at how much ground he covers, how much art history and related fields he has made his own."

Leppert was born in 1943 and grew up on a North Dakota farm not far from the Canadian border. His grandparents on his father's side were homesteaders, settling on land at what was then the end of the railroad. To this side of his genealogy may be credited his love of gardening, woodworking, carpentry. "I love to work with my hands," he says.

But music and the arts were also deeply imbedded in his background. His mother's family moved from Chicago to North Dakota, he explains, "on the very bad advice of a physician who told my grandfather the fresh air would do him good. A man who was by trade a watchmaker suddenly became a farmer in the badlands north of Medora."

The farm was not a success. But before debarking for the high plains, Leppert's grandmother had been deeply involved in the world of music, and even enjoyed a brief career singing in the chorus with a Chicago opera company. She passed the interest on to Leppert's mother who, as would her son, studied music in college.

"My mother's 84 now but still a fine singer," he says. "She's the one who got me involved in music from the time I was in kindergarten."

The path that led Leppert into musicology was originally charted to take him into a career in performance. All during childhood he studied piano and then took up voice. In college, his initial intention was to become a professional singer, albeit one with strong academic credentials: as an undergraduate at Moorhead State University he took degrees in three subjects: music, English literature, and German. He was, he recalls, "well on my way to taking a degree in a fourth major when my parents very gently suggested it was time to move on." Although he considered doing graduate work in literature, a fellowship in musicology took him to the University of Indiana.

There, still in his early 20s, he made a discovery that ultimately may have had a very small impact on the world of the performing arts, but a very large impact on the world of musicology.

"I found I was moving into a realm where there are essentially two kinds of voices," he recalls, "very good, and superb. I had the former."

"The difference is absolute. From there I concentrated on musicology."

Like many graduate students in the sixties, Leppert was galvanized by the political events of the day, especially the upheaval occasioned by the Vietnam

*"What is at stake in music goes all the way back to the ancient Greeks. Music has been able to pretend it is one of the sciences. There is a great deal of prestige that comes along with that."*

War. At a time when the barriers between domestic and foreign policy, between the battle overseas and the struggles on the homefront, were coming down for society as a whole, he began to wonder about the relevance, even the morality, of the way musicology was studied at that time.

"Several of my friends from college who did not go on to graduate school were drafted and killed," he says. "While my opposition to the war was thorough, I was pretty troubled by the awareness of my own safety and insularity provided by the fellowship."

That uneasy conscience led him "to question what I was studying and why."

"The way music history was almost universally taught in those days was as an entirely autonomous subject unrelated to anything except itself," he says. "In particular, music's relation to society and culture was pretty much off-limits or otherwise judged to be irrelevant. What counted was only the work itself, self-contained and historically isolated."

It was this crisis of conscience—combined with a deep interest in the popular music of the time, so much of which addressed social and political issues—that set Leppert thinking about the links between culture, society, and music.

Since then, musicology—following the lead of literary studies and art history—has undergone a sea change. One of the most important events along the way was the 1987 publication of a slim collection of essays entitled *Music And Society: The politics of composition, performance, and reception*. Coedited by Leppert and Susan McClary, then a University music faculty member, *Music And Society* is essentially the proceedings of a symposium Leppert and McClary conducted in 1985.

*continued on page 10*

# Our Song

A DIFFERENT DRUMMER

a price and that price is paid by those who don't get to participate in the glories of civilization." As an example, Leppert cites the palace at Versailles.

"What Benjamin asks us to remember is the anonymous labor of the peasantry that built the palace but which is in no way documented in the monument," he explains. This does not mean, he adds, that he or Benjamin are suggesting that Versailles should be torn down or precluded from the list of canonical works of Western civilization.

Yet another of Leppert's governing aphorisms comes from Theodore Adorno, an early champion of Benjamin's work, who wrote that the splinter in the eye is the best magnifying glass. "The function of the magnifying glass is to make legible what otherwise cannot be easily seen," Leppert explains. "In a literal sense, a splinter in the eye would blind us, but in the process what we would 'see' would be pain." That splinter, then, enables us to see

In the catchy but often imprecise shorthand of the news biz, they were called "cocaine babies," "crack kids," the infants nobody wanted. We started hearing about them in the late eighties, in our daily newspapers, in *Time* and *Newsweek*, on National Public Radio, *60 Minutes*, and *20/20*. They even turned up on the in-depth segments of the nightly TV news (usually during sweeps week).

They were described as a new generation of ill-fated children, innocent victims damaged irreparably by the drugs their mothers took. They faced a grim future of imponderable and perhaps insurmountable developmental, social, and educational hurdles. Massive (and expensive) new service programs were called for to meet the unique challenge.



It's 1995, and the picture looks not so grim or pessimistic. Make no mistake, prenatal exposure to cocaine and crack, as is the case with other drugs, poses serious risks to a child. But University of Minnesota researchers, and others across the country, are finding that a lot of what we have come to believe about these children is more myth than fact. And the facts, while not suggesting that there is no cause for concern, leave a lot more room for hope than do the misconceptions.

Scott McConnell and Mary McEvoy, codirectors of the University's Early Childhood Research Institute on Substance Abuse (ECRISA), say that media attention has done a lot to raise public awareness of the dangers of prenatal drug and alcohol exposure. But, by focusing on worst-case scenarios, they have also sensationalized the problem and contributed to the misconceptions about, and the pessimistic predictions for, the children's future.

McEvoy, McConnell, and their colleagues have been following infants prenatally exposed to drugs and alcohol and their families for four years. What they've learned about the effects of such exposure on a child's development, and about what is needed to minimize or overcome those effects, has been a surprise to many.

For one thing, the daunting specter of "cocaine babies" does not exist. The pessimistic predictions for these children are not coming true. Here are some of the facts.

**fact:** Abuse of crack or cocaine by pregnant women is NOT the greatest threat to infants and young children today. In fact, not all cocaine-exposed children have severe handicaps, and most who do can be helped. Further, cocaine, in and of itself, does not cause behavioral problems in babies who are exposed to it before birth.

## Exposed in the womb

researchers sort facts from myths about prenatal exposure to drugs

By Mary McKee

"What happens after these children are born may be more important than what happened before.... A variety of factors... may have more influence on child development than prenatal exposure to drugs and alcohol."

**fact:** Crack/cocaine is also not the primary drug of abuse by pregnant women, nor is it the most harmful of drugs to the unborn. Research shows that women are much more likely to have used alcohol as cocaine during pregnancy; unlike cocaine, alcohol has been proven to cause fetal malformations. Also, nicotine, which has a strong relationship to infant mortality, is the second-most-often-reported drug, with marijuana coming in third. Vastly more pregnant women smoke tobacco and marijuana than smoke crack.

**fact:** Prenatal substance abuse is NOT confined to women of color living in the inner cities. Research shows similar rates of illegal drug abuse during

pregnancy among white and nonwhite women, and among urban, suburban, and rural women. Yes, white, middle class or wealthy women also use drugs and alcohol during pregnancy.

**fact:** Prenatal alcohol and drug exposure does not sentence a child to a certain set of behavioral and developmental problems. In fact, most children exposed to prenatal substance abuse are not adversely affected. There is no "typical" prenatally exposed preschooler. Researchers question even categorizing children as drug exposed because the term doesn't define a consistent pattern of development—nor does it predict future behaviors.

Further, drug exposure alone is not the only cause for concern for children's development. "What happens after these children are born may be more important than what happened before," says McConnell. "What we're seeing is that a variety of factors—including economic and social resources, caregiving environments, and the array of services received—may have more influence on child development than prenatal exposure to drugs and alcohol."

**fact:** We DON'T need to create a whole new service system to give these children and their families a chance to grow and thrive. What's necessary, says McEvoy, are many more of the range of services now in place—pre- and post-natal health care for women and infants, help with housing, job training, day care, parenting classes, and so on. Also, "we need to remove barriers that make it difficult for people to get services they need," says McEvoy. For example, there are few chemical dependency treatment programs that can accommodate women with children. "We need much better coordination of those services so they're more accessible to these high-risk families and more effective at meeting their complex needs," she adds.

Here's where McConnell and McEvoy see an important role for the University of Minnesota. "There is not a big distance between science and service," says McConnell. "With our applied research, we're getting very good science that's relevant to community needs—and to agencies that are trying to meet those needs. By discovering what goes on and what's needed in the community, the University can form partnerships—with chemical dependency programs, with social workers, and with job training programs that link the research base to direct services."

McEvoy says that the goals of University 2000 "affirm everything we are doing.... We have had to be user-friendly to gain the trust and cooperation of the people in our base; we are translating research to community services; and we have tailored our activities to be respectful of the diverse community of people with whom we are dealing." ■

photo: TOM FOLEY







Photo: Tom Foley

# BEST OF BOTH WORLDS

A SARAGUROS INDIAN COMES TO MINNESOTA

BY MAUREEN SMITH

• • •

When he left his village near the border with Peru, Gonzales had to travel 17 hours by bus to Quito, the capital, to get on a plane for Miami. "All the leading people from his ethnic group went with him," Linda says.

One big obstacle after he arrived in Minnesota was that he needed to pass the Test of English as a Foreign Language (TOEFL). He had started studying English in Ecuador but didn't make much progress. When he arrived in Miami, he remembers, it was "very, very difficult for me to understand English."

Gonzales spent the summer of 1993 with the Belotes in Duluth, and "we poured TOEFL English into that poor man's head," Linda says. "He was very dedicated, and he worked so hard. He passed."

In fall 1993 Gonzales moved into Bailey Hall in St. Paul and began his studies.

The first quarter, he got B's and C's. By the end of the year his grades were strong enough that he was offered an assistantship, "which was really good, because we were out of money," Linda says. The same year that Gonzales started at the University, the Belotes returned to Ecuador for a sabbatical year. "We were struggling financially, and so was he."

Gonzales made a trip home in the spring of 1994, and the Belotes were there to join in greeting him. "He had gotten so pale," Linda remembers. At home, where the Saraguros people live out of doors except when they sleep and eat, his skin had been bronze.

When he was home, Gonzales married Clemencia Quizhpe, and she came with him to Minnesota last July. The marriage delighted the Belotes. "We're also real close to Clemencia's family," Linda says. "Our friends' kids are all marrying each other. We didn't even know they knew each other that well. Segundo's brother married the daughter of our closest friend in another community."

• • •

In warm weather Gonzales wears his traditional dress, short pants and ponchos, on campus, but by February he had made a concession to the Minnesota winter and was wearing jeans and a sweatshirt.

"The use of shoes is lately," he says about Saraguros customs. "Until 1968 almost nobody of my community was wearing shoes." Now most people do.

In comparing two very different ways of life, in Ecuador and America, Gonzales sees advantages in both. "Education generally is very good," he says about his experience in Minnesota. "The laboratories are very well equipped. Transportation is very good. Communication between one university and another is very, very good." Gonzales had never used a computer before coming to the United States.

Some other aspects of American culture have seemed less positive to him. "During the classes you can find people eating and bringing in their cup of coffee. In my country nobody eats or drinks during

**THE SARAGUROS PEOPLE  
"HAVE GIVEN US OUR LIVELIHOOD,  
OUR CAREERS, A LOT OF OUR  
PHILOSOPHY OF LIFE, WONDERFUL  
FRIENDSHIPS."**

class or walking on the street. It's surprising to see students putting their legs over the desks. Another thing I don't like is the way some professors throw out the handouts and don't give the papers in the students' hand."

Linda Belote, an American who admires the Saraguros culture, says her belief is that "the Saraguros are doing a lot better than Americans" in most ways. She says she and her husband tried to raise their children with Saraguros values. "Most people think our kids are not like other kids," she says proudly.

What Gonzales has found missing most in America is a community spirit.

"Nobody takes care for all the people. You can walk in the street and nobody knows you."

But Gonzales is grateful for the education he is gaining, and he says he wants to "teach to my friends all the things I have learned here."

"He's not here as Segundo Gonzales. He's here as the Saraguros Indians getting dairy cattle knowledge," Linda says. "Everybody is very excited by his being here." ■

Nobody from the Saraguros ethnic group in southern Ecuador ever left home until Segundo Gonzales came to the University of Minnesota as a graduate student in animal science. His opportunity grew out of a family friendship that began before he was born.

Back in the early 1960s, before they were married, Jim and Linda Belote were Peace Corps volunteers in Ecuador. "One of our very closest friends was Segundo's mother," Linda Belote says. The Belotes are now anthropologists on the faculty at the Duluth campus, and Linda is director of the Achievement Center.

On return trips to Ecuador, the Belotes stayed in touch with their friend, who married and had children. They came to know Segundo as a young child, a boy, a high school student, a college student. "The relationship between my family and them is very, very close," he says.

When Linda Belote visited Ecuador again in 1992, Gonzales asked if she and her husband could help him come to the United States to study. "There were many things I didn't learn in my university," he says. "Our universities are generally poor."

Before that visit, the Belotes had talked about finding a way to help the Saraguros people. "They have given us our livelihood, our careers, a lot of our philosophy of life, wonderful friendships," Linda says. Helping their young friend learn more about dairy cattle could be the best thing for the Saraguros people, they decided. "Dairy cattle is their main economic enterprise."

The Belotes talked to Richard Goodrich, head of animal science on the St. Paul campus, who explained what obstacles would have to be crossed. "We crossed them all," Linda says. The couple then agreed that "we would take our savings and bring him up here. It took them all." Expenses are high for international students, including nonresident graduate tuition.

The investment has been worth it. "I'm just super super happy with how life has gone for Segundo," she says.

## The Road to U2000

continued from page 5



From the faculty point of view, John Adams said, another problem is "the widespread sense that there is an unequal allocation of burden" and Finance and Operations is being protected at the expense of academic units.

"I think it's the administration's responsibility to address this concern in a way that's understandable," said Gray, chair of the Finance and Planning Committee.

"We have had a historical underfunding in maintenance," Hasselmo said. "In 1992 we gutted Finance and Operations. We overdid it. We have to put some money back in. I don't know if the balance is right, but the needs are there."

Astronomy professor Roberta Humphreys summed up the feeling of many of her colleagues: "To be quite blunt about it, you have a morale problem. The message has got to start taking a more positive tone.

"It's starting to reach a crisis. Everyone is saying, 'Let's hunker down and hold on to what we have,'" Humphreys said. "I liked what you said when you came in this morning."

"I'm painfully aware that what you say is right," Hasselmo said. Faculty creativity must be tapped, he said, because "the faculty is the University."

The reason the University is going to have a great future is that "we have an outstanding faculty," he said. "We have so much strength, so much power here." ■

## The Measure of Our Song

continued from page 7

"Things have changed a great deal in musicology in the past 10 years, in part because of our book and others that began coming out in the late eighties," says McClary, now a faculty member at UCLA. "There are now many people involved in asking questions about music and other cultural practices."

Those changes, however, have occasioned often acrimonious debate between academics who champion a more traditional approach to music history and those who have challenged that approach.

"What is at stake in music goes all the way back to the ancient Greeks," says McClary. "Music has been able to pretend it is one of the sciences. There is a great deal of prestige that comes along with that. Unlike other art forms where the content is much more evident, music has succeeded in aligning itself with mathematics, at least in the West."

Yet at the same time, McClary, Leppert, and other cultural musicologists point out, debates about music have usually been about music's power to arouse strong emotional and physical responses—see, for example, the condemnation of rock music in the 1950s because of its supposed power to inflame animal passions in the young.

"We have had for a long time in music study a highly sophisticated vocabulary for discussing the formal procedures of music, from simple folk tunes to complex pieces of jazz improvisations to the sonata form that comprises the bulk of symphonic literature," Leppert says. "That is to say we have a good understanding of how musical procedure works and how music is put together, particularly western and art music."

What we do not have a good grasp on, he contends, is how music operates as a "sign system"—how it "encodes" a culture within its structure and its sonorities. This should come as no surprise, Leppert says, given music's abstract nature. Yet it is axiomatic that music means different things to different people at different periods of time.

The experience of listening to a Beethoven symphony today is fundamentally different from the experience of those who first listened to it early in the 19th century. Although we like to think of music as a "universal language," the truth is that age, race, gender, ethnicity—all have an effect on how we individually hear music. So culture, in the broadest sense, does in some way influence the hearing and, Leppert's work shows, on the composition and performance of music as well.

"You don't need to be a musicologist to understand that when 'Hail To The Chief' is played as part of a Presidential Inauguration, it is the sound of the Marine Band—and in particular the sounds of the

*"The issue is not in any sense to vulgarly bash the art of Western civilization, but to try as best and as honestly as I can to investigate its bright and its darker sides."*

brass instruments—that encodes sonorities appropriate to the occasion," he observes. "I think it is safe to say that an American audience would be appalled if the anthem were performed instead by an accordion quintet."

Yes, but *why* do brass instruments "encode sonorities appropriate to the occasion?" In the old days that question would have been set aside as unanswerable and therefore irrelevant. Or some "purists" might have dismissed the question altogether by airily maintaining that brass instruments just naturally embody such sonorities as a result of eternal principles of music.

"In fact," says Leppert, "the history of brass instruments and of how they were used helps clarify why they sound right to us today." In the 16th and 17th centuries, trumpets and kettle drums were used as military instruments—but only in association with the cavalry, which in those days was made up of members of the aristocracy.

"And that," Leppert says, "is ultimately where the association of the sound of brass with statecraft comes from."

To some, such historicism seems barbaric, if not out-and-out blasphemous, a defaming of the muse. To such critics, Leppert replies that his earliest ambition—to become a professional singer—ought to offer compelling evidence against one of the most frequent charges leveled by enemies of the new theoretical approach to the humanities: that the theorists simply hate Western culture and wish to dismantle its canon in favor of a leveling discourse that would place the most banal outpouring of "popular" culture on a par with Bach and Shakespeare.

"I regard my role in studying the humanities to be entirely distinct from being a cheerleader," he explains.

"That said, it's important to point out that the reason I became an academic in the humanities is precisely because I deeply love and care about the artifacts I study. The issue is not in any sense to vulgarly bash the art of Western civilization, but to try as best and as honestly as I can to investigate its bright and its darker sides."

What that approach suggests, he argues, is not an antagonistic or even irreverent attitude about the products of Western culture, but a measure of how seriously he takes art and music and their roles within society.

"I don't view them as frosting on the cake," he says vehemently, "but very much the cake themselves." ■

## SHORT TAKES

### trying to remember the prime minister

When Lamberto Dini was elected prime minister of Italy, Craig Swan asked some of his colleagues on the economics faculty to search their memories and asked University Archives to search its records.

Dini was a student at the University for one year, in 1957-58. He studied economic theory, public finance, money and banking, business cycles, and international economics. His application noted a special interest in issues of taxation.

Most of Dini's work was with the late Walter Heller, Regents' Professor of Economics. He also audited one course each with Jack Kareken, now chair of the Department of Finance in the Carlson School of Management, and Ed Coen, who retired from the economics faculty five or six years ago.

"I haven't had the opportunity to talk with Ed yet, and Jack draws a blank," says Swan, chair of economics. "I'm sorry that we are not able to provide more direct and personal memories, but the passage of time has a habit of eroding one's memories."

### UMD grad programs in counseling are accredited

Graduate programs in school counseling and community counseling on the Duluth campus have been accredited by CACREP (Council for Accreditation of Counseling and Related Educational Programs).

The programs are in the Department of Psychology and Mental Health in the College of Education and Human Service Professions.

To receive accreditation, a program must submit a lengthy self-study, respond to reviews of that self-study, host the site visit of a three-member committee, and respond to the committee's report. Site visits include an in-depth examination of course content, practicum experiences, instructors' training, and program evaluation, as well as interviews with past and present students and employers of graduates.

The school counseling and community counseling programs have a developmental focus based on a prevention model created by Professor Emeritus Moy Fook Gum.

In celebration of the accreditation, the department is planning an open house for the spring.

## reading the line print

Ever get the feeling that reading off 10-inch letters from a chart 20 feet away doesn't measure your ability to read a book? So does psychology professor and vision researcher Gordon Legge, who with three colleagues devised new eye charts that use texts, not individual letters, to measure reading acuity in normal- and low-vision people.

The charts, which are read at normal reading distance, also go to smaller type than anyone can read, which gives more accuracy in assessing visual acuity. New technology allows print resolution as small as 3,600 dots per inch.

Called MNREAD acuity charts, they feature 19 simple sentences, all with the same number of characters, in decreasing type sizes. The charts come in four versions. Unlike conventional eye charts, they allow one to measure three important variables: reading acuity (the smallest print one can read); maximum reading speed (speed when reading isn't limited by print size); and critical print size (the smallest print one can read at maximum speed).

Legge expects the charts to be marketed by Long Island-based The Lighthouse Inc. soon.

## what a difference a friend makes

Picture two boys growing up in the same neighborhood. Both are physically abused and live in poor families headed by mothers who love them. One becomes a responsible adult, the other a prison inmate. Why? One had a good, steady friend.

A study headed by Jane Gilgun, associate professor of social work, finds that several protective and risk factors distinguish inmates from noninmates, and having a confidant during adolescence is perhaps the strongest protective factor of all.

"The ability to discuss personal problems during adolescence is a powerful protective factor," Gilgun says. "Feeling loved and cared for by an adult family member simply isn't enough."

Study respondents, all from Minnesota, included 1,700 prison inmates, 36,000 public school students, 540 juveniles in detention and correctional facilities, and 800 randomly chosen women and men.

## PEOPLE

### twin cities

Professor of medicine Jay Cohn, head of the Cardiovascular Division, is one of two editors of a new textbook entitled *Cardiovascular Medicine*. He is also editor-in-chief of a new journal, the *Journal of Cardiac Failure*. A number of University faculty members have written chapters for the book and are associate editors of the journal.

Joanne Eicher, professor in the Department of Design, Housing, and Apparel, has been named series editor for a book series entitled *Dress, Body, and Culture*. Eicher, internationally known for her work on the significance of dress in different cultures, will work with Berg Publishers in Oxford, England.

Faculty from the Department of Family Social Science have played an important role in the development of a "Families" exhibit scheduled to open in October 1995 at the Minnesota History Center. Faculty members William Goodman, Dan Detzner, Jan Hogan, Kathy Rettig, and Paul Rosenblatt served as consultants to the project.

Lori Graven, Catherine Ploetz, and Tina Anderson, employees of the professional development and conference services department, have won the Minnesota Council for Quality's service award for their work in conference planning and coordinating.

Sociology professor Carl Malmquist was presented with the Golden Apple award of the American Academy of Psychiatry and Law at its 25th annual meeting in Hawaii last October. The award recognizes members of the academy who have made significant contributions to the field of forensic psychiatry.

Leonard Polakiewicz, associate professor of Slavic languages and literatures, received the Excellence in Teaching Award from the American Association of Teachers of Slavic and East European Languages at its national conference in December. The award is "in recognition of outstanding achievement in teaching at the postsecondary level."

Susan Schrader, who earned a doctorate in sociology with a minor in gerontology, received the top student research award during the November 1994 annual meeting of the Gerontological Society of America. Her doctoral thesis focuses on organizational stigma in nursing homes. Her faculty adviser was Don McTavish.

Music professor Judith Lang Zaimont has won a major international competition, the 1994 McCollin Competition for Composers. The Musical Fund society of Philadelphia announced that her Symphony No. 1 was the winning composition. She received a \$5,000 cash award, and her winning work will be given its premiere professional performance by the Philadelphia Orchestra in January 1996.

### duluth

Kathryn Martin, dean of the College of Fine and Applied Arts at the University of Illinois at Urbana-Champaign, has been named chancellor at UMD effective August 1. She replaces Chancellor Lawrence Ianni, who has led UMD since 1987 and will teach English in the fall. Before serving in the University of Illinois system, Martin was dean in the School of Fine and Performing Arts and Communication Arts at Wayne State University in Detroit.

Ruth Myers, former codirector of American Indian Programs in the School of Medicine at UMD, received an honorary degree at the fall commencement.

David Schimpf, associate professor of biology, is the new director of the Olga Lakela Herbarium.

### morris

Qaisar Abbas began work as the minority student program education coordinator, in charge of academic advising for minority students and the Gateway program. He earned a master's degree in journalism in Pakistan and moved to the United States about 10 years ago. He has taught intercultural communications at Concordia College, St. Paul, and Metropolitan State University.

Bert Ahern, history professor since 1987 and chair of the Division of the Social Sciences since 1987, announced his intent to resign as division chair June 15. He will continue on the history faculty.

The Minnesota College and Personnel Association has awarded Tom Balistrieri, director of Student Counseling, the annual Innovations in Student Development Award for his Passage process.

John Bowers began December 1, 1994, as director of Computing Services. Most recently, he was assistant director of the Computer Information and Resource Center at George Washington University.

Gary Donovan, director of the Career Center, received the 1994 Minnesota Career Development Association Research Award for the significant contributions he has made to Minnesota in the area of college-graduate follow-up research.

"Celebrating Rizal Day: The Emergence of a Filipino Tradition in Twentieth Century Chicago," an article by Roland Guyotte and Barbara Posadas, will appear in the book *Celebrations in North American Ethnic Communities*, to be published in April by the University of New Mexico Press.

Gary Lemme, head of the West Central Experiment Station, has been named acting assistant director of the Minnesota Agricultural Experiment Station.

Clare Strand, assistant registrar, has been named as the equal employment opportunity liaison to the Upper Midwest Association of Collegiate Registrars and Admissions Officers (UMACRAO). She will also serve on the program committee to plan this year's annual UMACRAO conference.

### crookston

The Red River Valley Trade Corridor received a \$75,000 grant from the Minnesota Department of Trade and Economic Development. Jerry Nagel is the director.

Dorothy Soderstrom, executive secretary in the chancellor's office, received a Torch and Shield Award for providing leadership and aiding in the development of UMC.

Erman Ueland, associate professor of agricultural business, received the National FFA Organization's Honorary American FFA Degree at a meeting in Alexandria, Virginia.

## cleaning up after the communists

Four decades of communist rule in Eastern Europe have produced an environmental nightmare. Consider the Polish city of Katowice, where two rivers converge after being used as a dump for industrial and human waste.

By the time one of the rivers gets to Katowice, it contains more than 85 percent waste. Is there hope for cities like Katowice?

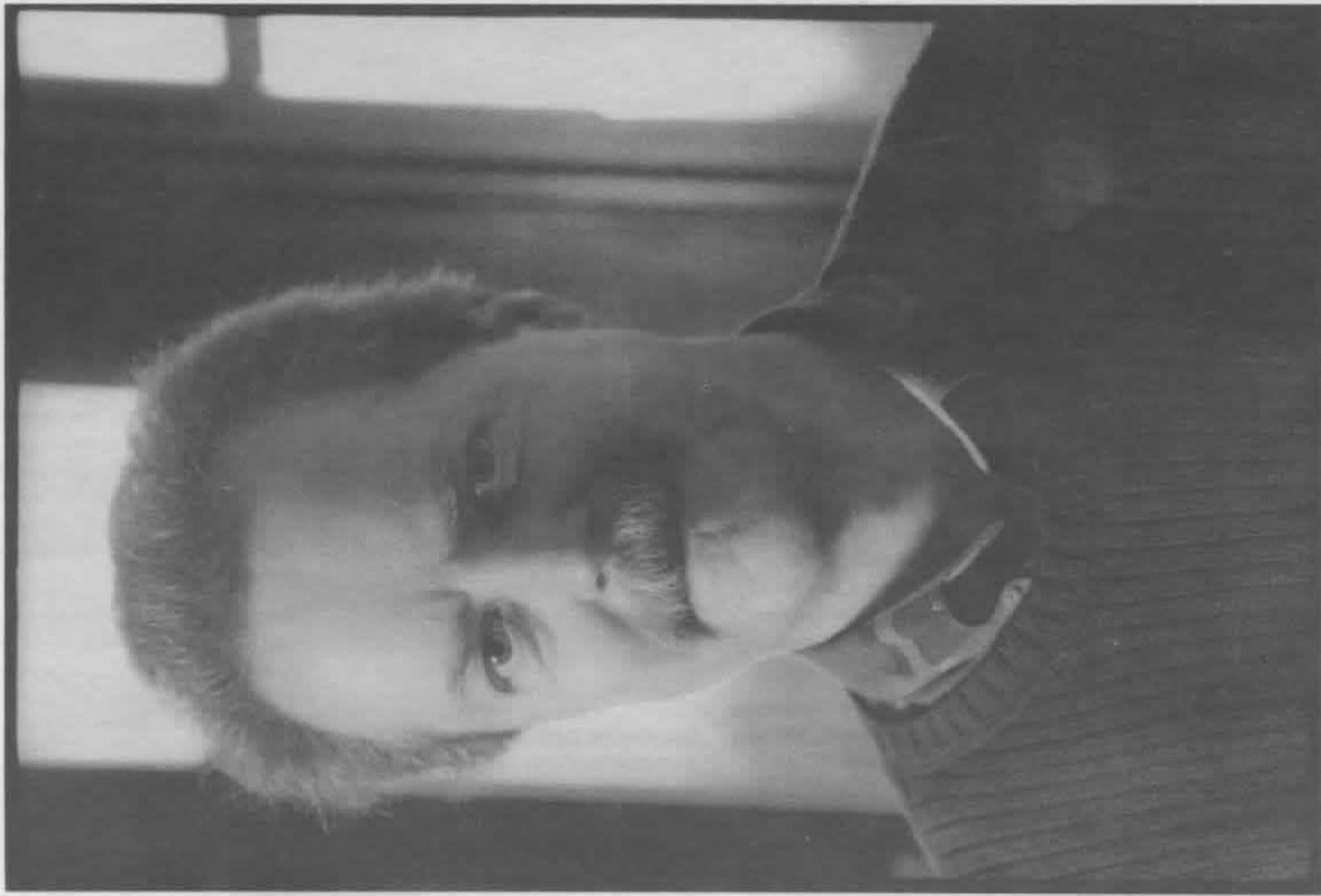
The University's Humphrey Institute thinks so. A national consortium led by the institute has been awarded \$11 million by the U.S. Agency for International Development to provide Central and Eastern Europeans with educational, technical, and legislative training to reverse the effects of 40 years of pollution and neglect.

Representatives will spend 10 months at the institute studying environmental economics and management, then return home to enact laws, implement pollution control policies, and coordinate cleanup.

"This project has significance beyond the Eastern European community," says project director Zbigniew Bochniarz. "We will contribute to the political and economic stability of these countries and aid in the cleanup of a global environmental problem."

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UNIVERSITY OF MINNESOTA



RICHARD LEPPERT | PAGE 6

# UPDATE

For Faculty  
and Staff

VOL 22 NO 2  
APR 1995

Volume 22 April 1995 Number 2

## UPDATE

*Update* is published six times a year. Three issues a year are directed to faculty and staff of the four-campus University system. Three issues a year address subjects of broader interest and are also sent to alumni and friends of the University.

*Update* welcomes ideas and letters from all readers. Write to *Update*, 6 Morrill Hall, 100 Church Street S.E., Minneapolis, Minnesota, 55455-0110, or call 612/624-6868.

The opinions expressed in *Update* do not necessarily reflect the official policies of the Board of Regents or the University administration.

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UNIVERSITY OF MINNESOTA

# BREAKING POINT

VIOLENCE IN THE WORKPLACE

by Richard Broderick

It took John Costalupes a little more than three minutes to shatter some illusions—specifically the “can’t happen here” attitude that University employees, like most Americans, have about violence in the workplace.

On March 10, a day after gunning down Mario Ruggero, a Northwestern University faculty member who was his boss eight years ago when the two men worked at the University of Minnesota, Costalupes showed up at the University’s Mayo building, in the offices of Shelly Chou, dean of the Medical School. Although Costalupes had never had any dealings with Chou—in fact, Chou was not even at the University in 1987, when Costalupes left under a cloud—it is clear what he had in mind for the dean.

For Alumni,  
Faculty,  
and Staff

VOL 22 NO 3  
JUL 1995

*continued on next page*

# BREAKING

That he never got the chance owes much to the intervention of Jo Anne Benson, a plainclothes University police officer. When Costalupes announced that he wanted to see the dean, Benson—stationed at Chou's office because of fears he might show up there bent on revenge—stepped forward and asked Costalupes to identify himself.

At that moment, she was not sure who she was confronting; the heavy-set, clean-shaven man she confronted now did not much resemble the photo of Costalupes circulated among police. Still, she had a suspicion—she especially disliked the bulging soft-sided briefcase the stranger was carrying.

Her suspicions were soon confirmed.

Instead of replying, the stranger turned heel, Benson trailing close behind. As they made their way down the hallway, Benson grabbed at the briefcase and wrested it from Costalupes before he had time to react. If there were a weapon in there, at least it wasn't in his possession any more.

Outside, Costalupes walked toward Washington Avenue as Benson tried to convince him to return to the building. No, he said. I just want to talk to the dean. This is between the dean and me. She asked his name. Jack, he replied, his manner deadly calm.

Meanwhile, back in Chou's office, someone had called 911. Benson had just about convinced Costalupes to step inside Jackson-Owre Hall when sirens began approaching in the distance.

At that point, Costalupes bolted, walking briskly down to the old west entrance of Mayo—a favorite place for hospital staffers to take a break, which many of them were doing on this unseasonably warm day. Still on his heels, Benson called out to police officers just arriving at the scene, "We're down here!" then followed Costalupes into the building.

What ensued was a scene that might have had comic overtones if it hadn't ended in tragedy. In an effort to slow him down, Benson swatted Costalupes across the back of the head with his own briefcase, knocking his eyeglasses off. Then, hearing the squawk of police radios behind her in the hallway, Benson, five foot, three inches tall and 130 pounds, attempted to pin the six-foot, 260-pound Costalupes against the wall face first.

Sliding into the doorway of the hospital blood bank, he pulled a revolver out of his jacket pocket. Benson grabbed the cylinder, trying to prevent him from pulling the trigger. When he put the gun to his face, she realized what he intended to do.

"I yelled 'No!' and pushed away because he was too close for safety," she recalls.

Costalupes put the revolver in his mouth and fired once. He died instantly.

The precise grievances that brought John Costalupes to the point where violence seemed the only recourse are particular to his case.

Yet if the details of his tormented life are unique, he himself possessed many of the characteristics shared by other employees who murder or attempt to murder colleagues. In fact, it's remarkable how much he fit the profile of individuals who have been involved in so-called "employer-directed violence"—current or former employees whose paranoia and sense of grievance against an employer explodes in violence.

Almost always these assailants are white males over the age of 35 (Costalupes was 45 when he died). They tend to be loners with an inadequate support system and a troubled work history (Costalupes was involved in disputes at Johns Hopkins, where he worked before coming to Minnesota in 1985).

**Ultimately, of course, violence in the workplace is a reflection of American society—the most violent in the industrial world. Endemic stress, access to deadly weapons, a glorification of violence in the media and popular entertainment... all contribute to a climate where hostility can flourish.**

They tend to derive an inordinate amount of their self-worth from work (Costalupes was never able to find work in his field after leaving Minnesota, a fact for which he blamed Ruggero). And so on.

"With a couple of exceptions he had every one of the 'issues' that have been identified as characteristic of people who do this sort of thing," says University police chief Joy Rikala.

Along with a dozen other administrators, staff, and faculty members, Rikala sits on the Threats In The Workplace committee formed in 1993 by associate vice president for health and safety, Paul Tschida. While that committee deals with a broad range of safety issues on campus, even before the Costalupes incident it was beginning to concentrate on violence in the University workplace.

In December, the committee sent out a "DDD"—a memo to all deans, directors, and department heads—with an advisory detailing precisely how University staff and supervisors should deal with violence or the threat of violence in the workplace. The memo also announced the formation of a threat-assessment team—a team of police officers, counselors, and other experts—who are available to evaluate an employee's behavior and determine whether he or she poses a threat.

Despite the understandable precautions and procedures, the University, like most workplaces, is a relatively safe place to work and it is important not to take a single incident and expand it into a full-blown crisis. Even so, there are certain qualities peculiar to the University that make it fertile ground for breeding employee grievances against the institution itself. Among them is the fact that the University is a so-called "closed environment"—that is, a cultural microcosm with its own mores and rules, partially insulated from the society as a whole but not entirely—the kind of community, in fact, that makes a useful research subject for federal agencies trying to develop effective methods of threat management.

"We are a good subject area for the FBI and Secret Service to work on profiling of potentially threatening people," Rikala explained at a recent threats committee meeting.

"In addition to being a large institution, this is a commuter campus where people come here from already built-up social circles; that makes it hard for people from outside the metro area to find comfort and support and acceptance," observes Tom Beaumont, a crisis counselor with Boynton Health Service; after the Costalupes shooting, he and other colleagues fielded calls from employees upset by the incident.

"The worst thing about such an incident is that it tends to make this kind of occurrence look much more common than it really is," he says. "The possibility exists of it leading to a tendency to over-react, with people ending up being more distant and distrustful. And then people who are touchy and overly sensitive wind up feeling even more isolated than before."

Beaumont's cautionary note is one worth heeding. The media's focus on spectacular cases—like the multiple killings by current or former postal workers of other postal workers—makes it seem as if the American workplace has become a venue where homicide is almost as common as office chatter.

That perception has also been fueled by a growing host of consultants and self-appointed security experts eager to cash in on the anxiety of corporations interested in protecting employees. That concern is both humane and economic: In recent years juries have demonstrated an increasing willingness to levy hefty damages against employers who hire dangerous employees or do not take action when alerted to a potential problem in their ranks.

But is there an epidemic of workplace violence, as is suggested by many articles and pamphlets? The answer is: no one knows for sure.

Certainly the number of homicides is on the rise—1,004 workplace murders in 1992. Yet a closer look at that figure reveals an interesting fact: 822 of those murders, or 82 percent of the total for the year, occurred as a result of robberies or other crimes—convenience store holdups, for example. Another 56 killings were of police officers in the line of duty. Only 87 deaths were part of a category that would include acts of violence by employees against employers or employees against their colleagues. In 1993, there were 59 homicides by workers or co-workers out of a total U.S. workforce of 120 million.

All told, the chances of an American being murdered at work is considerably less than the chance of being struck by lightning.

One thing all experts agree on is the need to discriminate between different types of workplace violence, each of which has different causes and different means of prevention.

There are several different categories. One broad area is violence committed against employees by non-employees; this would cover holdups, police shootings, assaults against emergency room staffers (a growing area of concern), or attacks by unbalanced individuals who, as in a recent incident in the Twin Cities, wander into, say, the local airport and open fire.

# POINT

Another category—and the one that tends to get the most press—is employer- or employee-directed violence, the slot the Costalupes case falls into. Yet another is domestic violence spilling over into the workplace—the jealous husband or boyfriend who shows up at work to confront his significant other. Still another covers a range of threatening or harassing behavior, from the employee (most often male) who develops an unwanted romantic interest in another employee and takes to stalking the object of his obsession, to racial and sexual harassment, to simple bullying and verbal abuse.

“The real issue of workplace violence is not the one that receives all the media hype,” argues Richard Price, a professor of organizational psychology at the University of Michigan and director of the Michigan Prevention Research Center. “The vast majority of killings are the result of robberies and muggings. The vast majority of things that get lumped under the heading of workplace violence tend to be verbal and physical harassment.”

Focus on high-profile cases, like the Costalupes killing, tend to divert attention from steps companies can take to reduce the level of harassment and threatening behavior. “What we can do is create work atmospheres where employees are respected and have a sense that they can go to someone with complaints about harassment and know that action will be taken to alleviate the problem.”

That such is not the case for most employees is borne out by a survey Price helped conduct for Northwestern National Life Insurance. Admittedly, the 1993 survey—which used a broad definition of violence—gathered data from only a small sampling of individuals who were probably self-selecting; those who’d experienced threats or harassment were more likely to respond. Still, the results give a depressing peek into the working life of all too many Americans.

Among the key findings of the study were:

- More than 2 million Americans working in civilian jobs were victims of assault during the previous year. Another 6 million were threatened and 16 million were harassed. In a one-year period, 25 percent of all workers were assaulted, threatened, or harassed on the job.
- Underreporting of incidents is almost as common as the incidents themselves: 58 percent of harassment victims, 43 percent of threat victims, and 24 percent of attack victims did not report the offense.
- Violence and harassment affect personal health and productivity.
- There is a strong relationship between job stress and workplace harassment and violence.
- Employees who say their employers have effective grievance, harassment, and security programs report lower levels of workplace violence. These same employees also report higher morale and fewer stress-related illnesses.

What such statistics, however provisional, point to is not a sudden epidemic of workplace violence, but the surfacing of a major social problem that is only now receiving attention from researchers and managers.

“I think there is a good question whether there is more workplace violence or if it is being reported more because no one has been keeping records except for homicides,” says Paul Tschida, assistant vice president for health and safety. “Those who think there is an increase are basing that on a sense that there is more stress now than in the past and a greater acceptance of ‘acting out’ by people.”

Why is there underreporting, especially by affected employees? The reasons are complex and related to a variety of work and social issues.

“Initially many people will respond to a threat as if it were a joke,” says Dennis Johnson, a Florida-based consultant and coauthor of *Breaking Point*, a 1993 report on workplace violence. “After this there is often a state of fear—of retaliation, of not trusting the organization to respond professionally to a complaint.”

Other reasons cited for this reluctance include lack of a clear reporting system, lack of knowledge about the warning signs of workplace violence, and simple embarrassment.



Ultimately, of course, violence in the workplace is a reflection of American society—the most violent in the industrial world. Endemic stress, access to deadly weapons, a glorification of violence in the media and popular entertainment, coupled with the “downsizing” of organizations once seen as offering secure employment, all contribute to a climate where hostility can flourish.

The cultural forces contributing to violence are not likely to change for some time to come, but organizations can take steps to prevent problems from erupting at work. And more corporations and institutions are doing just that: Dennis Johnson reports that his company, Behavior Analysts & Consultants, has worked with more than 100 clients in 42 states.

“We have been responding to workplace violence for at least 12 years,” he says. “In the last 5 years we have seen dramatic increases in requests for assistance.”

“That’s happened virtually without advertising. The demand is driven by clients, not by marketing.”

Among the steps many organizations—including the University—are taking include:

- Threat assessment. As at the University, organizations have formed teams of staff from human resources, health and safety, and legal departments, and counselors to evaluate an incident or complaint and decide what the appropriate response might be. Here at the University, that might range all the way from a referral for counseling to a visit by the police.

For threat assessment to work, of course, the team needs to receive information about disruptive or threatening behavior and individuals. That has not necessarily been the case at the University where, for example, numerous departments and officials had received correspondence from John Costalupes, but nothing was on file with the University police when the call came informing them of the Ruggero shooting.

“We need to do a better job encouraging people to let us know and forward letters and documents from people who seem to be threatening,” says Rikala.

- Training of supervisors and managers. Staff who know how to respond properly to threatening situations can often defuse the problem without outside intervention. The University of Michigan, for example, has circulated a detailed guideline on “threat and violence management,” containing information about not just who to call, but also how to act in tense encounters—things like “keep a safe distance” and “listen with empathy” to an agitated employee or ex-employee.

- Enhanced screening of potential employees. This is one of the most problematic areas of violence prevention because of the conflicting claims—and laws—governing privacy, treatment of disabled employees (which include individuals with emotional or mental problems), employer liability, and security.

“I tend to be aggressive in thinking that organizations need to do more preemployment screening,” says Richard Arvey, a professor in the Industrial Relations Center who not only researches workplace violence but has also offered expert testimony in trials stemming from such violence.

“Our hands have been tied because of privacy rights, which has made it difficult for employers to get information about a job candidate from former employers,” he points out. “Organizations tend not to pursue references because there is little info yield. We have gotten ourselves into the position over the past 10 years where fear of defamation suits has caused employers to clam up.”

In the case of John Costalupes, for example, information about work problems at Johns Hopkins, his employer just prior to his coming to Minnesota, was never passed along to the University.

- Postincident analysis and debriefing. Following the Costalupes shooting, Officer Benson went through an extensive debriefing in which trained personnel walked her through what had happened and helped her deal with her fears that she may not have done the right thing or that someone might blame her for Costalupes’ death.

“They made it clear to me that I had done my duty and that the outcome was the best that could be expected under the circumstances. Basically they screwed my head back on,” says Benson who still has trouble sleeping and concentrating because of the shooting.

Whenever an event like Costalupes’ violent death occurs in a workplace, there is a general unsettling of employees and a rise in stress, anxiety, and fear that in and of itself can lead to more problems. Which is why experts stress the absolute necessity of proper postincident response.

“How you respond to a violent incident will determine your future morale, productivity, public image, and organizational integrity,” argues Johnson. “It is critical to see that everyone involved progresses beyond the incident in as healthy a way as possible.”

But perhaps the best method for preventing the broadest category of workplace violence—harassment and threats—is for organizations to adopt what Price calls a “universal strategy.”

“The most open labor-management communications possible,” he says. “Sexual and racial training and policies for everyone; grievance procedures and committees in place with clear policy guidelines; 360-degree performance appraisals—everybody getting feedback from everybody they work with, including subordinates.

“These would make a big difference.” ■



photo: TOM FOLEY

# Animal Attractions

CEN/SHARE helps us understand the human-animal bond

by Mary McKee

Ned is a slight man, early sixties, with khaki pants almost reaching his ankles, a white button-down shirt, and a gray, pilled cardigan frosted with dog fur. A former math teacher, he's been on medical disability since 1992, when he had a stroke and then, two months into his rehabilitation, fell and fractured his hip and pelvis. After surgery and several months of physical therapy, Ned's health care team told him that he'd probably never walk on his own, even with a walker, and since he wasn't able to transfer himself from the wheel chair to bed or toilet, would probably need to stay in the nursing home indefinitely.

That possibility was painful, terrifying, and demoralizing to Ned. Although he'd suffered little brain damage from the stroke, hearing what sounded like a life sentence to a nursing home brought back the depression that had plagued him off and on when he was younger. For weeks, he felt a terrible sadness, loneliness, lack of motivation; he fretted over the smallest decision, ate little, and skipped the morning newspaper/current events discussion group.

But now, thanks to Helping Paws Minnesota, Inc., an agency started as a pilot program through the University's Center for the Study of Human-Animal Relationships and Environments (CEN/SHARE), Ned no longer lives in the nursing home. Instead, he lives in a high-rise for seniors and people with disabilities with Buddy, a four-year-old sheltie. He cherishes his independence, and is grateful for the home health care, housekeeping, and other social services that make it possible for him to live on his own. And especially, he is grateful for Buddy: his helper/companion, who braces Ned's body as he carefully maneuvers from wheelchair to bed or toilet, fetches the remote control or telephone, helps pull off Ned's socks on the nights when his hip is uncooperative, leads the wheelchair down the street, clearing a path and watching for potholes and other dangers, and carries a few groceries in a backpack after accompanying Ned to the corner superette. And he's also trained to summon help by pushing the red button on the living room's MedAlert monitor. But Buddy's real gift to him is something he never knew existed—joy, a sense of satisfaction in being alive, the ability to play. He says Buddy is the reason he gets up each morning.



Established in 1981, CEN/SHARE has become a national leader in the study of human-animal relationships. It serves as a sort of network for numerous private and public agencies, including political bodies, humane societies, veterinarians, professional animal breeders and trainers, farm groups, pet-related industries, and animal welfare and rights organizations. CEN/SHARE provides a neutral environment for these diverse interests, promoting dialogue, supporting research, offering educational and community programs, and recommending appropriate public policies.

While CEN/SHARE is still housed on the University's Minneapolis campus, all its operational costs are met through donations (including donations through the University of Minnesota Foundation); the organization receives no state funds. All staff are volunteers. "It's a labor of love for us," says R.K. Anderson, professor and director emeritus (now associate director) of CEN/SHARE.

CEN/SHARE started informally in 1976 with an interdisciplinary course and study group at the University called Perspectives: Interrelationships of People and Animals in Society Today. (Twenty years old and growing, the course drew about 100 students spring quarter.) Perspectives covers such topics as ethical issues of people using animals; animal rights and human rights; animals helping people with disabilities; hunting, wildlife, and conservation; grieving a pet's death; and people and animals sharing the environment. The course speakers list is a Who's Who of experts in the field.

At about the same time the Perspectives course people were getting together, Oregon psychiatrist Michael McCulloch, who had a National Institutes of Health contract to study the human-animal bond, became the first president of the Delta Society, a national advisory group that originated in Minneapolis. The Delta Society took its name from McCulloch's use of the triangle to signify the threeway relationship among people, animals, and veterinarians.

In 1981, six of the seven people who today lead CEN/SHARE established the organization. They are: Robert Dunlop, now director of CEN/SHARE and professor of clinical and population sciences (formerly dean) in the College of Veterinary Medicine, and associate directors R.K. Anderson, a veterinarian with a master's in public health, professor and director emeritus of CEN/SHARE; Ruth Foster, director, Twin Cities Obedience Training Club; Joseph Quigley, another veterinarian; David Garloff, director of Health Sciences Learning Resources; and



Geraldine Gage, professor emeritus, family social science. (The sixth associate director is Patricia Olsen, also a veterinarian.) Their goals: promoting health and quality of life for people and animals through behavior research, educational opportunities, and a public policy forum. The founding members hoped to bring together academics in fields like veterinary medicine, public health, human behavior, and social sciences, with dedicated volunteer animal lovers interested in studying and improving human-animal relationships.

Soon the group was busy organizing an international conference, which they sponsored in 1983 with the College of Veterinary Medicine and the School of Public Health at the University of Minnesota, the College of Medicine at the University of California, Irvine, and the School of Veterinary Medicine at the University of California, Davis. More than 1,000 people attended the two programs, held back-to-back in Minnesota and California. Widely acclaimed by professionals and animal lovers throughout the world, the megaconference also spawned two books, *The Pet Connection: Its Influence on Our Health and Quality of Life*, still considered a leading compendium of research in the area, and *Use of Animals for Farm and Fiber*. Both the conference and the books span a wealth of research on such topics as abused children and their pets, rehabilitative horseback riding for children with language disorders, use of aquariums for reducing anxiety, attitudes of violent criminals toward animals, and pet-facilitated therapy for depressed nursing home residents.

Among the research encouraged by CEN/SHARE are Ruth Foster's work on service dogs for people with disabilities, Joe Quigley's on the effects of pets on nursing home residents and staff, Michael McCulloch's on using pets in therapy for mental illness, Robert Dunlop's on ethics of animal use and animal rights, and Geraldine Gage's on pets and family dynamics. Besides encouraging research, the organization also takes a leading role in disseminating it in many forms, including audio- and videotapes, books, teleconferences, and lobbying efforts. Garloff manages the production of CEN/SHARE's informational resources.

CEN/SHARE provides no direct services, but it has sponsored some pilot programs, such as Minnesota Helping Paws, Inc., which trains dogs for service to people with disabilities. [See sidebar.]

Perhaps the group's most important activity is fostering public dialogue on issues related to the human-animal connection and thus helping to shape public policy. "We try to be a neutral forum for people with different opinions—pet owners, animal rights advocates, farmers and the agricultural industry, and government regulators, for example," says Garloff. "These issues are often controversial, very debatable. We try to enable people to approach with an open mind, to get the information needed to form their own ethical positions."

Of course, the organization's research and public policy shaping missions often dovetail. For example, nursing home and service dog studies led to state legislation that allows pets in nursing homes and ensures that people with any disability, not just visual handicaps, may have service dogs in public places if the dogs help them to live more independently.

CEN/SHARE's reach into the community is wide, and more and more people are becoming interested in issues relating to relationships between humans and animals. Director Dunlop says that in the Twin Cities area, an estimated 60 percent of people have pets. "It's probably the most important interest besides family. We are drawn to living things...The animal life form makes life exciting!"

[Editor's note: "Buddy" and "Ned" are composite characters drawn from case files of Helping Paws' service dogs and recipients.] ■

## Of Dogs and Disabilities

Helping Paws of Minnesota, Inc., is an example of a University pilot project that has successfully spun off into an independent, in this case not-for-profit, community service organization.

The organization had its start in 1985, when a College of Veterinary Medicine professor turned to colleague R.K. Anderson, then director of CEN/SHARE, with a family problem. The professor's niece, Wendy Benson, was disabled by a chronic disease. He knew about some of the companion pet studies being done through CEN/SHARE, and wondered if it would be possible to train a dog to be a companion and helper to Wendy.

CEN/SHARE thought it would. Anderson and Ruth Foster, both involved in the group's research on service dogs, enlisted the services of Eileen Bohn, then assistant director of training at Twin Cities Obedience Training Club, to help set up a training program. Foster helped Bohn understand the special needs of service animals and their owners. Bohn found a golden retriever at the Hennepin County Humane Society and trained him and Wendy. Before long, Jenny Peterson, a quadriplegic and now president of Helping Paws' board of directors, had also asked for a dog—and so a pilot program was launched. (Peterson's dog, Alpha, is now 10 years old, and still working.) To date, the group has placed 15 dogs for service; only one has been retired, because of bad hips.

The organization, which became an autonomous not-for-profit in 1988, supports its \$30,000 annual budget with money from individuals and small businesses, foundations, and the Minneapolis Clinic of Neurology. Part-time development director Dawn Glaser-Falk and program director Eileen Bohn are Helping Paws' only paid staff. Volunteers take care of the rest.

And the rest is quite a lot. Volunteer foster families provide homes for the pups—which are usually about seven weeks old when they begin training—and help to train the dogs, taking them to weekly classes and working with them at home for the year and a half to two years before placement. Besides the time, energy, and love foster families give, most foster families also make a financial commitment. Although Helping Paws provides the dogs with food, special medical exams for eyes, hips, and elbows, heartworm treatment, and equipment like collars, leashes, and crates, the foster families often cover routine veterinary visits, immunizations, and other expenses. The trainers, too, are volunteers.

About 16 dogs are now in various stages of training, and 6 will be put into service this summer. There are usually about 30 people with disabilities on a waiting list. An applicant must be at least 18 years old, a Minnesota resident, have a physical disability, and be striving to live more independently. Typically, the wait for a dog is 18 months to three years, depending on the characteristics of both people on the list and the dogs as they complete their training.

Matching dogs to recipients is an important task that Bohn supervises. She first does her own gut-reaction match, then looks to Helping Paws' computer program (developed by Bonnie Berg at the Assistance Dog Institute in California), which rates the social styles of people and dogs. (According to Glaser-Falk, Bohn's intuitive picks and the computer's are usually the same.) From there, the recipient gets to meet and work with several dogs before a final match is made.

Recipients must go through a four-session course covering such subjects as canine behavior, health issues, and living with a dog. The transfer process involves three weeks of more intense training; handling the dog and using commands (the dog learns between 60 and 80 commands), grooming issues, stubbornness in the dog, problems that may arise when working in public. For the first week and a half, the dog stays in the recipient's home and returns to the foster family after class. For the last half of its training, the canine stays with its new owner around the clock.

Helping Paws provides ongoing support to owners, including an emergency medical fund, assistance with behavioral problems, vacation/hospitalization foster care, and volunteers to exercise the dog when the owner's friends or families are unavailable. In addition, the organization maintains ownership during the service years, so the dogs are always covered by insurance. If the recipient dies, or must give up the dog, Helping Paws has the first right of refusal. By the end of its training, a dog is valued at between \$5,000 and \$7,000.

Most of the dogs have come to the program through donations; the group has only purchased a few. It started a breeding program last year, however, and the first litter, born in February, is now in training.

People hear about the program from demonstrations by volunteers at schools and community meetings, some media exposure, and especially through word of mouth. The Helping Paws logo now appears on the side of every bag of Canine Prime dog food—Canine Prime has elected to sponsor Helping Paws for the next year. "But," says Glaser-Falk, "our volunteers, the foster families, and the recipients rolling down the street or working with their dogs are all ambassadors for Helping Paws."—MM





PHOTO: TOM FOLEY

# Mission *Impossible?*

**Provost Brody's tall order**

by Mary Shafer

It's 7:35 on a cool Tuesday morning in April when William Brody takes the last seat at the table in the College of Pharmacy conference room. The dozen or so people already here at his request are an eclectic cross section of academic life: the tenured professor, the administrator, the dean, the scientist, the budget officer, the board member. This morning, the sense of humor that often characterizes Brody is absent, and there's little doubt that this is serious business. In measured tones, he outlines the group's charge.

"We need to make a fundamental shift in how we're organized," he says. "We have to pull together our limited resources in a way that will serve our customers. This is the major strategic issue we face, and the status quo is not an alternative. We have to organize by programs. You need to make the case for change, communicate it, and figure out the process and the criteria to do it."

Brody doesn't stay for the rest of the meeting. He says, "Good luck," as he leaves, having bestowed on this group—christened the interdisciplinary program task force—the charge to change the way things have been for the past century or so. This seems to be Brody's style: to provide broad parameters, then get out of the way and let people do their work. In this case, the parameters are almost boundless. But is the goal attainable?

William Brody is the first provost of what is now called the Academic Health Center, that part of the campus sometimes described—with or without sympathy, depending on which side you're on—as "the other side of Washington Avenue." The phrase is as symbolic as it is geographic. With the University hospital, Medical School, and five other professional health sciences units (nursing, pharmacy, dentistry, public health, and veterinary medicine), the health center has always lived in an

uneasy relationship with the rest of the system. With 14,000 staff and 6,000 students, this is the place that captures the big grants (almost half of all those awarded to the University), generates a lot of revenue (from patient-care services), and has earned significant prestige for medical research. It's also the place that has captured more than its share of unwelcome publicity in the past three years.

Those public troubles began in May 1992, when the *Twin Cities Star Tribune* published a story on physician David Knighton, a University surgeon who had invented a wound-healing salve called Procuren, which had brought him considerable financial and professional success. The newspaper story was critical of Knighton and what the reporter thought looked like a conflict between self-interest and professional allegiance to the University. The Knighton story, however, was practically a minor sidebar compared to what followed. There were stories about suspect business ventures, abuses in the physicians' private-practice system, and then, the centerpiece: a charge that the University's ALG program, under the leadership of renowned transplant surgeon John Najarian, had operated in defiance of the law.

In swift order, Najarian resigned as surgery department head, his two bosses—the Medical School dean and the vice president for health sciences—resigned as well, and by June 1993, President Hasselmo had recruited a consultant to try to get things back on track. Former Medtronic CEO

**"He was ideal from the beginning. He's smart, he's a risk taker, he's got a business background, and he understands the market. The only tough thing was convincing him to come here."**

Winston Wallin—that outside agent—was far less concerned with the publicized struggles than with the underlying structural issues that had caused them and with the external forces that had made the health center's way of doing business obsolete.

"The problems you heard about were mostly symptomatic of more underlying cultural and structural problems," Wallin says. "What was really critical were two main forces: There wasn't a proper structure to ensure oversight, and health reform was rapidly locking the University out of the marketplace and the patients it needed to educate students and perform research. We had to figure out a workable structure that would get us back in, and fast."

Wallin said the only way would be to become more market driven, less bureaucratic, and more autonomous. Enter the idea of a provost, who would function more like a CEO than had the health sciences vice presidents before him. And so, enter Bill Brody, whom Wallin believes was the clear-cut right choice.

"He was ideal from the beginning," Wallin says. "He's smart, he's a risk taker, he's got a business background, and he understands the market. The only tough thing was convincing him to come here."

It wasn't an easy sell. "At first I thought it wasn't much of a deal," he says, "and not because of the headlines. You've got to understand that those kinds of headlines are showing up all over the

country. Harvard and Johns Hopkins, for example, are both dealing with cases in which staff have been charged with fraud and system abuse. The University of Minnesota is not unique in that. What is unique is that this is the most advanced health care market in the country. We may not have kept our heads in the sand longer than anyone else, but our market changed faster. Now we have to move faster to create a structure that will make us viable in that market. We have to literally create the model for the rest of the nation. That's the challenge. That's why I came."

At 51, Brody seems tantalizingly to have it all. For the medical community, there is the Stanford M.D. and the tenured professorship at Johns Hopkins. For any doubting academics, there's the electrical engineering Ph.D. from Stanford as well. For those concerned with issues of business and industry, there's a successful business entrepreneurship. There's even a Minnesota connection in the cardiovascular surgery residency Brody did at Stanford under Minnesota legend Norman Shumway. Beyond that, there's arguably the most important criterion: a self-acknowledged and unwavering commitment to ethical conduct.

"We need to set very high standards and be very effective in how we deal with people who don't adhere to those standards," Brody says, "but the standards have to be clear...The controls just haven't been there [in academia] in the same way they've been in business."

The challenge as he sees it, is to institute business-like controls while retaining the fundamental academic mission.

"They say, 'In the land of the blind, the one-eyed man is king,' so if I have some business background, people may think I know something," he says. "But universities aren't businesses. After all, as soon as you say, 'business,' people say, 'Well, we have to look at the bottom line,' to which I say, 'If we do that we'll conclude that we ought to close the University.' What I do think is that there's a logical way to do certain things. It's really about logic and predictable behavior more than about business."

Brody agrees with Wallin that the challenges to the health center are not so much the ones that have made headlines, even though when John Najarian goes on trial this fall, charged with 18 counts of fraud and conspiracy related to ALG, there will undoubtedly be fallout from headlines for weeks. "But those problems will pass," he said to his constituents in his State of the Health Center speech. "It's sort of like a teenager going through a bad case of acne. It's hard to convince someone that it will pass, but it almost always does pass. What is of greater concern to me is that we, the faculty and staff of the Academic Health Center, seize this opportunity and make the changes required to assure our future success."

If Brody is successful, he may well achieve what seemed to be the University's original aim when it pulled the health sciences together under a vice president in 1970. In those days, says Neal Gault, former Medical School dean and a member of the planning team, it was becoming clear that the direction of health care education was interdisciplinary. Increasingly, theorists said, health care would be delivered by teams whose members would have to know about each other's disciplines. So, with legislative blessing to construct new buildings, and a mandate from the futurists to integrate disciplines, the health sciences were brought together both conceptually and geographically.

But the hoped-for integration was only partly successful—in the form of some programs, some interdisciplinary education, and some isolated grant applications. Departmental structures and unit loyalty remained, in large part because that's how the money was allocated. And this is the thrust of Brody's vision: Programs and resources must be aligned by cost centers and incentives provided for interdisciplinary efforts. In his view, there is really no choice. It's what managed-care purchasers are buying, it's what government agencies are funding, and it's what health care employers are expecting.

On September 1, Brody will have been at the University for a year. As with any leader, he has generated some lore: There's the indefatigable energy that has generated e-mail postings at 2:30 a.m. There's the penchant for technology that makes his presentations a multimedia delight. And there's the bias for a good metaphor to get his point across—as in his criticism of Minnesota Nice.

"Everybody smiles and says, 'OK,' then they walk out in the hall and say very bad things about you behind your back. If you go to Intel or Microsoft, you think you're in the Gaza Strip. The employees are there arguing and yelling and screaming. But it's just business. It's not personal."

There are also critics. His appointment of Frank Cerra as Medical School dean did not go without reproach by those who lobbied for an external candidate to fill the spot. There are those who say things aren't happening fast enough. Or that they're happening too fast—that Brody is not sensitive enough to the culture, and is expecting it to change too fast. He's blunt when he needs to be, a quality that makes some people wince. "Well, yes," says one wincer, "I know what he says is true, but couldn't he temper it a little? Frame it a little differently?"

Meanwhile, there's the traditionally tenuous relationship with the rest of the University, which Brody is not sure can move fast enough to keep up with the changes the health center needs to make, even though he believes customer-driven service and resource allocation by cost centers will eventually be University-wide necessities. What drives him now is the vision for an academic health center driven by excellence and managed efficiently by program. It's also not been done yet—by any university.

"Many people say it can't be done," Brody says. "But I consider myself an optimist, and I always remember Dr. Shumway [Norman Shumway, renowned transplant pioneer and retired cardiovascular surgeon, who trained at the University of Minnesota] saying that you should never let yourself be persuaded by what others think is impossible. There's obviously a lot of risk, but if we're successful, we'll be a model for the rest of the nation." ■

**A**lthough no one's conducted a formal search in the matter, it seems safe to say that Robert Jones, distinguished professor of agronomy and plant physiology, is the only tenured faculty member at the University to have appeared—as an entertainer—on "The Arsenio Hall Show."

Jones was on the once-popular late night program as part of Sounds of Blackness, a gospel group that has, among other distinctions, won a Grammy. Jones, a tenor who has worked with other musical groups, became involved with the organization in 1980, two years after arriving in Minnesota as a new assistant professor.

"I did it out a sense of isolation, even boredom with my social life," he explains. "I had been here a while and didn't know very many blacks at work."

As with most things in his life, Jones devotes considerable time and energy to Sounds of Blackness, which performs what he calls "the whole gamut of African-American music" from African chants to field hollers (chants slaves sang while working in the fields), gospel, R&B, and more. The group rehearses twice a week, a minimum of six hours a week—more when performances are pending. He is also a past president, vice president, road manager, business manager, and continues to serve on the organization's board of directors.

Coupled with his work as a researcher, teacher, part-time administrator, and member of the University's faculty governance system, that may sound like a lot of extra work. But then, Jones has never shown an aversion to hard work. Which is good, because despite an obvious aptitude for science and research, without a willingness to work hard, Jones probably would never have overcome the obstacles once routinely encountered by any intelligent, ambitious black person in this country.



PHOTO: TOM FOLEY



Jones was born in 1951 in Dawson, in southwestern Georgia—peanut country. And although the Civil Rights act was only 13 years in the future, things in that corner of America hadn't changed much since the end of Reconstruction.

Jim Crow was strictly enforced. Economic and educational opportunities for blacks were limited and obtainable only at a much higher price than paid by whites. Roadblocks to self-improvement and advancement abounded, affronts to self-respect abundant, from separate-but-unequal schooling to signs designating public facilities "white only."

For most of his childhood his father sharecropped peanuts for a local white farmer named Jack Lang. He grew up, he recalls, in an environment where everyone in the family, including the younger children, was expected to help out. Coming home from school midafternoon, he and his sister changed into cotton sack clothes and went out and helped their parents in the fields until dinnertime.

Yet by the time he was seven, he says he knew what he wanted to do—become a scientist. He remembers staring at the leaves on the peanut plants, wondering what was going on inside. At the local black high school, his vocational agricultural teacher, Walter Stallworth, was the first of several mentors who helped channel this early interest into agricultural research.

"His desire for education drew me closer and closer to him at that time," recalls Stallworth, now retired but still living in Dawson, where he helped nurture the ambitions of other bright black youths. "I kept on leaning on him and telling him what would be good for him in life."

"He was the male teacher in my school who everyone respected, from the well-behaved students to the bullies," Jones says. Among other things, Stallworth got Jones and a small cohort of four or five other students he felt similarly gifted and driven into Future Farmers of America and other activities designed to quicken their interest.

Stallworth's encouragement went beyond admonitions and advice, to the ultimate in self-fulfilling positive reinforcement. Long before Jones took his Ph.D., his old high school teacher was already referring to him—only half in jest—as "Dr. Jones."

"As I stood in front of the audience," he says with a smile, "I could not help thinking about how this was the same institution that thought I needed to do remedial work before I could be admitted to it as a grad student."

All during this time, meanwhile, he was working at one, two, and sometimes three jobs to support his education and—after marrying his freshman year—his wife and son.

"I essentially paid for my own education," he says. "My parents were very supportive and proud of what I was doing and very disappointed they couldn't do more to help. But I'd been fairly independent for a long time. My family stopped buying me clothes when I was 14 because by then I was earning enough money to take care of myself."

In college, Jones first worked for a rubber manufacturing company where he pulled molds—removing giant molds from an industrial oven, emptying them and then putting rubber into the molds and shoving them into the oven again. ("I still have stress marks to show for doing that at such an early age," he says.) Then Professor Blount got him a lab job. He also operated his own laundry pick-up and delivery service, and worked on his parent's farm. In his junior year, after his brother was hired as a meat cutter by Piggly Wiggly, he got a job doing the same thing.

He continued to work while he earned his master's. In fact, it wasn't until he won a fellowship at the University of Missouri, where he took his doctorate, that he was able to study and not work at an outside job.

"It definitely enhanced my drive and impetus to get a good education," he says of the years he spent laboring to pay for his schooling.

"As soon as I walked into the hotel where the agronomy meeting was taking place, I was greeted by several people from the department in Minnesota," he recalls. Soon he received a formal invitation to apply for the open position.

Wearing a wool suit he'd just purchased to keep warm, he arrived in Minnesota early in December and met with the search committee. His last interview was with the then-head of the department, Herbert Johnson. Determined to be accepted on his merits rather than his race, Jones declared point blank that if the University were interested in him because he was black, he was not interested in Minnesota. He remembers Johnson leaning back in his chair so that he could look out over the research fields on the St. Paul campus, lighting up a cigar, then leaning forward on the desk.

"He said, 'Dr. Jones, let me tell you one thing. This is the last place you will get anything just because you're black.'" Jones says. "That was the basis of our understanding, and it is why I came here."

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Unusual for a new faculty member—and even more so for one who has just finished his doctorate—Jones came to Minnesota faced with the task of setting up his own brand-new research project, hiring staff, purchasing equipment, securing grants, and designing a program. For the past 15 years he and his project team have been trying to figure out the mechanism by which heat stress disrupts the development of cereal crops, especially corn.

Since then Jones and his colleagues have discovered that corn plants are most vulnerable to heat stress just after pollination. Even short periods of heat stress can significantly reduce yields—a matter of vital concern in hot, semiarid regions and of growing concern at a time when global temperatures are

# TRUE GRIT

ROBERT JONES HAS MADE A NAME FOR HIMSELF THE OLD-FASHIONED WAY

BY RICHARD BRODERICK

From high school, Jones went on to one of what are known as historically black colleges, Fort Valley State, where there were especially strong programs in agricultural education and in plant and soil science. There he encountered his next teacher/mentor, Malcomb Blount.

"Professor Blount had a more heavy-handed approach to mentoring," Jones explains. "He had a set of goals, things you were going to do and you didn't have any choice in the matter. That would be unique in today's climate."

Jones completed his undergraduate degree in agronomy. Both the University of Georgia and University of Florida recruited him for their masters programs. But even though Jacksonville was closer to Dawson than Athens, he decided on Georgia for reasons that speak volumes about that particular time and place.

"Even though I graduated from Fort Valley with a 3.5 grade-point-average, Florida insisted that I go through a year of remedial coursework before actual admission," he says. Both for reasons of pride and of urgency, Jones went to Georgia, where he completed his master's in crop physiology in just 18 months. A few months ago he had reason to revisit Florida's slight when he was invited to lecture in Jacksonville.

Jones was accepted by numerous Ph.D. programs, but settled on the University of Missouri because C. Jerry Nelson, a leading crop physiologist, was there. He credits Nelson, who received both his undergraduate and master's degrees from the University of Minnesota, with teaching him "how to do research."

Jones worked as a research assistant helping Nelson study mitochondrial respiration in grain cells. "The key things that came through during our time together was his ability to work with people and his ability to see things in depth, to synthesize and analyze data and to construct good experiments," says Nelson.

In the fall of 1977, about the time he was finishing up his doctorate, Jones heard about a job opening at Minnesota, but did not think he was a likely candidate for the position. That changed, however, when a Minnesota faculty member, Kent Crookston—now the head of the Department of Agronomy and Plant Physiology—came to a symposium in Missouri and encouraged Jones to apply for the opening.

Still, he did not apply. But then, at a meeting of the American Society of Agronomy at which he gave a talk about his Ph.D. work, Jones discovered that Crookston had been talking him up to his University colleagues, several of whom were also attending the agronomy meeting.

expected to rise several degrees in the next century owing to the Greenhouse Effect.

More recently, Jones has uncovered the reason why that period is so critical in grain development.

"Corn kernels make high concentrations of hormones called cytokinins," he explains. "We've known for a long time that this compound is very important in cell division."

"Under heat stress during the reproductive stage of the plant, there is a 70 percent to 80 percent reduction of cytokinins in the kernels." Lower levels of cytokinins mean a lower rate of cell division, hence a lower yield.

"Ultimately," he says, "our long-term goal is to use genetic engineering techniques to help cereal crops withstand higher temperature stress. We may then be able to grow crops in places where it is now too hot even though there is enough water."

*continued on page 14*



PHOTO: TOM FOLEY

# Into Africa

For Craig Packer and Anne Pusey, chimps, baboons, and lions are all part of family life

by Deane Morrison

Back in 1972, Craig Packer had just graduated from Stanford University and was looking forward to taking his place in medical school. Little did he know he would give it up on account of a baboon.

It happened because Packer decided to first spend six months in Africa studying baboon behavior under famed primatologist Jane Goodall. But Africa didn't agree with him. He hated the bugs, the snakes, and the boredom of sitting around "in the middle of nowhere." Then, one morning near the end of his stay, he noticed a young male baboon who seemed hell-bent on leaving his home troop—the extended family of baboons that had raised him and accepted him without question—for a neighboring troop whose resident males did everything in their power to keep him out.

"The young male was up a tree watching the other troop," Packer recalls. "He then got down and tried to get closer to it. The males chased him, and he got bitten. He tried again and again, and the same thing happened."

The young male struck a chord with Packer. He describes the moment in his recent book *Into Africa*:

*Here was a male at an equivalent age to myself about to make the most amazing journey in his life—he might only move a quarter mile from home, but he was about to leave all his childhood friends and family and set off into the unknown.*

*But why? Why leave home? Why not just stay with mom and the family?*

The burning need to answer that question hooked Packer. He asked Goodall to extend his stay by three months, gave up his place in medical school, and embarked on a career in animal behavior. "I had to know why that male left home," he explains. "I had to know why he would put himself through that kind of abuse trying to get into another troop."

More than 20 years later, Packer hasn't stopped asking questions about the behavior of baboons and other animals. Nor has Anne Pusey, Packer's wife and fellow professor of ecology, evolution, and behavior, whose career includes studies of chimpanzees with Goodall. Together, Packer and Pusey have carved out a name for themselves for their work on African lions, but Pusey's work on chimpanzees and Packer's on baboons have also contributed to our understanding of how our primate cousins live and why they behave the way they do.

The road to Africa opened several years earlier for Pusey than for Packer. She grew up near the spires of Oxford University, where her father was a zoologist. Through him she met Oxford zoologist Nikolaas Tinbergen, who would win the 1973 Nobel Prize in Medicine and Physiology for his explanations of the evolutionary origins of animal behavior. While still in high school she arranged to spend a summer studying seagulls at Tinbergen's field station in Cumberland, on the west coast of England. Her job was to walk with scientists to an observation blind and then walk back alone, a ruse to fool the gulls into concluding the blind was empty because somebody had left it. That would allow the birds to go on about their business without fear that a human was nearby.

"I thought that was the life," says Pusey. "Tinbergen was an inspiring man. We would get up at 4 a.m. and see the beach covered with the tracks of foxes and other animals. Walking along, Tinbergen would read the tracks and tell us the story of what had happened in the night."

As an undergraduate at Oxford, Pusey became interested in how human behavior develops. Eager to apply the methods of Tinbergen and other ethologists to children, she wrote to Robert Hinde, Goodall's graduate adviser at Cambridge. By happy coincidence, Goodall had asked Hinde to find somebody to study mother-infant interactions among chimps at the Gombe Stream reserve, Goodall's study area on the shore of Lake Tanganyika in Tanzania. The next thing she knew, Pusey got a call from Hugo von Lawick, Goodall's photographer husband. Meeting with Goodall and Hinde, Pusey got the nod to start at Gombe after obtaining her undergraduate degree. In 1972, degree in hand, she headed to Gombe for a two-year stay.

Living among the chimps, Pusey observed a social structure quite different from that of humans, and, for that matter, baboons. Among baboons, females form the core of the group while the males come and go. "But in chimps, it's the other way around," she says. "Males form stable groups based on kinship. But females are less social, and I found that adolescent females often forsake one 'community' for another."

While she was studying chimp mothers and infants, the male kin groups displayed a new and disturbing behavior.

"I was there when two groups of male chimps made war," Pusey says. "These were chimps that had been friendly in the past, but a rivalry developed between them. Each group would patrol the edge of their range, and if they encountered a single male from the other group, the chimps would cooperate to hold him down and bite him."

Several researchers witnessed the actual murders of chimps at the hands of their fellows. The incidents amazed animal behaviorists around the world because now it was clear that humankind's closest relatives could plan and execute violence in a way previously thought unique to *Homo sapiens*.

At Gombe, Pusey met Packer, the premed student. They shared the green slopes with several other students from America, England, Germany, and the Netherlands, each of whom had a separate metal hut with a concrete floor. African cooks provided sustenance, and Lake Tanganyika made a convenient bathtub. Same life for everybody, but the Englishwoman and the American man reacted differently.

While Packer talks about feeling ill—"and I mean ill"—during much of his first stint with the baboons, Pusey enthusiastically recalls rising before dawn and seeking out the places chimps had nested for the night so she could watch them get up. But both enjoyed the hilly country, which she says made everyone "very fit."

After meeting at Gombe, Packer and Pusey crisscrossed for their graduate degrees, he enrolling at the University of Sussex in England and she at Stanford. They met again at Gombe when they returned to complete their thesis research. In her work, Pusey observed how relations between young chimps and their mothers changed as the youngsters grew. At puberty, young males would leave their mothers to join the adult males. Females started leaving when they began mating, and most eventually joined other communities. For his part, Packer found that male baboons leave their home troops in search of sex. The young male who climbed the tree to look at a neighboring troop was interested in the females there. Unexcited by their sisters and cousins, male baboons go all out to get "in" with another troop and so gain access to sex partners who aren't their close relatives.

In 1975, Packer and Pusey both contracted hookworm and left Gombe for what they believed would be a short recuperative holiday. They spent the 19th of May in a hotel on the Kenyan coast, taking their worm medicine. Had they been at Gombe, they would have been kidnapped along with the four students—three American, one Dutch—seized that night by Zairian guerrillas who had paddled across Lake Tanganyika in search of rich hostages to help finance their war against the Zairian government.

The students were released unharmed, but the episode put an end to white researchers at Gombe. Packer and Pusey were left to write up their theses with what data they already had and look elsewhere for study subjects. In 1977, they completed their doctoral degrees, married, and received a two-year grant from the Guggenheim Foundation to study Japanese snow monkeys. But then came the revolution that overthrew Ethiopian Emperor Haile Selassie, and all of a sudden a large number of displaced Japanese researchers were back in Japan, reclaiming the databases that Packer and Pusey had hoped to use for their monkey study. So they again changed gears and looked to the lions of Africa's vast Serengeti Plains.

Thanks to the work of George Schaller and others, Packer and Pusey gained 10 years' worth of data on individual lions when they began their studies. Guggenheim agreed to a second year of support, and in 1978 they headed for the Serengeti, home to about 3,000 lions, and the floor of the nearby Ngorongoro Crater, where another 50 to 100 live.

Back then, the plains overflowed with lions and their prey, the zebras, wildebeest, water buffalo, and other grazing animals. Packer and Pusey became expert at finding lions, despite their very catlike habit of spending 19 hours a day sleeping or otherwise lying around.

"For the first five years, we had no radio collars, so we had to spend most of our time just searching for the lions," says Pusey.

Standing on the roof of their Land Rover with binoculars, they scanned the tawny-colored landscape for the tawny-colored king of beasts. Before long, they could spot a lion foot sticking up from the grass a mile away. After a sighting, they often had to make loud noises to get the lions to raise their heads so they could identify individuals from the pattern of whisker spots on their muzzles. They watched as the lions played out the dramas of their lives, alternately cooperating with and attacking each other according to unseen laws of evolution and the lions' personal histories.



A brief biography of lions: prides are maintained by females, all of whom are blood relatives. At any given time, several males also live in the pride, and they father the cubs. Young males leave the pride at maturity and wander the plains in search of other nomads that can help them invade a pride. Invasions wreak violence on a pride as the invaders evict the resident males and kill any cubs they can find, which frees up the females to mate with the new males and bear their cubs. Once ensconced in a pride, the males will defend it against male invaders until they grow too old or weak and are themselves deposed. Two years is about the average tenure for an adult male in a pride.

By human standards, it's a horrifying life. Not even another lion wants to get attacked by an adult lion, but it happens all the time. Yet lions cooperate to a degree unheard of among cats. Males help each other on the open plains as they search for a pride to take over, and females drive off unwelcome females and nurse each other's cubs. Lions hunt mostly at night, a distinct annoyance to human observers.

Not surprisingly, roaring plays a central role in lion communication. When males approach an unfamiliar pride, both sides can gauge the strength of the opposition by the character and number of roars (which is to say, lions can count). Neither males nor females tolerate the presence of same-sex strangers, and both become very excited if a stranger roars from inside their territory. Packer and Pusey studied this behavior in detail by recording the roars of several lions and then playing them back over a loudspeaker to other lions. Packer describes the scene in *Into Africa*:

*Whenever we played the recorded roar of a nomadic male to a group of resident males, the residents instantly became alert, listening intently. Once the recording ended, they would quickly rise and walk determinedly toward the speaker, ready to evict the invader... Just to make sure the lions were really coming to attack the invader, I arranged to have a stuffed lion sent from an English museum. We hid the dummy behind a bush just beyond the speaker and broadcast a roar. As soon as the lions discovered the dummy, they stalked it, approaching cautiously from behind, inching forward ever so slowly, before suddenly leaping up and attacking it. After they had ripped out a mouthful of tanned hide and styrofoam they quickly lost interest and, I have to admit, seemed slightly embarrassed.*

But if the females of a pride are sisters and cousins who have grown up together, who are the male comrades-in-arms that join forces to take over a pride? They are sometimes brothers or cousins, sometimes just "friends," says Pusey. Sometimes two will invade a pride, but the number may be as high as nine. Packer and Pusey have witnessed many takeovers, and noticed that whether the invaders were related or not, they treated one another with the same displays of affection and solidarity.

Pusey describes the exploits and fate of one nonrelated pair: "They stayed very close together. They'd

lick each other and lie on top of each other. When they approached a pride, they were very nervous, standing shoulder-to-shoulder. They got to mate with the females, but the quartet of resident males was only away temporarily. They came back a few days later, and we found one of the pair mortally wounded the following week."

Male lions that successfully take over prides in pairs or groups of three will all get to mate. But in a large group, some males usually lose out, says Pusey. So why should any male join a large group? The mystery was recently solved by DNA fingerprinting studies, which revealed that large groups of males comprised only relatives, she says. So any male that doesn't get to mate at least passes on some of his genes by helping out his close genetic relatives.

What separates the lotharios from the losers in the lion world is still a mystery, say the researchers. "Several of the large coalitions show obvious dominance hierarchies, and the top males father most of the cubs," says Pusey. "But relations are equitable in most coalitions, and the source of their mating disparities remains elusive."

"The more we study these animals, the more surprising we find them," says Packer. "We never really believed that they could count, for example. And even the smallest details might turn out to be important."

Two years ago, Packer and Pusey reported in the journal *Nature* that the symmetry of the whisker spots on a lion's face can predict its life expectancy. The more symmetrical the pattern, the longer a male lion will live, a fact that may reflect the greater genetic quality of symmetrical males.



After five years of lion studies, Packer and Pusey came to the University as assistant professors in 1983. Their daughter, Catherine, was born in 1984, and a son, Jonathan, came along in 1987. Despite the added demands, both kept up their travels to Africa for the next five years. (Jonathan spent much of his prenatal life in Africa, and Pusey made a special trip to the USA to deliver him.) They set up a routine in which Packer would drive off to watch the Serengeti lions, Pusey would follow those that lived near the house where they stayed, and Tanzanian nannies took care of the children. The family took weeklong trips to the Crater to study the lions there. When Catherine began school in 1989, Pusey suspended her travels so the children could have a parent at home.

Over the last four years, Packer and Pusey have become custodians of Jane Goodall's records of the Gombe chimps, a gold mine of information on our closest relatives gathered over 35 years of study. Goodall, says Pusey, was especially "keen" to have the University of Minnesota take the nearly 20 years of data she had been keeping at her home in Dar es Salaam, Tanzania, where the humidity runs high and the security leaves something to be desired.

Filling an entire room in the Ecology Building, the records contain day-by-day accounts of what individuals do and who has the most mates, subordinates, offspring, and other measures of social success. Once that dataset has been entered in computers, researchers can sift through it to find out, for example, whether the females with the choicest home ranges have the most infants or what characteristics or behaviors can turn a subordinate male into a dominant one.

*continued on page 14*

Psychotherapists have always been moral consultants, William Doherty says, and for them to claim to be morally neutral is to deny reality and evade responsibility. In a new book, Doherty urges therapists to be more thoughtful and intentional about the moral role they play.

Doherty, a professor of family social science with a part-time private practice, remembers the day he changed his way of thinking about the moral dimension of his work as a therapist. He tells the story in *Soul Searching: Why Psychotherapy Must Promote Moral Responsibility*.

He was meeting with a client he calls Bruce, whose wife had just ended their marriage. In his pain, Bruce kept saying that it might be better for him to cut himself off from his two children. "Maybe I should just pack up and move far away," he said. A few years earlier Bruce had lost contact with a child he had fathered with a woman he did not marry.

"I felt dismayed when he talked about abandoning his children," Doherty says, but in a traditional therapeutic approach the most challenging statements he could offer would be something like, "I wonder if you have considered the regret you will feel if you take yourself out of your children's lives," or "You may not be in a healthy enough frame of mind right now to make long-term decisions."

Nothing is wrong with these statements, Doherty says, and he used them with Bruce, but they seemed inadequate. "So I also decided to do something decidedly nontraditional—I challenged him in explicitly moral terms. After listening at length to his pain over the end of his marriage, I gently but forcefully told him that I was concerned that his children would be damaged if he abandoned them."

Bruce was responsive to talking about his decision in these terms, and in the end he remained a committed father to his daughter and son. Later he reconnected with the child from his previous relationship.

When Doherty describes the case to his colleagues, some of them say he could have achieved the same result by appealing to Bruce's self-interest. "I did, in fact, use these appeals, because I think they are valid," he says. "When a parent abandons a child it is not only the child who is damaged."



PHOTO: TOM FOLEY

by Maureen Smith

But in dealing with a moral decision, Doherty has come to believe, "it is generally a mistake to appeal only to a client's self-interest, even if that appeal 'works,' because the ethic of personal gain that we thus promote erodes the quality of our clients' lives and ultimately the quality of community life."



We have all heard people say, and maybe we have said these words ourselves: "I have to take care of myself." True and right as that sentiment is, it has been used to justify all kinds of selfish choices. People who are in therapy may credit the idea, rightly or wrongly, to their therapists.

American culture has always valued individualism, Doherty says, but in the past it was more balanced with a family and community orientation. Increasingly, people are putting themselves first to an alarming extreme. Psychotherapy is not to blame, he says, but it can be viewed as one of a number of factors that have fostered a culture of individualism.

In the 1985 book *Habits of the Heart* by Robert Bellah and others, the authors argue that psychotherapists unwittingly promote an ethic of "expressive individualism," which is the cousin of "utilitarian individualism."

# Soul

Utilitarian individualism is the idea that when individuals pursue their private economic self-interest, society as a whole benefits. "In expressive individualism, the same logic holds for emotional well-being," Doherty says. "We should each focus on ourselves because personal psychological well-being inevitably leads to family and community well-being."

"At its crudest, expressive individualism is a psychological form of trickle-down economics in which responsibilities to others are assumed inevitably to result from responsibility to self."

How have therapists promoted this ethic? For one thing, he says, they have been trained to avoid "should"-ing their clients, to stay away from the language of "ought." The only authentic life, according to this school of thought, is one based on doing what "I want."

The trouble with all of this, Doherty says, is that it doesn't work. Justifying their choices with "appeals to personal entitlement, doing one's own thing, or victimization," people are running away from personal responsibility and moral accountability.

Nor are these choices making people happy. Depression is epidemic in our culture. With each generation, Doherty says, the incidence of depression has increased. "That's true throughout the whole industrialized world. I'm convinced it's connected with the breakdown of family and community. We do best in committed relationships, families and family substitutes, close-knit communities."





For the first six decades or so of psychotherapy's history, Doherty says, most clients came to therapy with a clear but rigid sense of responsibility. Therapists could then see their role as setting people free from guilt, inhibition, and strict rules of conventional morality.

At the same time, the moral rules could be counted on as the foundation upon which the client could rebuild a more authentic life. Psychotherapists were borrowing on what public policy scholar James Q. Wilson calls the "moral capital" of past decades and centuries.

"After 100 years, the moral capital is depleted and therapists no longer need to see themselves primarily as agents of liberation from an ethic of blind self-sacrifice and inauthenticity," Doherty says. "At the cultural level, that battle has been largely won, but the fruits of victory are not as sweet as many of us imagined."

By the 1990s, he says, "whatever served as the moral center of mainstream culture seems not to be holding."

Doherty stresses that he is not calling for a return to old values that were oppressive to many people and especially to women. Fear of this kind of regression, and of conservative policies that seem punitive, have made liberals uncomfortable with talking about moral responsibility.

Does the moral concern for the children trump all other concerns? "Certainly not. But a decision to divorce is a thoroughgoing moral concern. Psychological well-being involves some sense of moral accountability."

In the wider culture "the parent-child relationship is now beginning to take on aspects of the same kind of fragility" that has already marked the marriage relationship, he says. "We've talked for a long time about runaway kids. Now people are talking about throwaway kids."

Besides marriage and parenthood, Doherty is concerned about an eroding concern for community service. "By focusing the energy of themselves and their clients on their personal psychological needs, therapists in some cases have been denigrating and pathologizing commitments to community," he says.

For one example, he tells of a friend's experience. In the early 1970s, the man decided to go to Ireland as a volunteer to assist children in Belfast. He mentioned it to his therapist. What you're really doing is not going to help the children in Belfast, the therapist told him. You're going to resolve your own family problems.

"My friend went but he felt neurotic. His community service ethic was not honored. It was pathologized."

may not consider how many choices are available to them. In his salon, a therapist talked about a case in which she had a moral concern about the choice a couple was making.

"What was keeping her from saying anything was that all she could think of was to say nothing or say she disapproved," Doherty says. "Here's a very sophisticated therapist with a wide repertoire of therapeutic techniques for almost every situation, and when it came to the moral area she thought she had only two choices."

In between silence and voicing disapproval, the therapist might raise a question or express a concern gently, he says. "These are punctuated moments in the broader therapeutic conversation. You have to develop a caring relationship and have a sense of timing. You can't bring up a moral concern until you have a relationship with people and they know you care and are on their side."

Another key is how the therapist responds when the client disagrees. Doherty recalls working with a couple who were encouraging their children to lie. "I said I was concerned about this, about what it would do to their kids' character. Do they calculate whether to tell the truth instead of having it as a baseline to tell the truth except in unusual circumstances?"

"They didn't buy it. OK, we moved on. It was not a big rift in our relationship. I'm a consultant. A consultant has to respond gracefully when people don't accept the consultation."

*Soul Searching* came out March 8, Doherty's 50th birthday, and the early response to it has been "very positive," he says. The publisher is Basic Books, a division of HarperCollins. Some of the testimonials on the back of the book jacket are worth quoting.

From Robert Bellah, coauthor of *Habits of the Heart* and *The Good Society*: "Beautifully written, intensely readable, this book marks the coming of age of psychotherapy. A 'must read.'"

From Amitai Etzioni, author of *The Spirit of Community*: "Anybody who has been in psychotherapy, knows someone who has, or cares about what this profession does, simply must read this book."

From Michael Lerner, clinical psychologist and editor of *Tikkun*: "A courageous and important book that provides a crucial corrective to the moral blindfolds worn by many therapists."

With that kind of response to the book, and with the interest in a nationwide network of therapists, Doherty is excited about the possibilities. "I'm really hoping this book will be the stimulus for a national movement," he says. ■

# Searching

## Psychotherapy and moral responsibility



"It's been a taboo subject for liberals," he says. "What's happening now is that everybody in the political spectrum is getting into the conversation."

As an example of how attitudes have shifted, Doherty cites the issue of marriage and divorce. "A generation or two ago, the majority of people believed you should stay married for the sake of the children, even if you were miserable. Hardly anybody believes that any more. People have a right to happiness. They should not stay indefinitely in a poisonous relationship."

But the pendulum may have swung too far. It is time for therapists to think more about whether they can support people's efforts to keep a marriage alive.

Back in the 1950s, he says, therapists were likely to be biased toward staying in a marriage. "Now I believe there is more of a tendency for therapists very early on to say, why in the world are you staying? This may happen in the first session. I think therapists have become fairly cavalier with divorce. Not all of them."

A few years ago, when a woman would tell Doherty she couldn't divorce because of her children, he would tell her that if she was healthy herself the children would be fine. "Now I'm willing to honor that as a legitimate moral concern and tell her I respect her for raising it, as opposed to saying she is refusing to face what she needs to do and is hiding behind the kids' needs."

In talking about the moral role of a therapist, Doherty does not want to imply that the idea is new or that other therapists have not brought moral concerns into their therapy. "A lot of therapists have been telling me they've been closet moral consultants for a long time, but they don't talk about it," he says. "We're not trained to do it, and we don't have any place to talk about it."

To provide opportunities for therapists to talk about moral, ethical, and community issues, Doherty and his colleague Patrick Dougherty, a therapist in private practice in St. Paul with a same-sounding name, are establishing a nationwide network of forums modeled after the *Utne Reader's* neighborhood salon. Doherty and Dougherty talk about the forums in "Forging A New Community," an article in the March/April issue of *The Family Therapy Networker*.

In conversation with other therapists in his own network, and in the book, Doherty talks about strategies therapists can use in addressing moral concerns.

Therapists are so fearful of coming across as moralistic or controlling or shaming, he says, that they

## TRUE GRIT

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While Jones refers to his research as "the central core of my being," he has spent the past 10 years dividing his time between his lab and the Minneapolis campus. In 1986, at the request of then-President Ken Keller, Jones established the President's Distinguished Faculty Mentor Program, which is designed to retain high-ability graduate students of color.

"The retention rate and quality of experience here for minority graduate students is better now," he says, although he believes there is still room for improvement. Last year, his administrative duties expanded dramatically when he was appointed assistant to the associate vice president for Academic Affairs and associate provost, Josie Johnson.

"When Josie became vice president, she wanted to have faculty members assist," he explains. "She asked me if I would continue directing the mentor program and take over oversight for the minority scholarship program." Besides those responsibilities, Jones also assists Johnson in dealing with issues related to minority faculty and in reviewing how diversity is addressed in collegiate planning.

His jobs in central administration and in the agronomy department amount to half-time appointments, but, he jokes, "It actually ends up being three-quarters time at Morrill Hall, three-quarters time in agronomy and plant physiology."

And as if that weren't enough, in 1993 he was elected to the Faculty Consultative Committee, the steering committee for the Faculty Senate.

"It's interesting to watch Bob pull this off," observes Crookston. "Despite his involvement with minority programs and faculty governance, he has this great research program, as good as you would expect if he were over here full time."

Jones's renown as a researcher extends beyond the University's confines. C. Jerry Nelson remembers attending a symposium where Jones was one of the presenters. Leaving that talk, Nelson encountered some colleagues who did not know of his connection with Jones.

"One of the people I was walking with said, 'That was a very impressive presentation. You could call it the 'Bob Jones Show.' Do you know him?'"

"It's unique how quickly he created his own professional identity and how well known he is in agronomy and plant physiology."

About the same time that Jones became director of the mentor program at the University, he immersed himself in another program designed to enhance the educational opportunities of black students—in this case, black South African students experiencing the kind of legal discrimination Jones remembers from growing up in the deep South.

For 10 years, he traveled to South Africa every summer to interview 300 to 500 black applicants to American colleges and universities. Between 1984 and 1993, he estimates that he personally interviewed about half of the 3,000 such students who actually came and studied in the United States.

"In 1983 there were only 5,000 college-educated blacks in all of South Africa," he explains. "I saw this as a way to fight apartheid, which made it virtually impossible for black South Africans to get a decent education."

Given the enormous commitment he's made to the program, it is surprising to discover that he was extremely reluctant at first to get involved at all. Asked to serve with the program, his initial response was, "What have I done that you would want to send me to there?" he says. "I had a very negative image of the country, colored no doubt by my having grown up in the deep South. Here was a place even more racist than where I came from!"

But sign up he did, with the unexpected effect of turning South Africa, a country he has come to love deeply, into "my second home."

"The fight against apartheid was very important to me," he says. "Right now South Africa is one of the most dynamic places on earth. It is a model of how a truly diverse society can end up being one of the most productive societies in the world."

Even so, the years prior to the decision by the white government to put an end to apartheid, release Nelson Mandela from prison, and pave the way for universal elections that, in essence, guaranteed the end of white rule, often brought painful reminders of the old days back in Jones's hometown.

"The most poignant reminder of what the South was like were the signs designating facilities and restaurants as white-only or black-only," he recalls.

But those days are over. On a recent visit, Jones got a chance to do something he thought could never happen—shake hands with Nelson Mandela on the occasion of the South African president's 75th birthday.

"If you had asked me in 1989 if things over there would have played out the way they did, I would have said no," he explains. "By that point, I had decided that I would not see Nelson Mandela out of prison and that I would probably go to my grave with the apartheid system still in place." ■

## Into Africa

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Again, patterns that emerge from the data can surprise everyone. Take the case of the baboon social climbers.

Female olive baboons enforce their social hierarchy by a series of brutally clear social signals. If a subordinate steps out of line, her social "betters" will threaten or even attack her to keep her in her place. If two females of different status fight, others will side with the dominant one. After the fireworks, a chastened low-ranking female will often make amends to an offended superior by grooming her fur—another ritual that helps cement the social order. The rewards of being top baboon include getting the most access to food and mates and producing daughters who usually inherit their mothers' high status.

That much was evident from 25 years of studies on olive baboons in Gombe. But Packer, along with Goodall and two other colleagues, looked at the data to see if baboons at the top of the heap enjoyed better fertility than their inferiors. In January, they reported that such wasn't the case: the most dominant baboons suffered from a higher risk of miscarriage and, in some individuals, reduced fertility.

Those findings ran counter to scientific thinking that evolution would inevitably favor individuals who tried to fight their way to the top of a hierarchy. The researchers suggested that constantly battling to hold onto one's exalted status may exact a toll, and that toll may keep female aggressiveness from getting out of control.

In reporting the story, the *New York Times* took pains to point out that baboons are not like humans. Not everyone, however, could resist the idea that the study was evidence that women who climb the career ladder will pay a price—an attitude that vexes Packer.

"People jump to conclusions," he says. "But female baboons are not like women. They've been fighting with their aunts and cousins since the day they were born. Every meal is a contest. How do you compare that to a day at work?"

Another emotionally charged behavior, infanticide, also eludes easy comparisons, says Pusey. When male lions commit infanticide they are killing other males' cubs and freeing up females to breed with them, but when male chimps do it it's not clear that they get females as a result. Still, says Pusey, Canadian researchers have shown that child abuse happens much more often in homes with a stepparent. It's tempting to speculate that the behavior of abusive men may have something in common with that of lions or chimps, but one always has to be careful about interpreting human behavior, she says.

Another complication arises from different breeding patterns in humans and other primates. In baboon troops, life resembles "an extended soap opera," says Packer. In that world, everybody has five or six mates, and male baboons overtly compete for the females. Likewise, female chimps take many sexual partners when they're in heat. This makes it nearly impossible to deduce which males father which offspring. But for Packer and Pusey, that question goes to the heart of the matter: if they are to learn how behavior evolves, they must be able to identify the individuals who leave few or many offspring so that their behaviors can be correlated with their breeding success. The breeding success of a female is relatively easy to observe, but identifying fathers requires DNA analysis.

Unfortunately, the vulnerability of primates keeps researchers from shooting a tranquilizer dart into a chimp or baboon and taking blood samples. While nothing will bother a drugged lion, a drugged primate could climb a tree and fall or become easy prey for any rival or predator that happens along, Packer says. So researchers have turned to an unlikely source of DNA: dung. In passing through the GI tract, feces slough off intestinal cells whose DNA, though in short supply, can be used to track paternity.

"We just got our first nuclear DNA from scat," says Packer. "We have a grant pending with the National Science Foundation to test all Gombe baboons and chimps for genetic fingerprints. We call it 'molecular scatology.' Julie Constable, a graduate student here, is doing the work."

With paternities established, Packer and Pusey can construct family trees for the Gombe primates and take a close look at what contributes to male breeding success. But it's not an easy task hauling the samples back from Africa. For one thing, the scat must be kept frozen in liquid nitrogen or ethanol, lest the delicate DNA disintegrate.

If science sometimes involves "scat" work, it just as often means intending to do one thing and ending up doing another, says Packer. Last year, an outbreak of distemper decimated the Serengeti lions, and Packer suddenly found himself staring at the prospect of losing many more if another wave should hit. So he launched Project Life Lion, an international effort to halt the disease through vaccination.

The distemper, which causes disorientation and convulsions in its victims, came into the lions from dogs whose owners moved by the thousands to the outskirts of the Serengeti during the last couple of decades. To stem the tide, Packer is trying to raise \$150,000 to vaccinate 30,000 dogs. (Lions can't be vaccinated because the vaccine was designed for dogs and may harm lions; besides, the dogs are a lot easier to round up.) The process must be repeated every two or three years, however, because Serengeti dogs only live about two and a half years, so each

generation is soon replaced by younger, vulnerable dogs that could spread the distemper virus anew. After the first round of vaccination, Packer expects the Tanzanian government to take over the project.

The distemper epidemic disturbs Packer, not just because the death throes of sick lions could melt a heart of stone, but because it was inflicted by the actions of people. In that respect, he says, it's like the snaring of animals. Snares are supposed to strangle game animals like impalas with wire, but they occasionally snag a lion or zebra. Packer witnessed one unfortunate male lion that had been caught around the waist. Struggling to free himself, he had pulled the wire tighter until it cinched his waist to a circumference of about 12 inches, enough to ruin his intestines and kill him.

"I've often seen lions with gaping wounds or rotting legs," Packer says, "but it never bothers me when they've been bitten by other lions. But when it's been inflicted by humans, it's a sign that time is running out." Every 18 years, the human population near the Serengeti doubles, he says. That increases the pressure on the fragile ecosystem and threatens a day when humans spill over the wildlife reserve in numbers too big to coexist with lions or the herds of game that support them.

The prospect of losing the Serengeti weighs on Packer, and so does the strain of his efforts to save the lions. He had been making annual trips to Africa to keep his research going, but last year he made three trips because of the distemper outbreak. It all comes on top of the usual trials and tribulations of traveling to the African countryside, a place where bandits lurk and malaria is endemic.

The strain runs through *Into Africa*, an extended account of a trip Packer made in 1991. The book describes swarms of tsetse flies, wars and governmental upheaval, sudden intestinal upsets, trains that run on no discernible schedule, corrupt border guards, and, making it all worthwhile, the animals. The book won Packer the prestigious John Burroughs Medal for natural history writing, perhaps in part because he captures the rhythm of life on the far continent and puts the human animal in its rightful place in the picture. Now, he fears that humans will take over the picture completely.

"I worry whether the Serengeti will survive 40 years unless something is done," he says. And so he does something, hoping to make a difference but prepared to be content with knowing that, if the Serengeti is lost anyway, he at least tried. It may seem a melancholy existence, and so it is, in some of the details. But Packer, like Pusey, still finds endless fascination in watching animals because their behavior, untouched by the patina of civilization, reveals the threads of nature and evolution that still tug at our own lives.

Or, as Packer puts it at the end of his book:

*... Wherever we live, the fundamental currents of competition and ambition still flow through the heart of our deepest desires. We keep up the appearance of working toward a set of lofty goals and seldom stop to ask why we never learn from history, why we condemn ourselves to repeat the same mistakes over and over again. Our failures will never cease unless we know something about our true underlying nature, the nature that doesn't change when a government declares itself capitalist or socialist. Look through the eyes of another species and perhaps the occasional good we do will stand out from the constant stream of wreckage.*

Contributions to Project Life Lion may be sent to: Project Life Lion, 123 Snyder Hall, 1475 Gortner Ave., St. Paul, MN 55108. Checks should be payable to: University of Minnesota Foundation. ■

## SHORT TAKES



### hot town—summer in the cities

Which city suffers the worst mortality rate during a heat wave: Atlanta, New Orleans, New York, or St. Louis? It's St. Louis, and the Big Apple is second. Why? That's what geography grad student Karen Smoyer wants to know, after calculating the rankings from census tract data. She'll go to St. Louis in August to examine housing types, poverty rates, population turnovers, and other potential risk factors at the neighborhood level.

Smoyer has some guesses as to what characteristics lead to the rankings of the four cities above. First, she thinks Atlantans and New Orleanites are more accustomed to hot, humid weather, so a heat wave is not such a shock to their systems. Other suspects: about 75 percent of St. Louis houses are brick; the city is in a depression near the river, so humidity is high; and the population includes many low-income elderly people. She also speculates that pollution contributes to the severity of heat waves.



### better than an old undershirt

A joint project of the Natural Resources Research Institute at Duluth and Larry Berg, an inventor and president of Wanamingo-based, Co-Pak, has produced AgriSorb, an absorbent board made from cornstalks. Specially designed to soak up the 3 million gallons of oil dripped every year onto the floors of garages and machine shops, AgriSorb works so well that the University has submitted a patent application for the product.

How well does it work? Smooth on the bottom, and designed to collect oil dripping from above, an inch-thick, one-foot square of AgriSorb can easily hold up to two quarts of oil and sometimes as much as three quarts.

Now, if someone could just come up with something to absorb red wine from a white table cloth...

### arts tour

Want to learn more about American art? Here's a way to do it—and help out the University's Weisman Art Museum.

Applications are being taken now for a new training class beginning in September for volunteer tour guides at the Weisman. A formal background in art or art history is not required, but a commitment to learning and an enthusiasm for 20th Century American art is valuable.

After completing the training course in American art and tour techniques, new tour guides will put in four to six hours a week in training and touring, giving an average of one to two tours per week to a visitors from the University, the community, schools, and out of town. Tours take place during the week, and on evenings and weekends.

For further information or to receive an application, contact Susan Rotilie, the Weisman's tour program coordinator, at (612) 625-9623. Deadline for applications for the September class is August 1.

### stop by the president's home

Eastcliff, home of the families of University of Minnesota presidents since 1961, will host tours of the residence on Wednesdays from 10 a.m. to 1 p.m. from July 12 through August.

Built in 1922 for lumberman Edward Brooks and his wife, the two-story, 21-room L-shaped home sits amid two acres of woods overlooking the Mississippi River. Of the colonial revival style, Eastcliff was designed by St. Paul architect C.H. Johnson, architect of record for the University, where he designed all but two buildings constructed between 1904 and 1936. The Brooks family gave the home to the University in 1954.

Reservations are encouraged, but not necessary. For reservations or more information, call the Eastcliff Management Office at (612) 627-6800. Eastcliff is located at 176 North Mississippi River Boulevard in St. Paul, one block south of the Lake Street/Marshall Avenue bridge.



# UPDATE

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UNIVERSITY OF MINNESOTA

UPDATE

# stormy weather

Higher education faces a host of challenges.

In an era when newsmagazines proclaim the existence of a "radical middle" in American politics, it comes as no surprise that the country's higher education system should be facing a time of unprecedented turmoil. From tenure to student loans, virtually all of the cozy postwar assumptions about higher ed are being re-examined, if not being attacked outright.

Some of the uproar has been a long time in the making. Some—like a resurgent attack against affirmative action—has been ignited by the rapidly shifting political zeitgeist signaled last year when the first GOP majority in 40 years took control of Congress. In the following pages, *Update* examines a few of the more explosive issues facing higher ed today.

For Alumni,  
Faculty,  
and Staff

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# Student Loans

For nearly 30 years, the question of federal involvement in student loan programs has been about as noncontroversial as you can get. Today, though, it is one of the hottest topics on Capitol Hill.

Through a system of banks, guarantee agencies, and national and state secondary markets—a place where a loan originator can sell a loan to another, “secondary” servicing agency—the federal government for almost 30 years has not only guaranteed student loans but also paid the interest on those loans during the time that a student was in school.

It was, and is, a complicated setup, in which large universities that attract students from across the country are sometimes forced to deal with more than 100 separate financial organizations.

It was also a very lucrative and safe setup for the financial organizations involved, a classic case of what one pundit has called “capitalizing profits while socializing risks”—a process in which the private sector is guaranteed profits while the public bears all the risk. For example, the Student Loan Marketing Association (better known as Sallie Mae)—the quasi-governmental secondary market set up by the federal government to purchase student loans—is traded on the stock exchange, where it has yielded handsome returns to shareholders. Sallie Mae operates out of luxurious Georgetown headquarters and its CEO earned \$1.3 million in 1992.

This cozy set of relationships all began to change, however, when the Bush Administration proposed a system by which the federal government would bypass private institutions, lending money directly to students instead. The reasons for the proposal? The old system carried a huge burden of overhead; furthermore, with loans guaranteed by Washington, lenders and note holders had little incentive to collect on defaults.

In 1993, at the urging of the Clinton Administration, Congress established a two-year test period for the new direct student loan programs. During that time 100 American institutions of higher education would be enrolled in direct loan funding, and the rest would continue to work with Stafford Loans—federally guaranteed loans offered by private lenders.

The direct loan program was enacted over the fierce objections of the lending industry; it also met with resistance from many college and university financial aid officers who did not look forward to working with an entirely new system. But after a couple of years, during which time the new direct system proved to be far easier and more efficient than the old guaranteed loan program, the grumbling from institutions died down.

Then came last November's elections. Republicans took control of Congress, vowing to eliminate the federal deficit within seven years while at the same time cutting taxes. With \$10 billion in cuts mandated for higher education, they began eyeing student loan programs for places to reduce spending. Although some cuts were proposed for the old system of federal loan guarantees and interest rate subsidies, it soon became clear that the real target of Republican ire was the direct loan program, with many in the new Congressional majority calling for the program's elimination.

The primary reason the direct loan program should be killed, these Republicans argue, is that it is wasteful and yet another case in which the federal government is intervening needlessly in the private sector.

But as intense lobbying by the financial industry has made clear, another reason for the attack was because of the way in which direct loans had eaten into the profits of the guaranteed student loan business. In 1993, private organizations had lent students some \$19.2 billion in guaranteed loans, but by 1994 that figure had dropped to \$15.3 billion. Meanwhile, during that same year \$13.8 billion was dispersed through the new direct loan program.

“One of the most difficult things we face on this issue is to undo what I characterize as the ‘disinformation’ program conducted by lenders, guarantee agencies, and the secondary markets,” argues Tom Butts, director of federal relations for the University of Michigan. Says Jerry Roschwalb, director of government relations for the National Association of State Universities and Land-Grant Colleges, “So far, reports from the field are that the direct loan program is working terrifically. But this is a profitable business if you are a bank.” Roschwalb goes so far as to claim that a recent Congressional Budget Office (CBO) report showing that the direct loan program was losing \$1.2 billion a year for the government is deliberately distorted.

“The CBO was forced to use a different method of accounting with a new set of assumptions to come up with those figures,” he says. He, Butts, and others argue that banking groups are not fighting the direct loan program in the interest of efficiency and reduced government spending but rather in the interest of profits.

This argument is bolstered by an unusual authority: William Niskanen, the chairman of the conservative Cato Institute and a former economic adviser to Ronald Reagan. While there may be sound philosophical arguments against federal involvement in student loans, Niskanen writes, the efficiency record of the direct loan program “merits a continued parallel test of guaranteed and direct student loans for several more years.”

Which is what the direct loan program appears it will receive, though in a far more limited way than was initially envisioned. Instead of substituting direct loans for all guaranteed loans over the next two years, as the Clinton Administration had proposed only last year, Congress has instead capped the program so that it can cover just 20 percent of student loans, and proposes disenrolling some colleges and universities already in the program.

**The outcome of all this is still unclear,**

“This is where things get really hairy,”

says Thomas Etten, the University of Minnesota's director of federal relations. “The debate will probably go on until December.” He points out that President Clinton has vowed to fight Republicans over cuts in education spending.

Meanwhile, changes have been proposed for the old guaranteed student loan program as well. Congress has backed off from earlier calls to eliminate the program altogether or to eliminate it just for graduate students, but seems poised to levy a tax on student loans to help pay for the program and to do away with the six-month grace period newly graduated students enjoy before they begin paying off their loans.

—RICHARD BRODERICK

# Affirmative

## ACTION

When the University of California Board of Regents voted last summer to eliminate consideration of race, ethnicity, and gender in admissions and hiring, they sent shock waves throughout higher education. Other universities found themselves wondering who else would follow suit and what would happen next.

What happened next at the University of Minnesota was that the Board of Regents decisively reconfirmed at their September meeting their continued commitment to equal opportunity and affirmative action. At the same time, the regents issued a revised policy that consolidated five existing ones related to diversity, affirmative action, and equal opportunity, and directed administrators to continue to work toward meeting affirmative action goals.

"The University has a firm and unwavering position on affirmative action," says Josie Johnson, associate vice president for academic affairs with special responsibility for minority affairs and diversity. "Everything we do reflects that commitment—our programs, our resource allocation—everything."

Indeed, just last year the University succeeded in meeting a series of five-year goals directed at increasing the number of minority students and faculty on University of Minnesota campuses.

By fall 1994, slightly more than 5,000 students of color were enrolled at the University's four campuses, accounting for 10.5 percent of the total student population (that number jumped to 5,309 students this fall). That represented a 35.8 percent increase since 1989, in a period that saw system-wide enrollment decrease by 10.7 percent. The University also succeeded in meeting its ambitious five-year goal of improving by 50 percent the graduation rate of students of color.

The number of minority faculty members also went up in this period, by 33.5 percent. People of color now constitute 9.1 percent of the systemwide tenured and tenure-track faculty.

But the University isn't satisfied with resting on its diversity laurels. New and equally ambitious goals have been set for further increasing the numbers by 2000. By that fall, the University seeks to have 16 percent of its entering freshmen and 11 percent of its faculty be people of color. (Another goal: to see the number of women faculty members—now at 22.6 percent of the total—rise to 25.7 percent of the total by 2000.)

The University has a whole system of programs and policies in place with which to achieve these worthy and ambitious goals, says Johnson. The programs go well beyond actively recruiting people of color. One faculty initiative is the Target of Opportunity program, which provides financial assistance to units that would like to increase diversity in their faculties but lack the money to do so. The program allows units to hire minority faculty members when

**"If you assume that historically not everyone has had the same shot, it can be unfair to ask for certain things when hiring for jobs."**

they are available by paying all of their salary for the first year, 75 percent for the second year, and so on, until the unit becomes responsible for picking up the entire salary during year four.

Johnson's office helps departments evaluate the progress of junior faculty and finds them mentors to see them through the tenure-seeking process, since, as she points out, retaining minority faculty members is every bit as important as recruiting them.

There is also money set aside in the President's Office for faculty research on minority issues; there are regular retreats in which faculty can discuss their experiences as people of color; and there is an all-University committee, headed by Robert Jones, professor of agronomy and plant genetics, that works to ensure that various collegiate units and departments have a deliberate plan and budget for meeting their diversity goals.

"Collegiate planning and budget planning is where we live. For the University to review these plans and say that diversity is an important part of them is critical," says Johnson. "It's a very important statement of our commitment to affirmative action."

Such a huge range of student services and programs are available that Johnson's office recently published a 138-page book to pull them all together. These programs include the African-American, Asian/Pacific American, Chicano/Latino, and American Indian Learning Centers; seed grants that departments can use to establish their own minority support programs (for example, the Institute of Technology runs a computer camp for ninth graders of color and a summer math camp for American Indian junior high students); the President's Distinguished Faculty Mentor Program, which links academically talented freshmen and sophomores with distinguished faculty mentors; and a summer research program (co-sponsored by Super Valu and the McKnight Foundation) called the Minority Scholars Development Program, which matches minority students with faculty members working in their area of academic interest.

Although it is typical to focus exclusively on faculty and students in discussing affirmative action and equal opportunity, the University's large staff has not been overlooked. The percentage of people of color among the civil service staff went up 2.5 percent between 1982 and 1994. They now make up 8.9 percent of the University's total civil service staff.

Along with doing active, targeted recruiting of people of color for staff positions, says John Felipe, assistant director of the Office of Equal Opportunity and Affirmative Action, the human resources department has also worked with University departments to ensure that job selection criteria are relevant and reasonable. "We're trying to create a climate of fairness and relevancy as to what you're hiring for," says Felipe. "If you assume that historically not everyone has had the same shot, it can be unfair to ask for certain things when hiring for jobs."

Felipe cites as an example a former requirement that Minnesota agricultural extension agents have had experience working on a Minnesota farm. Naturally, this tended to exclude many possible applicants, among them people who might have had farm experience in North Carolina, California, or Latin America, for example.

Clearly, the affirmative action and equal opportunity world is a complicated one in any large research and teaching institution, and the University of Minnesota is no exception. Managing and overseeing that complexity falls primarily to Johnson's and Felipe's offices, both of which have recently filled important administrative positions.

This month, Stephanie Lieberman will take over as director of the Office of Equal Opportunity and Affirmative Action, a post filled most recently by Patricia Mullen. Lieberman comes from California State University at Sacramento, where she held a similar position. And in August, Jessica Bailey joined Johnson's staff as assistant vice president for academic affairs with special responsibility for diversity. Bailey most recently served as senior consultant for the American Association of State Colleges and Universities in Washington, D.C.

Lieberman and Bailey join departments that, though heartened by recent progress toward meeting affirmative action goals, remain far from complacent. "We still have historical attitudes to work on, and we still have barriers," says Johnson. "Now it's up to all of us to make diversity happen."

—LYNETTE LAMB

# TENURE

In corporate America, massive layoffs have become routine, and job security a thing of the past. In 1993, some 450,000 workers lost their jobs, a number nearly equal to the entire population of full-time college professors in the United States.

Given the harsh realities their neighbors and fellow citizens face, what makes faculty members think they deserve to hold onto their jobs for life?

Attacks on academic tenure are on the rise as universities themselves face financial constraints and downsizing. When a big chunk of a university's budget is tied up in the salaries of its tenured faculty, it has limited flexibility for responding to changing campus needs.

Yet to many faculty, tenure is at the core of their profession, the only sure protection they have for the academic freedom they need to pursue truth and speak their minds without fear of reprisal. President Nils Hasselmo, for example, still a faculty member at heart, has repeatedly affirmed his commitment to tenure.

Nevertheless, the tenure debate rages at the University of Minnesota as it does at most universities. Indeed, Eugene Rice, who is addressing the issue of tenure as director of the Forum on Faculty Roles and Rewards, a project of the American Association of Higher Education, notes that "People from Tennessee called yesterday. Arizona has had a retreat. Florida is debating the issue."

The University of Minnesota's regents began a systematic look at tenure in October, and the topic will stay on their agenda at least through January. Regent Jean Keffeler, who asked for the regents' discussion at Minnesota, says any changes in tenure must rest on two principles: "One, the aggressive protection of freedom of discovery and expression, and the other, the development of contemporary human resources policies to enable the University to change consistent with its strategic orientation and the needs of today's students and society."

Is the idea to change tenure or to do away with it entirely? "What is it in tenure that you are talking about? Job protection?" Keffeler asks. "The direction will be to change rather than to abolish tenure, but some people would say that to change it at all is to abolish it."

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Hardly anybody today would argue for tenure on the basis of job security. Instead, the strongest case for tenure rests on its link with academic freedom. Whether tenure is still needed to protect that freedom, however, is a matter of debate.

**"The early purposes of tenure are no longer directly relevant to today's situation, although the importance of freedom of expression and freedom of discovery is every bit as important as it ever was,"**

Keffeler says.

Sociology professor David Ward opposes tenure, a minority view among faculty. "Tenure protects some nitwits, some lazy incompetent people who would be fired anywhere else," Ward says. The recent past chair of the Senate Judiciary Committee, which is often called on to review cases of tenure denial or removal for cause, Ward says that in several years he has seen only one academic freedom case, and that even in that instance "we had a big debate about whether it was an academic freedom case."

If not many academic freedom cases come to the Judiciary Committee, "that may just show that tenure is doing its job," says W. Phillips Shively, provost of arts, sciences, and engineering.

American universities "have carved out a degree of independence for their faculty that's really quite extraordinary in a popular democracy," says Frank Sorauf, Regents' Professor of Political Science. "I think tenure is one of the components of it. It isn't just respected within universities, but the whole political system is forced to respect it." When he goes abroad to lecture for the United States Information Agency, Sorauf says, "people are amazed that even though the U.S. government is paying for me to be there, they are not dictating what I say. I think we would lose something very precious for this society, and for that matter for this economy, if we lost that freedom."

Tenure was the topic last February at a Pew Roundtable Discussion convened by Shively. "That was a real eye-opener for me," he says. "As we went around the room, almost everybody told of serious cases where they themselves had their careers threatened or they knew untenured colleagues who were unwilling to say things" for fear of jeopardizing their jobs.

History professor Sara Evans, who also participated in the Pew Roundtable, had a similar response. "The discussion impressed me with the dangers, the threats to academic freedom, which are really grave, and graver than I knew," she says. "I'm quite aware of the examples in the humanities and social sciences. There were more in the sciences than I had imagined."

Sometimes what can put a professor at risk is so unpredictable as to be almost ridiculous. Carole Bland, professor of family practice and community health, tells of a faculty member in Georgia "who did an innocent little study on whether children have more recognition of Disney characters, Sesame Street characters, or Joe Camel." When he found that Joe Camel was the most recognized of these characters, thus calling into question the tobacco industry's claims that they are not targeting children with their advertising, the tobacco industry in Georgia really went after him, Bland says. "The only protection he really has is tenure."

But sociologist Ward believes that academic freedom can be protected without tenure. "In cases where you are being told you're being fired for your political views, no university would allow that," he says. Others argue, however, that tenure's protection goes beyond the individual, shielding universities themselves and thus empowering their leaders to resist outside threats.

"I do think the political climate is becoming so raw that probably tenure will become more important rather than less," says the AAHE's Rice, from his national perspective. "I would hope we would have tenure to protect the university as the place where hard, inconvenient questions can be asked."

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Even the strongest advocates of tenure agree that it has disadvantages as well.

**"It's possible for tenure to be a protection for incompetence just as it is a protection for conscience,"**

Shively says.

"The problem is what you do with the incompetent and sometimes outrageously incompetent faculty members," Ward says. He contends that a few faculty members have held onto their jobs for decades without ever being promoted and without even teaching classes. "This is a small group of people, but it's bad for morale, and it's annoying to the faculty who have to pick up the slack."

Nonperformance is one problem. Another is that "we have had cases of faculty members who have been convicted of felonies and they still come and say they shouldn't lose tenure," he says. "Citizens ought to be saying, and they are saying, what is going on?"

The tenure code does have provision for removal for cause, and the problem may simply be that the process is not used often enough. It is not that the University cannot fire people who don't do their jobs, but that it doesn't. Simplifying procedures for removal for cause could help, Shively says. "Obviously we can't make it a snap for this to happen, but it should be reasonable and doable."

Besides removing felonious and nonperforming faculty, the University could find ways to "encourage people to do what the institution wants them to do," says Adams; he advocates uncoupling salary from tenure. "I've always believed it would be helpful if we could make a distinction between tenure as job protection for academic freedom and tenure as money protection on the other hand," he says.

The way Adams envisions it, "one portion of salary would be attached to one's tenured position and the other part could be flexible up or down, depending on what you do. If a person is doing something that has lost its value, the salary ought to be reduced."

A majority of faculty would probably oppose that suggestion. Telling people their salaries will be cut if they don't change the direction of their teaching and research to meet institutional needs could easily be seen as a threat to academic freedom. But Adams counters that idea, retorting, "People don't own their jobs in the academy any more than they do in General Motors."



# URE ? TENURE

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The question of tenure must be put in the context of "what would attract the best of a new generation into the profession and make it an attractive and resilient career," Rice says. "I think we will have tenure, but I would hope it would be more flexible." The time allowed for earning tenure might be extended. "Probably faculty and the institution would both be better served by having longer probationary periods," Shively says. "Probationary faculty wouldn't have to prove themselves in just five years."

"The tenure process was developed for another generation, when faculty had spouses, had wives," Rice says. This country's fundamental cultural shift in the last 20 years toward the dual career family has led to higher family incomes, but also to enormous role strain, he notes. Most professors would agree that trying to simultaneously earn tenure and have a meaningful family life can be difficult.

"Tenure is no friend to women," Shirley Tilghman, professor of microbiology at Princeton University, wrote recently in a *New York Times* op-ed. "The problem of reconciling a scientific career with some semblance of a normal life is exacerbated by the tenure system. A woman is usually 30 years of age before assuming an assistant professorship at a university, which puts her tenure decision at age 35 to 36. Thus, her critical scientific years, in which she is establishing her reputation, and her peak reproductive years coincide. This is a dirty trick....I favor abolishing tenure entirely in favor of rolling appointments that are regularly reviewed."

Still, for many people, tenure may be part of what makes an academic career attractive.

**"We have in American faculties a group of very talented people, creative people, who have agreed tacitly to accept a compensation level well below what comparably creative people receive. One of the reasons is the stability."**

says regents' professor Sorauf. "If you take that away, we will lose some of the competitive advantage we have. We are already beginning to see the loss of some competitiveness. In my field, for example, there is no doubt that a larger percentage of our very best undergraduate majors are going to law school and a smaller percent are going to graduate school for Ph.D.'s."

If talented students are not choosing academic careers, John Adams thinks the fault lies with faculty for not lifting up the ideals and rewards of their profession. "I don't think we have in our best classrooms enough professing. We have too much careerism. The teachers are as bad as the kids. Parents and teachers have a lot more influence than they think they do, but many of them don't take advantage of it."

Neither money nor job security is what attracts the best people to a field, Adams says. "I don't know anyone who was chasing money who ever had enough. I don't see any correlation between lots of money and lots of satisfaction in life."

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These days, the biggest disadvantage of tenure is that it can produce institutional rigidity, Shively says. "Almost all of our budget is in personnel, and a lot of that is in faculty. You have locked up a lot of your budget." One change that may be needed is to make tenure reside in units rather than with the University as a whole, says Shively, arguing that that change would not reduce its ability to protect academic freedom.

At least until now, the University's tenure code has been interpreted to protect even those faculty whose units have been closed. When the University closed the entire Waseca campus, an agricultural school quite different from the rest of the system, it nevertheless kept its commitment to find jobs for tenured Waseca faculty elsewhere in the system.

It would be possible to interpret the code somewhat more narrowly, Regent Keffeler says, but "we've never taken that to the mat." Given the way it has heretofore been interpreted, she says, "our code is stringent compared to other schools."

Now that the University has moved to a more decentralized organization, it may be that tenure will be treated differently under different provosts. One area of the University that is facing an intense need for flexibility, and has embarked on an ambitious reengineering effort, is the Academic Health Center (AHC).

The AHC is at the epicenter of an earthquake, Provost William Brody contends, because Minnesota has moved faster than any other state toward managed-health care. In 18 months, he says, the AHC "will be a completely transformed organization."

Solutions that will work for the AHC may be different from those that will work in the College of Liberal Arts or the Institute of Technology, Brody says, and therefore that unit's transformation may also include a different approach to tenure.

In her department, family practice and community health, for example, "they have largely stopped hiring people on tenure track," Bland says. One problem in the Medical School, she says, has been that many faculty were tenured as teachers, researchers, and clinicians but primarily supported themselves as clinicians. "Now they cannot bring in money through clinical practice, and we have them on the tenure track."

Tenure is "already implemented very differently at a number of world-class universities, so it does not mean that one has to eliminate tenure necessarily to get a significant change to meet our customers' needs," Brody says. "For example, some universities only tenure at the full professor level," he says, citing Harvard and Johns Hopkins. Brody himself has been a tenured professor at three different universities, and he notes that the mechanisms for granting tenure in each of those institutions were "as different as day is from night."

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Retirement has become inextricably linked with the tenure debate because with no mandatory retirement age, an aging and unproductive faculty member could potentially hold onto a job for life. "I think that is a legitimate issue. I was more comfortable, frankly, with a compulsory retirement age," says Sorauf, who will himself retire next year. Universities need the renewal of young faculty, and young people who seek academic careers deserve the opportunity, he adds.

**"Let's face it. This can be a retirement job for those who want to make it that,"** Ward says. At the same time, he points out, some faculty past age 65 are "cooking away just as they were in their thirties."

One change likely at Minnesota and other schools is a system of periodic post-tenure reviews. The goal is to "help people be productive all their lives," Bland says. Reviews would ensure accountability and encourage productivity for all faculty. "A couple of studies have shown that, just as a function of the review, nothing else, faculty are more productive," Bland says.

Whatever happens with tenure, Regent Keffeler says, it will be important to balance several different values. If the University is going to continue delivering on its mission, she says, "excellence of discovery, freedom of expression, flexibility of institutional response to strategic direction, and productivity are all key."

Shively puts it this way: "One of the best ways to protect tenure is to make tenure something that works well for everybody."

—MAUREEN SMITH

photo: TOM FOLEY



BY LYNETTE LAMB

# The Plague

In my junior year of high school I came home from school one day to find our parish priest in the living room with my father, who was in tears.

They told my sisters and me that our mom had had a lump in her breast removed that day, that it was malignant, and that it had already spread to the lymph glands beneath her arm. This was 1974, when that kind of news was almost a death sentence.

My mother would go on to be successfully treated with radiation and chemotherapy, and has now been in remission for more than 20 years; yet ever since that awful January afternoon the specter of her illness has stayed with me. At 16 I became—long before it was fashionable and certainly well before I needed to—chronically worried about getting breast cancer. I obsessively pored over every article written about the disease; at 20 I even wrote a lengthy term paper about various forms of chemotherapy. And worst of all, I never enjoyed that feeling of immortality that is the rightful province of the young. For the one thing that has long been established about breast cancer is its inheritability. That I knew from the start.

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By now, every American knows what a killer breast cancer can be. The most common form of cancer among American women, it accounts for more than 30 percent of all cancers in women, according to the American Cancer Society. One in nine American women, or about 180,000 a year, will develop breast cancer, and each year some 46,000 of those women will die from it.

The risk factors, too, are well known: being over age 50; having a family history of breast cancer; having started menstruating early or stopped late; never giving birth; first giving birth after age 30.

Less well known is that 70 percent of women who develop breast cancer have none of these identifiable risk factors.

Long silent on this scourge of their sex, American women have recently begun to become breast cancer activists, and their advocacy has in turn prodded government funding for research, which jumped

from \$77 million in 1990 to more than \$500 million in 1995. A not-insubstantial amount of that funding is being directed toward studies conducted by University of Minnesota epidemiologists.

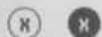
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My mother was convinced that she had been stricken with breast cancer because she had—over the objections of her pope and her church—taken birth control pills for a few years in the early 1970s immediately preceding her diagnosis. Estrogen had already been shown indisputably to have a strong connection to the illness, although at that time the jury was still out on whether birth control pills themselves were at fault. (Actually, there is still disagreement on this point, despite recent evidence from the National Cancer Institute that use of oral contraceptives does increase the risk of breast cancer in women under age 35.)

## Breast cancer remains an elusive killer

In the late 1970s, as I became sexually active, I embraced the pill as an easy and effective form of birth control. When my mother found out, she was terrified that I was setting myself up for a bout of the very disease she had just fought off. All my assurances that the new pills had much lower doses of estrogen fell on deaf ears, and eventually her very real concern made me ask if I was choosing ease and certainty over long-term health.

At 20, though, the fear of pregnancy loomed larger than the fear of breast cancer. And so I continued to take the pills, resentful at having to choose between two evils, angry that I couldn't pop them as carelessly as my roommates did. And resentful, too, that what I thought of as an old person's disease was haunting the very dawn of my womanhood.



Tom Sellers is the lead investigator for the ambitious Breast Cancer Family Study, which is documenting the development of breast cancer in some 10,000 women. These women are the relatives of 544 families who participated in early research conducted by the University of Minnesota's V. Elving Anderson between 1944 and 1952, a study that was one of the first to show that breast cancer runs in families.

This time around, Sellers and his co-investigators, including his fellow University epidemiologists Larry Kushi and Wei Zheng, are looking at both genetic and lifestyle risk factors. They are now four years into a five-year, \$2.5 million National Cancer Institute (NCI) grant and hope to be funded soon for an additional five years.

Although several papers based on findings from their study are still under peer review, Sellers was willing to point out two areas of concern his family study research has highlighted, areas that until now have not been widely publicized.

First, it appears that the distribution of a woman's body fat can make a difference in her breast cancer risk. The apple-shaped woman, who carries more of her fat in her upper torso and waist, is more prone to cancer than the pear-shaped woman, particularly if the apple figure type is combined with a family history of the disease.

Second, it seems that women with denser breast tissue are at somewhat greater risk for breast cancer. This is a complicated piece of information, since older women—whose breast tissue is less dense—are more prone to breast cancer than younger women.

Along with genetic predisposition, the Breast Cancer Family Study is also looking at diet, reproductive characteristics, estrogen supplement use (both in birth control pills and estrogen replacement therapy), physical activity levels, and body shape. The researchers are increasingly convinced that there's much more to breast cancer risk than a family link. "We've seen a tremendous increase in breast cancer rates over the past 50 years," Sellers says. "And yet our gene pool hasn't changed in that time. So what's responsible?"



When I reached my thirties, the doctors and nurse practitioners at my annual pelvic exams began to show enormous concern for the maternal premenopausal breast cancer noted on my chart. Although they were never certain enough about the risks of birth control pills to counsel me to jettison them, they did watch me carefully, and strongly encouraged me to do regular monthly breast exams.

By the time I was 33 I had—well ahead of my peers—my first mammogram; I had the second one at 36. Mammograms are meant to discover the tiniest of tumors, but recent studies have shown that small tumors can be hard to find in the relatively dense breast tissue of younger women. Nevertheless, the medical establishment seems to have an almost mystical belief in the efficacy of mammograms, and each year I'm asked when I'll have my next one. It's as if somehow this radiological talisman is all the healers have to stave off the skyrocketing incidence of deaths from breast cancer.



Although there are now several different breast cancer studies going on at the University of Minnesota, most findings already reported in the media have been based on the Iowa Women's Health Study, which began in 1986. This study of 40,000 post-menopausal women also discovered that apple-shaped women have higher rates of breast cancer (especially when there is also a genetic correlation), that hormone replacement therapy slightly increases the risk of developing breast cancer, and that among women who have breast cancer, those who consume a high-fat diet run a greater risk of dying from it.

What the Iowa study didn't conclusively find, according to nutrition epidemiologist Kushi, is an association between dietary fat intake and breast cancer. Nevertheless, he and other cancer researchers are not willing to discount the connection, since they believe that the Iowa study—and other large prospective cohort studies that have also failed to prove this association—have left two large questions unanswered.

First, since almost all epidemiological studies thus far have been done in Western nations, where fat intake is uniformly high (from 28 to 45 percent of total calories, averaging 37 percent), it has been impossible to see what kind of difference a truly low intake of fat (20 percent or less) would make. Evidence that a connection between dietary fat and breast cancer exists comes from Asian nations such as China, where breast cancer rates are 30 percent of U.S. rates now and were 15 percent of U.S. rates 20 years ago, according to Zheng. (Fat intake has gone up in those intervening two decades, Zheng confirms, but he points out that it is by no means the only variable that has changed in that time.)

Second, says Kushi, "we have tantalizing clues that diet during adolescence is likely to have profound effects on breast cancer rates. Higher fat intakes appear to lower the age at which girls start to have their periods, and the earlier the age at menarche, the higher the breast cancer risk."

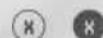
Two University studies just getting under way will be addressing the dietary fat issue more closely. One of those studies, the Women's Health Initiative, is actually a multicenter clinical trial in which the University of Minnesota is just one participant. This nationwide study of 65,000 post-menopausal women—which will look at heart disease and osteoporosis as well as at breast cancer—will have as one of its major components a low-fat diet intervention: the women will be taught to follow a diet in which only about 20 percent of the calories will come from fat.

Another promising study, which Zheng is planning to conduct, would look at the occurrence of breast cancer in the area around Shanghai, China, where rates of the disease have increased dramatically over the past 20 years. Zheng, who was at the

Shanghai Cancer Institute before coming to the United States in 1989, is interested in exploring why the incidence of breast cancer among young Chinese women has nearly doubled over the past two decades.

In his China study, Zheng and his co-investigators hope to look closely at dietary fat. Although some Chinese people are consuming more fat than they were 20 years ago, the median fat intake in China is still just 20 percent of total calories. Therefore, comparison studies should be more meaningful there than they are in the United States, where nearly everyone's fat consumption is high, and "low" fat intake might be 25 percent.

The idea behind this comparison, says Zheng, is that if he can study people whose diets are truly low in fat and compare them to those whose diets are high in fat, he may be able to find the heretofore elusive correlation between a low-fat diet and a lower risk of breast cancer. It's a correlation that makes sense, given that both dietary fat and body fat have been shown to affect estrogen blood levels.



Newspaper and magazine accounts of breast cancer research are all too often an endless exercise in blaming the victim. "Gene linked to young mom's lower risk of breast cancer" bleats one headline, reminding those of us too career-crazed to have reproduced in our twenties that we have only ourselves to blame if breast cancer hits. "Exercise reduces breast cancer" another one screams, letting us know that if we're stricken it could be because we're too damn lazy. "U study links fat, breast cancer" another reads, nagging us that if only we'd downed fewer Doritos and more broccoli we wouldn't have to worry. Rarely, if ever, mentioned is the connection between breast cancer and all the pesticides in our food and water, the toxins in our air and soil—in short, the chemical soup that surrounds us, and that all the low-fat diets and marathon runs and 22-year-old reproducing in the world can't touch.

Until very recently, there wasn't much research being done on the possible link between environmental toxins and breast cancer. Instead, most studies focused on genetic links or on controllable factors such as estrogen supplements and diet. But now many scientists are beginning to believe that organochlorines, among them dioxin, DDT, and chlordane, can mimic estrogen in the body.

In other words, some researchers, including Devra Lee Davis, an epidemiologist at the World Resources Institute in Washington, D.C., believe that these synthetic chemicals—used for processes such as bleaching paper and making plastics, solvents, and pesticides—can behave in the body like estrogen, thus activating estrogen receptors and stimulating breast cell growth. It has long been known that a woman's lifetime exposure to estrogen affects her breast cancer risk. Now scientists like Davis, whose opinions have appeared in recent articles in *Health* and *Scientific American* magazines, believe that that risk comes not just from the body's own estrogen, but also from chemicals that mimic it, which she named xenoestrogens.

Although Greenpeace, too, has issued a report stating that "many organochlorines have been shown to cause or promote cancer, including breast cancer," other researchers, including Zheng, are less certain about this connection.

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PHOTO: TOM FOLEY

ROGER JONES WAS ALWAYS INTERESTED IN SCIENCE. As a kid, he especially liked astronomy and biology. Growing up in New York City, he delighted in going to the planetarium at the Museum of Natural History, and other such institutions, but at first his interest in science was strictly philosophical in nature. He took no physics or chemistry in high school, for example, but became fascinated with a book on physical sciences and with the concept of electricity.

After applying to City College's engineering program, Jones was admitted instead as a physics major because he had taken no previous chemistry courses. This man, who later became an associate professor of physics and astronomy, had no idea as he stepped through the doors of City College that he was beginning a life's work and a teaching career that would span three decades.

After doing Ph.D. research in high-energy experimental physics at the University of Illinois, Jones decided that teaching and writing were his real goals. He originally came to the University of Minnesota in 1967 as associate director for sciences in the MINNEMAST (Minnesota Math and Science Taught Together) project, a program designed to introduce science to junior high students.

This was soon after Sputnik, when the United States was funneling a lot of money into math and science education, a "curriculum rush" that Jones thinks has pretty much come to nothing. "There was a similar thrust in the eighties, after *Nation at Risk* was published," says Jones. "The solution we always come up with is to increase sophisticated mathematics, or whatever. But that only serves to drive people away from the basic sciences."

Around the time that MINNEMAST funding was eliminated in the early 1970s, Jones began considering how to make physics interesting to younger kids—kindergartners through third graders. Later, his interest and activities would extend into working with teachers in senior high schools, where physics most often fits into American education.

Then he began to turn his work out into the community more. It is the layperson, he now argues, who really needs to understand math and science, and especially the principles of twentieth-century physics, in order to understand their effect on how we think and feel about the universe and, indeed, about all of human life.

"American citizens need to understand how we think about ourselves, as individual entities separate from the environment, and how we see a universe governed by movement of planetary laws of matter in space and time [as] explaining existence," he says. "These theories are not adequate to explain the spiritual meaning of human life."

According to Jones, "the whole package of physical sciences" for the last 300 to 400 years has had enormous influence on our culture, an influence that most people don't understand. He believes it's important to recognize how much our value system is related to the culture of physics, cosmology, and so on. "People talk about interconnections, a systems point of view, but we have a long way to go before [such a world view] is ingrained in human consciousness," he says.

Relationships between science and the humanities have been among Jones's interests since childhood. His fascination with science, he says, has always been based in "the wonder and awesomeness of the universe, sort of an aesthetic approach to science—the beauty of it, the artistic, philosophical view, and also the enduring deeper questions: Who are we, where did we come from, why are we here?"

Conveying this fascination to others has involved, among other activities, developing courses through Experimental College and Continuing Education and Extension that look at the overlapping ideas in psychology, sociology, the sciences, and the humanities. In addition, he has designed independent study courses with television components, and, along with Media Resources, developed a series of 10 half-hour public television programs called *The Changing Physical World—Introduction to Modern Physics*.

The Department of Independent Studies has succeeded in marketing this course internationally, in such countries as Japan. Jones's experiences in teaching with television and videotape have also led him to introduce video components in his regular college-level physics courses.

Along with his course preparation, Jones has written two books, *Physics as Metaphor* and *Physics for the Rest of Us*, both intended for the lay reader with an interest in physics, as well as a wide range of articles, including one entitled "Has Science Become Our State Religion?"

"As I look back on my formative years, I feel that Professor Jones

*Roger Jones on space,*

*motion, and spirituality*

strongly influenced my education and career.... He encouraged me to

# The Tao of Teaching

delve beyond the mechanics and understand the philosophical and

humanistic implications of my pursuits. He was unselfish in his advice

and was always there for me as a teacher and adviser."

BY MARY MCKEE

Jones's colleague William Mishler, an associate professor of German, Scandinavian, and Dutch who has twice taught an independent study course on Goethe and Newton with him, describes Jones as having "a gift both for the enlightening metaphor and the patiently unfolded argument."

He has high esteem for Jones's teaching skills and for the contribution he has made with the publication of his books, which Mishler describes as useful in "breaking down the barrier between the specialized world of physics and the other world where most people live their lives. Healing the rift between these 'two cultures' (as C.P. Snow put it) is at the heart of Roger's motivation as a teacher. He is one of the few teachers I know who actually spends a great deal of time and energy thinking about the negative consequences of this rift, and devising ways in his teaching and writing to overcome it."

Jones also does a lot of lecturing on topics as diverse as "Scientific Idolatry—The Conflict Between Physics and the Humanistic Outlook" and "The Relevance of Spirituality to Physics."

His latest project, which he is undertaking this year on a Bush sabbatical, is a joint one with astronomy professor Robert Gerhz. Together they are producing Project MinneMac, a multimedia presentation of physics and astronomy demonstrations designed for use in college classes.

But of all Jones's many involvements, it is teaching that remains his true calling. In a personal statement published in the program for the 1995 Horace T. Morse Minnesota Alumni Association Awards for Outstanding Contributions to Undergraduate Education, he wrote: "My perennial desire [is] to share the wonder and excitement of learning with others. Even as a child, I loved to tell stories and to share ideas with my friends, and later with my own growing children....[I try] to return to my own difficulties with physics and try to fathom what the stumbling blocks are for someone approaching the subject for the first time. I believe that an ability to empathize with students and to struggle to approach the subject as a novice, rather than an expert, is an invaluable skill in teaching in general, but it is absolutely essential to introductory learning."

In his 28 years as an academic, Jones's commitment to teaching has not gone unnoticed. Earlier this year he was one of ten recipients of the aforementioned prestigious Morse-Alumni teaching award. Last year he received the Institute of Technology (IT) Best Instructor Award, in 1993 he was given an IT Outstanding Instructor Award and the George Taylor-University of Minnesota Institute of Technology Alumni Society Distinguished Teaching Award, and in 1984-85 he received the University's Certificate of Recognition for Outstanding Service to Students.

Physics department head Marvin Marshak agrees with the high assessment of Jones's pedagogical power, opining that Jones is "consistently the best introductory course instructor among almost 50 physics faculty members." In describing Jones's devotion to students, Marshak tells of the longtime professor deciding that physics students needed an informal study area so they could spend more time interacting and learning together. He then took it upon himself, says Marshak, to find space in the Physics Building, furnishing it with furniture he bought himself.

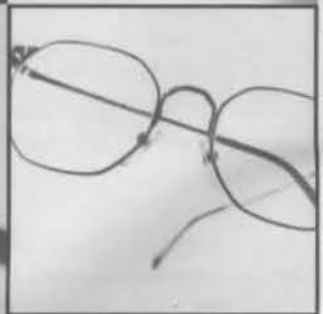
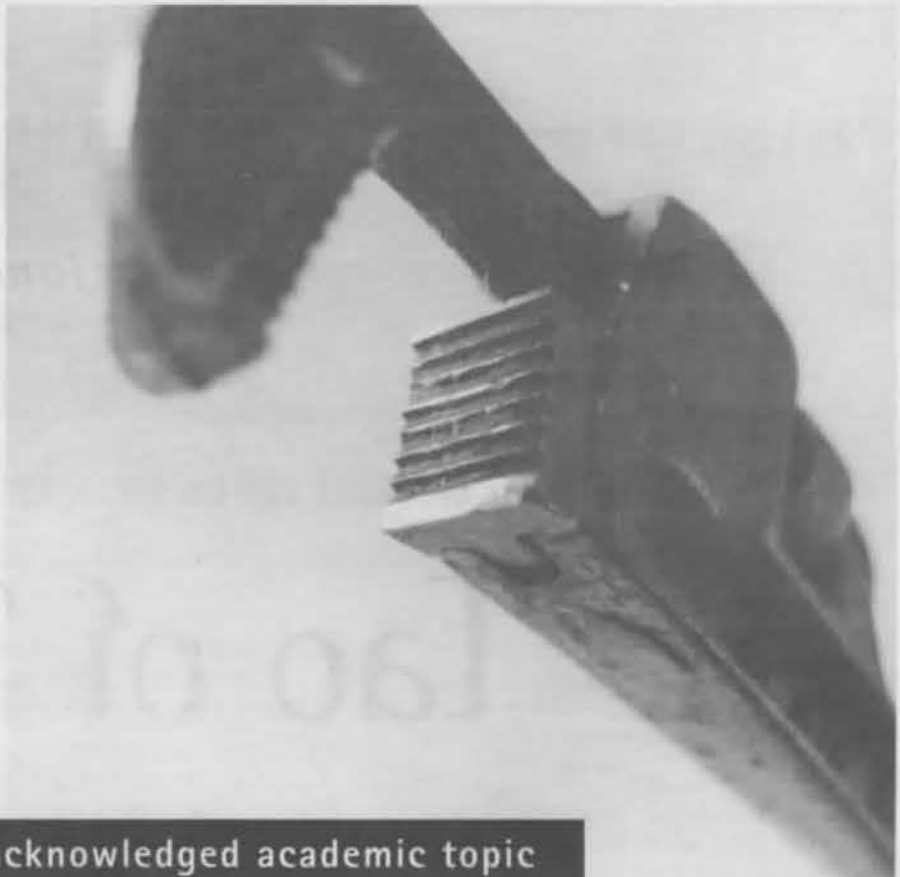
With all this praise and recognition for his teaching abilities, creative accomplishments, and outreach activities, why after almost three decades of teaching is Jones still an associate professor? According to Marshak, Jones's lack of a full professorship is due to his "devoting his career to education...." and furthermore "that he remains an associate professor after all this time is a reminder that education and research do not really play equivalent roles in the University's promotion process."

Students, however, have different priorities from those of University decisionmakers, and many describe themselves as "privileged" or "honored" to have studied with Jones. One such student, now an associate medical director for emergency services at a St. Paul hospital, says, "As I look back on my formative years, I feel that Professor Jones strongly influenced my education and career.... He encouraged me to delve beyond the mechanics and understand the philosophical and humanistic implications of my pursuits. He was unselfish in his advice and was always there for me as a teacher and adviser."

And for an educator, there can't be any higher praise than that. ■

# WORKING CLASS

A new book explores an unacknowledged academic topic



article by MAUREEN SMITH  
photos by TOM FOLEY

**Americans like to believe that they live in a classless society, that almost everyone in America is middle class. Academics like to believe that success in college is based on merit, never on class.**

Both of those comfortable beliefs are challenged in *This Fine Place So Far From Home* (Temple University Press, \$22.95), a collection of essays by college professors and graduate students from working-class families. The editors, both graduate students in English at the University when they began the project, are Carlos L. Dews and Carolyn Leste Law.

Many of the essayists describe their anguish and shame in hiding their backgrounds. They told their stories because they "wanted to break their silence, to come out of the class closet," Dews says.

Some people who have read the book, even people who do not identify their backgrounds as working-class, told Law they cried when they read it. "One thing that touches people so much is that reading our book makes it impossible to pretend that we're all the same in America," she says.

Reading these essays makes people think about "what kinds of privilege and what kinds of deprivation they have experienced themselves," says Law, adding that the book is political in its "criticism of higher education as an institution with very strong class biases" and pedagogical in looking at "the ways in which we as educators meet our students in the classroom."

College professors who would never make a racist remark or use the word *girl* for an adult female will have no such compunction about openly scorning "blue-collar slob," says historian William Pelz from DePaul University.

The power of language as a class marker in this country is one of the strongest threads in the book, Law says. "A person can affect a certain class invisibility by the way one dresses, the way one sits at a table," she says. "It's when you open your mouth that it's much more difficult to hide your class of origin."

By now Law and Dews have learned to talk like academics. "At the University that marks us as one of the gang. We are acceptable," she says. And the authors are not alone in having changed their style of speech to fit in at the university. "The road to the academy is paved with working-class accents," Pelz says.

If she talked at the University the way she talks at home, Law says, she would be immediately judged as stupid. If she talked at home the way she talks at the University, she would be immediately judged as snooty. "What we learn is to be bilingual."

"I long to write and read scholarly essays that sound like my sister when she's talking—my sister who lives in a trailer house a few miles from my parents' house and continues to talk the way I used to talk, the way I often wish I still did, the way that feels honest," Dews says.

"Unfortunately, I can't get rid of the contamination of the academy. I can't put the genie back in the bottle. I find myself using words like hegemony against my will. I just can't shake it.

"I vacillate (college word) back and forth (that's pretty comfortable) between my old way of talkin' (very comfortable) and the new discourse of the

academy (academic language again). If I take a few deep breaths, then type as fast as I can, I outrun the academic censor and write something my sister and a colleague might understand.

"That's my new goal: not to leave my sister behind, because when I leave her behind I leave myself, my family, and other working-class people behind."

Two of the book's 24 essayists are from the University of Minnesota—Gloria Warren and Milan Kovacovic. Warren, who recently earned her doctorate in family and parent education and now lives in Detroit, writes about her experiences as an African-American and a Christian in higher education.

"One issue that stands out is taking on debt," she says. "In my family, it was important to owe no one, especially institutions or white people.... I had to adopt the middle-class view of educational loans as an investment."

At Minnesota Warren encountered "something called 'Minnesota nice,' which means whites discriminating against people of color and deluding themselves that because they have the veneer of courtesy they have not been discriminatory."

Milan Kovacovic, associate professor of language and literature at the University of Minnesota, Duluth, writes from a different kind of working-class experience in his essay "Workin' at the U."

His mother, a Slovak guest worker in France, worked as a live-in maid, and he was boarded with an elderly peasant couple. Then at age 10 he was given a French government national merit (all-expense) scholarship to a prestigious residential school for boys in an upper-class suburb of Paris.

"The distance of only forty miles from my archaic peasant third-world, which had not changed in centuries and where I still had not encountered a toothbrush, to the sophisticated, exclusive world of the lycée turned out to be the longest voyage I have experienced in my entire life," he writes.

Meanwhile, his mother found new employers, a wealthy Jewish family, who treated him with great generosity, and he "quickly assimilated to the ways of the high bourgeoisie." His mother's decision to emigrate to America brought new struggles, but today he says, "I've been through many social classes and don't feel uncomfortable in any milieu."

His current tenured faculty position makes him "extraordinarily privileged, though not in income, for I earn only a modest living," Kovacovic writes. The source of his privilege, "incomparably more important than money," is his "matchless working conditions."

At the same time, Kovacovic has some uneasiness, stemming from his background, about whether the work he loves is truly work. "A working-class person is used to concrete results. I have an element of discomfort in the intangibility of what we do."

The distance of the academy from the life they have known is another consistent subject for the book's authors. For the working-class people she knows and socializes with in Minnesota, Law says, "the University of Minnesota might as well be on Mars."

Besides the power of its theme, *This Fine Place So Far From Home* is remarkable for being the work of two people still struggling to complete their Ph.D.'s. Dews received his degree in 1994 and is now an assistant professor of American literature at the University of West Florida. Law, a doctoral candidate in English, is writing her dissertation.

"I'm confident that without the book I would be finished by now," Law says. "We were driven to do this book for our own needs. It was the wrong time to do it professionally, but it was the right time personally." ■

**excerpts from *This Fine Place*:**

My ambition then was to become an English teacher. I admired my high school teachers; I liked their lives (what I could see of them). My mother, I know, was proud of me and glad that I was doing well in a world she had never known. What she could not have guessed, though, was that in the course of my teacher training, I learned, through myriad covert (and some not so covert) pressures and practices, to feel increasingly ashamed of my home, of my family.

Again and again, I heard that children who do not read, whose parents work too hard and who have little time or skills to read to them, whose homes are not 'literate' but oral and often pretty nonverbal as well, children who have never been taken to an art museum or who do not have library cards, these are the ones at risk, the ones most likely to fail (be failed by) the traditional academic setting, in practical terms, the ones who make a teacher's job so frustrating.

Never once did any of my professors entertain the thought that I or any of my classmates could possibly have been one of those children. That those children are also most often children of the working class seemed unremarkable at the time. It never occurred to me to question the implicit classism and institutional biases that view the child as the problem, not the system or the curriculum. I wanted then only to ask, "But what about me? How do you explain me?" but, of course, I did not dare.

It becomes the university's job to help children of the working class, when by some fluke or flash of good fortune they become undergraduates, to overcome their backgrounds.... I eventually made that dream my own and day by day betrayed my self in order to gain acceptance in the academic community; my strategy was silence and lies.

I never confessed that I recognized my own home in the patronizing, contemptuous examples of my well-intentioned professors, which every day increased my resolve to erase my past and elude the humiliation of being found an imposter.

I had never seen my mother or my brother read a book. There were no books displayed in my home, except a 1955 edition of the World Book Encyclopedia (I was born in 1961). The few books my family owned were stored in a cupboard. One was *The Torch Is Passed*, about the assassination of John F. Kennedy, and another was a souvenir copy of *The Shepherd of the Hills* by Harold Bell Wright, a novel sold by the millions in the Ozarks and a book that I love more than I can say.

While I knew that my mother was (and is still) the most competent person I have ever known and that my brother has skills and common sense that have made him equally successful in a stock car and in an executive meeting, and while I knew that my father could construct buildings from the ground up just like the ones my professors' cluttered offices were in, I was bombarded with messages discounting their competencies and, by extension, discounting their lives.

—Carolyn Leste Law, Introduction, *This Fine Place So Far From Home*, Temple University Press

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PHOTOS: TOM FOLEY

# Nurturing Values

The Minnesota Landscape Arboretum is one place that just keeps getting better

BY RICHARD BRODERICK

A hot morning late in August, the parking lot of the brand-new Clotilde Irvine Sensory Garden at the Minnesota Landscape Arboretum. For 15 minutes the staff of the Sojourn Adult Day Care have been trying to get a wheelchair-bound old woman off the van. Something's the matter with the lift. Instead of lowering itself smoothly to the ground, it keeps jerking and halting.

Finally, Sally Hebson, Sojourn's executive director, spies the problem—the lift won't work until a safety strap that's been left unfastened is locked in place. The strap is pulled tight, the lift goes into motion.

Inside the lovely wood pavilion that serves as the garden's program center, a dozen or so other old people await the beginning of the Intergenerational Garden Program, one of numerous horticultural therapy sessions offered by the arboretum. They are arranged in chairs around an open square of folding tables.

As Jean Larson, the coordinator of horticultural therapy, prepares a snack for the participants—lemonade and low-fat Oreo cookies—there is little talk. The old folks look listless, exhausted by the heat and the commotion of getting here.

A few minutes later, another small bus arrives, this one from the nearby Minnetonka school district. The doors swing open and this time there is no difficulty in discharging the passengers. A dozen middle school children pour out into the parking lot and swarm around the raised planters in the garden's demonstration area.

The kids, members of the Whatchamacallits, a program for grades five through seven, pile into the pavilion, chattering with pre-adolescence intensity as they make their way to the open seats.

Roll call reveals a lot about the cultural changes of the past 50 years. The kids sound off with names like Ronnie, Justin, Sarah, and Daniel. The old folks reply in whispery voices, Philda, Bess, Felix, Alice, and Lillian, who introduces herself as "a great-grandmother" to a round of applause.

At first it seems as if a terrible mismatch of energy levels has been engineered here, with the old people in danger of being overwhelmed by the vitality and

high spirits of the kids. But a magical transformation in the interpersonal dynamics occurs with the first activity.

"Before going into the garden," announces Larson, a cheerful, open-faced young woman with shiny tan hair, "we're going to have you kids play newspaper reporters." Teamed with someone from Sojourn, the Whatchamacallits are supposed to interview their older partners about their childhood memories of food and gardening.

Hunched over their notebooks, the kids take their task seriously. And so do the old folk. Within minutes, the pavilion fills with a babble of voices, as favorite memories transform even the most fatigued elders.



The sensory garden is just the latest addition to the arboretum, which operates—along with the 80-acre Horticultural Research Center (HRC) located a mile west—as a unit of the University's Department of Horticultural Science and Landscape Architecture.

Founded in 1958, the arboretum occupies 900 acres of rolling parkland, prairie, woods, and bogs about 15 miles due west of Minneapolis. And it's growing. The facility recently added 30 acres of land that will be reclaimed as a bog and is looking to add another 250 acres if the money can be raised for its purchase. (Only a third of the arboretum's budget comes from the University, the rest coming from grants and foundations.) The additional acreage, Peter Olin, says, "will bring out boundaries to the road system surrounding the arboretum, which will mean we will then cover about 90 percent of our watershed."

This last point is important because conservation is one of the three primary points of the arboretum's current long-range plan. "And protecting the watershed is one of the best things you can do to protect your environment," he points out.

Olin has been director of the arboretum for 10 years and acting director for a year before that. In those 11 years, he's witnessed the relentless changes that have taken place on the western fringe of the Twin Cities. When the facility was started 35 years ago, the stretch of country between Minneapolis and the arboretum was almost entirely farmland, interrupted here and there with woods or bogs.

**Today, suburban developments, strip malls, and industrial parks have crept right up to the arboretum's eastern boundary. If land isn't added quickly, it will no longer be available.**

"We have to get that land now," Olin says. "If it goes into development, it's lost forever."

Not surprisingly, an expanded base of funding is one of three long-range goals designed to support the arboretum's three programmatic goals: the aforementioned conservation; expanded education; and expanded research, especially in cold-hardy plants, fruits, urban shade trees and shrubs and in restoring native plants and wetlands.

"We have not been particularly involved in conservation up to now," says Olin, "although most arboreta and botanical gardens are." He describes the arboretum's initial efforts as "modest"—a seed exchange program with gardens in Russia and China, where many cold-weather plant and tree varieties are under threat of disappearing in the face of industrial development and population pressures on habitat; a plan to exchange personnel with a botanical garden in the Ukraine.

The arboretum already contains one endangered species native to Minnesota, the dogtooth violet, whose home is the prairie parkland of the southwestern part of the state. "There are probably other endangered species we could plant in our prairie and woodland areas," Olin says. "It wouldn't take a special effort."



While the conservation goals at the gardens may be modest for now, the research objectives are, and have been, ambitious. The HRC, which dates back to 1907, has been in the forefront nationally for introducing cold-hardy species; two-thirds of all apples grown in Minnesota were developed at the research center, for example. In fact, there would probably be very little commercial apple growing in the state were it not for the work of the center's botanists. Any time you bite into a Granny Smith,



Sweet Sixteen, or Regent, or bake a pie with Haralson apples, you are indulging in a fruit brought to you courtesy of the HRC.

And the work goes on. Recently, the center developed an apple variety that researchers there believe is the best yet. "Honeycrisp is probably the finest apple we've developed and it has come at a time when the market is hungry for new varieties," says David Bedford, a research scientist at the center.

Crispness, flavor, and storability are all attributes offered by Honeycrisp, a combination of Honeygold (itself a hybrid of the Golden Delicious), Haralson—Minnesota's most popular apple—and Macoun (an eastern variety with qualities like a Macintosh or Cortland). Already Honeycrisp has taken its place alongside the 4,000 or so other apple varieties in the world ("More varieties may have existed in the past," Bedford observes. "We're talking about something that goes back to the Garden of Eden.") and will soon be on the market. "We expect it to be the number one apple in the state," Bedford says, "and it could be even a big player nationwide."

New apples varieties, of course, are not the only fruits to be introduced by the HRC. In all, more than 90 kinds of apples, strawberries, cherries, gooseberries, currants, apricots, wine and table grapes and more have been developed at the center, all with an eye toward superior flavor and cold hardiness. At this time, researchers are concentrating on apples, strawberries, blueberries, and grapes, especially for wine. Indeed, the HRC is just now introducing its first wine grape variety.

The grape, Frontenac, is a viticultural counterpart to the Honeycrisp apples; a cold-hardy and disease-resistant hybrid of native and European grape varieties with superior flavor and productivity. Right now it is being shipped to nurseries and wineries in Minnesota and around the country, but because it takes a few years before a new vine bears usable fruit, wine made from the variety is still down the road. But as with the new apple, the viticulturists at HRC are very excited about Frontenac's prospects.

"Frontenac can be used to make a good quality wine in many different styles, although it seems to work best in a lighter red—something along the lines of a Beaujolais," says the center's viticulturist, Peter Hemstad.

### Frontenac is a good example of the combination of persistence, research, and serendipity that often goes into developing a new fruit.

The grape is a cross between a French grape called Landot, a hybrid bred at the turn of the century from a mixture of several wine grapes native to Europe—the classic *vitis vinifera*—and American root stocks. A root fungus accidentally imported from North America was in the process of decimating European wine grapes, which have no resistance to the disease.

To Landot, viticulturists at the HRC added a particular clone of *vitis riparia*—Minnesota's native river grape—gathered by a researcher in the 1970s, who found it while canoeing down the Minnesota River sampling grapes from some 300 different wild vines.

It takes about 15 years to develop a new hybrid. When Frontenac began to bear fruit, HRC researchers were pleasantly surprised to discover that, unlike other first-generation hybrids, this one produced outstanding wine with bouquets suggestive of berries, plums, and cherries.

Nurseries are already offering Frontenac, and numerous commercial wineries, including several in Minnesota, have it under cultivation. Although it will still be several years before vintage Frontenac shows up at the local bottle shop, there's already "plenty of demand from other states," says Hemstad. "A vintner out in Utah is ripping up his zinfandel vines and putting in Frontenac."

Better yet, the center is already developing hybrids of Frontenac that promise to surpass it.

"Introducing new varieties is probably the biggest kick of working at the center," says Jim Luby, a professor of horticultural science and the HRC's director since 1982. "As a plant breeder that's why you're in the profession. It gives you a chance to leave a legacy."

Not all research takes place at the HRC. The arboretum grounds are themselves the site of demonstration projects and other kinds of research. The newly added 30 acres will be devoted to an important urban wetlands reclamation project; one focus of the arboretum's long-range plan is urban ecology.

Other research involves the complex ways in which human activity affects the biological processes in plants. For example, Vera Krischik, an assistant professor of landscape plants and a Minnesota Extension Service specialist, is studying the way an increase in ultraviolet radiation—the result of ozone depletion in the upper atmosphere—alters plant development.

In her extension role, Krischik is also involved in educating the public about one of her specialties—management tactics for sustainability in urban landscapes. Situated at the intersection of rural and urban life, the arboretum is the ideal setting for her two planned demonstration projects—one in Integrated Pest Management, a method of controlling harmful insects with natural predators or organic substances rather than insecticides, and the other in composting.

In addition, Krischik is creating a sustainability resource center in the arboretum's magnificent Anderson Horticultural Library, located in the garden's main facility, the Snyder Building.

"The demonstration projects are a way to try to reach the public and alter opinion," Krischik says. "And the resource center will be able to provide an alternative source of information. Most gardening information is given out by garden centers and is profit driven. For a corporation to develop something it must be profitable. But extension can show how to do things without spending a lot of money and without damaging the environment."



Research and outreach may be primary missions of the arboretum and the HRC, but it's safe to say that most visitors are drawn to the arboretum not for those aspects but for their sheer beauty and peacefulness of the place. The grounds of the arboretum are divided into the gardens radiating out from the centrally located Snyder Building, and the landscape habitats—oak savannas, bogs, wooded glens, and prairie hillsides—that cover the rest of the 900 acres.

The arrangement is not static. Virtually every year, more gardens are added so that now the arboretum features gardens for perennials, hostas, roses, azaleas, herbs, vegetables, and annuals, as well as a garden for plants used in dyeing fabric and an exquisite Japanese garden with a miniature waterfall and its own teahouse.

### In a country with a slowly deteriorating infrastructure and rapidly expanding visual ugliness, the arboretum provides a welcome alternative—it's one of the few places that keeps getting palpably better over time.

To maintain the grounds takes a small army of staff and volunteers—indeed, the arboretum would have a hard time functioning without the 600 volunteers who help with everything from gardening to conducting tours.

Duane Otto, one of the arboretum's landscape gardeners, has principal responsibility for the perennial gardens and collections. He and his crew of five



## NATURAL EDUCATION

Not all of the arboretum's educational activities take place on the arboretum grounds. Take, for example, the Children's Garden-in-Residence program, now entering its eighth year.

This program teams Tim Kenny, an instructor with the arboretum's Learning Center, with city kids and adult volunteers. Together, they plant, cultivate, and harvest inner-city gardens.

The idea, of course, is not only to give urban children a chance to see where their food really comes from, but also to involve them in a project that builds their confidence and self-esteem. Students enrolled in the program are expected to show up for the twice-weekly sessions with Kenny and take responsibility for the care and nurture of their plants.

Last summer, there were gardens-in-residence at three inner-city Minneapolis sites—Northeast Minneapolis, the Elliot Park neighborhood, and the Phillips neighborhood. "Basically, the arboretum provides everything the kids need to get started—seeds, transplants, tools, stakes, string, and, of course, instruction," says Kenny.

The program, which runs from April through August, requires plenty of work on the kids' part. They're paired off, with each team working a 5-by-16-foot plot.

"Every week there's weeding and watering and all the nurturing that goes into raising a garden," says Kenny. "We also mix in different activities, ranging from craft things to looking at insects to how plants make their own food—basic science stuff."

"We also have fun. This summer was pretty warm, so lots of sessions ended up with water balloon fights. And at the end of the summer, the kids get to bring up lots of fresh produce."

The Children's Garden-in-Residence is just one of the Learning Center's many educational offerings for adults and kids. Indeed, programs held both at the center and off-site last year served about 30,000 children from throughout the metropolitan area. In addition, the Learning Center provides teacher support programs and adult workshops on topics such as flower arranging and gardening.—RB

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## The Plague

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But despite Zheng's arguments that "organochlorine compounds have only weak estrogenic effects and their associations with breast cancer have not been proven yet," he nevertheless plans to look at subjects' blood pesticide levels in his China study. He notes that pesticide use has gone up dramatically in China during the same 20-year period in which breast cancer rates have soared. "A preliminary study showed that DDE [a byproduct of the pesticide DDT] levels in Chinese women are five times as high as in U.S. women," he points out. He also hopes to look at women's blood levels for other organochlorines.

Even the NCI, which has been criticized in the past for ignoring the link between environmental toxins and breast cancer, is now exploring it, confirms Susan Sieber, deputy director of the NCI's Division of Cancer Etiology. "In many of our studies, pesticide exposure is one of the factors being evaluated," she says, noting that the NCI will soon be conducting two studies looking specifically at DDT exposure and is already conducting a 10-year agricultural health study—encompassing 80,000 farmers and their families in North Carolina and Iowa—in which they will be examining pesticide exposure.

The NCI is also investigating, at Congress's behest, a whole series of environmental pollutants—electromagnetism, toxic waste sites, air and water pollution, car exhaust—in an attempt to explain the large number of breast cancer cases on Long Island. Breast cancer rates soared during the 1980s on Long Island, and are now as much as 6 percent higher than those in the rest of the country.

"The evidence for exposure to estrogen and estrogenic compounds is quite strong now," says Sieber, "and there's more interest in the estrogenic properties of other substances."

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I visit a photo display at Abbott Northwestern Hospital in Minneapolis called "Pink Ribbons: The Minnesota Faces of Breast Cancer," featuring 60 breast cancer victims and survivors. The photos show women of every age, color, and personal style; women so alive they seem almost to speak. It comes as a shock, then, to read the words beneath the photos, words like these under a bridal photo: "Jill Ramberg Brockopp, Harris, Minnesota, diagnosed 1992 at age 22, died 5/9/93, Mother's Day." Jill wrote: "I hope when you think of me today, you think of peace and happiness. God gave me 23 wonderful years."

After reading a few more captions, most of them equally sad, I begin to cry, more from rage than sadness. These are vibrant women—volunteers, mothers, community activists, wives, workers, lovers, friends. Why should they have to be grateful for 23 years when they deserve so many more? And why don't we know more about what's causing this plague?

As I continue through the exhibit there are more, many more, depressingly more, photo after photo: a 37-year-old mother of three, a 55-year-old state senator, a 44-year-old breast cancer activist.

After a while a theme is clear: "She lived her life to the fullest each day and refused to give up.... She demonstrated so much courage.... She battled her cancer without complaint ... a real survivor ... a positive attitude."

Their courage and strength are moving, but I'm furious that they had to be so tough, and I'm furious, too, at their seemingly ready acceptance of victimhood. I'm relieved, then, to finally come to the posters reading "Every woman must join the fight" and "Everything I do is for my daughter and the young women I teach. I hope in their lifetime we will know how to prevent and cure breast cancer." I hope so too.

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Breast cancer research, especially investigation of the disease's connections with environmental toxins, is fraught with questions, more questions than answers. Taken together, the conflicting and incomplete findings can make a woman feel powerless to affect her own health. Yet even though much is still unknown, researchers do recommend a few steps: cutting down on dietary fat, reducing alcohol consumption, and questioning the use of estrogen supplements.

And then there is the tantalizing possibility that some foods may actually act to fight cancer. Although Kushi cautions that there is not much direct epidemiological evidence yet, he says there is some reason to believe that certain foods, such as soybeans, contain naturally occurring plant compounds with estrogenic effects. These compounds, called phytoestrogens, appear to compete with the body's natural estrogen, he explains, possibly lowering a woman's risk of breast cancer. (Zheng will also explore this angle in his Shanghai study.)

Better publicized are the possible anti-cancer effects of cruciferous vegetables such as cabbage, broccoli, and cauliflower, which may contain compounds that turn on a carcinogen detoxifying enzyme in the body, and of allium vegetables, such as garlic and onions, which contain sulfur-containing compounds with similar properties.

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While visiting a friend, I meet her coworker, who is wearing a hat instead of her hair. I had already heard from my friend that this woman, at 43 the mother of two young sons, was fighting breast cancer, and was undergoing chemotherapy while continuing to work. I ask the woman about it, and when I tell her about my mom, 21 years well now, she glows. I tell her, too, of my belief that much of this disease is caused by things we cannot control, by the toxins we live among, and she seems relieved at the notion.

When she assures me that she's always eaten right and exercised, I realize that, like most breast cancer victims, this woman has gone mentally round and round with the what-did-I-do-wrongs and the what-might-I-have-done-differently. She's doing everything she can now, treating her cancer aggressively, keeping her spirits up, getting support. If only she could believe she wasn't to blame for her own illness.

I bid her good-bye, wish her good luck, and offer up a silent prayer. ■

## WORKING CLASS

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(more excerpts from *This Fine Place*)

During my Ph.D. preliminary oral exam, I was accused of intellectual dishonesty. A member of my committee said that my responses sounded like I was saying what the committee wanted to hear rather than what I truly felt. She said my responses lacked conviction. She was right. The only way I can be intellectual is dishonestly. Being intellectual is not part of my nature.

I was regurgitating to my committee what I had learned they wanted to hear. I was saying what I had learned I was supposed to say in these situations. Graduate school hadn't really changed the way I think; it had only made me, although obviously not too convincingly, appear to think a certain way.

Nothing in my southern rural working-class (white-trash) background prepared me to think genuinely and with conviction about scholarly topics. I was in that conference room to be examined on what I had learned in graduate school, but I was called dishonest when I displayed what I had learned. Yet there was no natural way for me to deal with the questions of a preliminary exam.

My working-class way of knowing, my working-class epistemology, had failed me. There is no situation within working-class experience analogous to the preliminary exam. My background taught me that thinking or talking for the sake of thinking or talking is show-boating, a waste of time in a world where time clocks matter....

Yes, I was being dishonest if I was expected to feel the answers as if they were organic within me. I will never be fluent in the language of the academy. It will always be at best a reluctantly learned second language.

—Carlos L. Dews, *Afterword, This Fine Place So Far From Home*, Temple University Press

Barbara is another graduate student at the university. She and I have always gotten along well; she has an acerbic sense of humor that I appreciate. On a cold, clear December day I run into her on the footbridge over the ravine between Kresge College and the bus stop.... Virginia, another graduate student joins us....

Barbara says to Virginia, "Have you ever heard this woman talk theory?" Virginia hasn't because we've never been in a class together. Barbara continues, "She can do it better than anybody. She talks theory all the time."

I decide to joke with Barbara about it, so I rattle off something that I intend to be recognized as pure garbage: "Well, of course, when I say hegemony, I mean it not in the literary sense, as commonly used, but rather in the Gramscian sense..." But Barbara doesn't get the joke.

"See what I mean!" she shrieks to Virginia. "She can talk about all that stuff like nobody else. And she's always talking about her working-class background and how deprived she was. I bet none of that is true." She turns to me. "I bet one of these days we'll meet your parents, and it'll turn out your father is a professor of philosophy at Harvard!"

Barbara and Virginia laugh. I laugh, too, because that's all I can do. I say, "Well, come to my graduation party and find out." As I walk away, my hands start to shake in my jacket pockets. For days I think about what Barbara said. If my father really is a carpenter, her reasoning goes, then I couldn't possibly be as smart as I am.

So, in order to be as smart as I am, my father must be a professor of philosophy at Harvard. That means that we have not a class system but a caste system because no working-class kid can be smart and upper-middle-class kids will always be smart.

—Renny Christopher, "A Carpenter's Daughter," *This Fine Place So Far From Home*, Temple University Press

All excerpts are from *This Fine Place So Far From Home: Voices of Academics From the Working Class*, edited by C.L. Barney Dews and Carolyn Leste Law. Temple University Press, 1995, \$22.95. Reprinted with permission.

## Nurturing Values

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and a volunteer contingent of 30 have been busy preparing for winter—weeding, planting bulbs, and cleaning up the grounds.

"After the first frost, all the annuals have to be removed," he explains. "Some of the beds will be planted with bulbs—we're putting in 5,000 tulips for next spring."

In addition, all the "tender" perennials, such as chrysanthemums, have to be covered with mulch, and the young trees must be wrapped and fenced to protect them from the deer who wander the grounds in winter.

For Otto, though, it's not all physical labor. There is also creativity involved. He likes to attend the annual perennial symposium that moves from site to site—the most recent was held in Victoria, British Columbia—to share ideas with colleagues from arboretums and botanical gardens throughout North America.

He is proud of the enhancements he has brought to the gardens. Strolling across the patio directly behind the Snyder Building, he points to a planter hanging from one of the trees. "I was the one who introduced the use of these moss baskets," he says. He is also pleased with the success of this summer's color scheme—blue and white, something of a break with traditional color ideas for flower gardens. Particularly successful, he recalls, were the hundreds of white tulips that blossomed in May behind the building. "They were just spectacular," he says fervently.

**"I'm always pushing hard to make things here better, better, better, better," he says. "Everybody is. You simply can't do this kind of thing well unless you really love what you are doing."**



For the last 20 minutes, the sensory garden pavilion has been abuzz with talk. Smiling and laughing, the old folks share a vision of a past in which most food was unprocessed and freshly prepared, and multiple generations lived together under the same roof.

Their interviewers, on the other hand, are a group of youngsters growing up in a society far removed from the sources of agricultural production and living in communities strictly segregated by age.

Modern domestic arrangements have given us quantities of food at the price of alienation from the land, and a society divorced from its own past, living in a permanent, anxiety-ridden Now.

But here today, in a small, highly localized occurrence, some of that alienation is being relieved. What's happening may not fit the narrow definition of horticultural therapy, but it's clear from the bright faces and shining eyes of the elderly, as well as from the rapt attention of the young, that a link has been forged, a reconnection made between young and old, past and present.

When time is up, Larson has to announce several times that the interview period is over. She calls on Justin to report. What did he learn from his interview? "I found out that they had a really good diet back in the old days. They ate lots of fresh vegetables and meat," he says. And what does he like to eat, Larson asks? "Candy and pizza," Justin replies, sounding just a little rueful.

"The highest value that I see here," says Sally Hebson, Sojourn's executive director, "is that it reinforces the sense of community. Older people have wisdom. Children have enthusiasm. Together, this is a really creative endeavor." ■

## SHORT TAKES

### high marks

In a prestigious ranking of 41 graduate programs released in September by the National Research Council, the University was ranked in 38. The study, the first since 1982, looked at 3,634 programs at 274 universities.

The University's chemical engineering program was once again ranked number one in the nation. Geography fell from first in 1982 to third in 1995, still an enviable ranking. Other top-ten programs are psychology, 7 (7 in '82), mechanical engineering, 8 (5 in '82), and economics, 10 (7 in '82). Overall, the University held its own, falling in some areas and rising in others. German climbed from 23rd to 11th.

### nobel prize-winning alumnus

Edward Lewis, a University of Minnesota graduate, was recently named co-winner of the Nobel Prize in medicine for gene studies that help explain birth defects. The prize, which is worth \$1 million, will be split among Lewis and his research partners, Christiane Nusslein-Volhard of Germany and Eric Wieschaus of the United States.

The researchers were cited for their discoveries concerning "the genetic control of early embryonic development," according to the citation from the medicine prize committee at Sweden's Karolinska Institute.

Lewis obtained a bachelor's degree in biostatistics from the University in 1939. He earned a doctorate in genetics from the California Institute of Technology in 1942 and served on its faculty from 1946 until his retirement in 1988.

### editor's note:

After the story on Helping Paws of Minnesota, Inc., was published in July, we received several requests for a contact number or address. You may call Helping Paws at 612/924-2404.

### dine by candlelight at the u

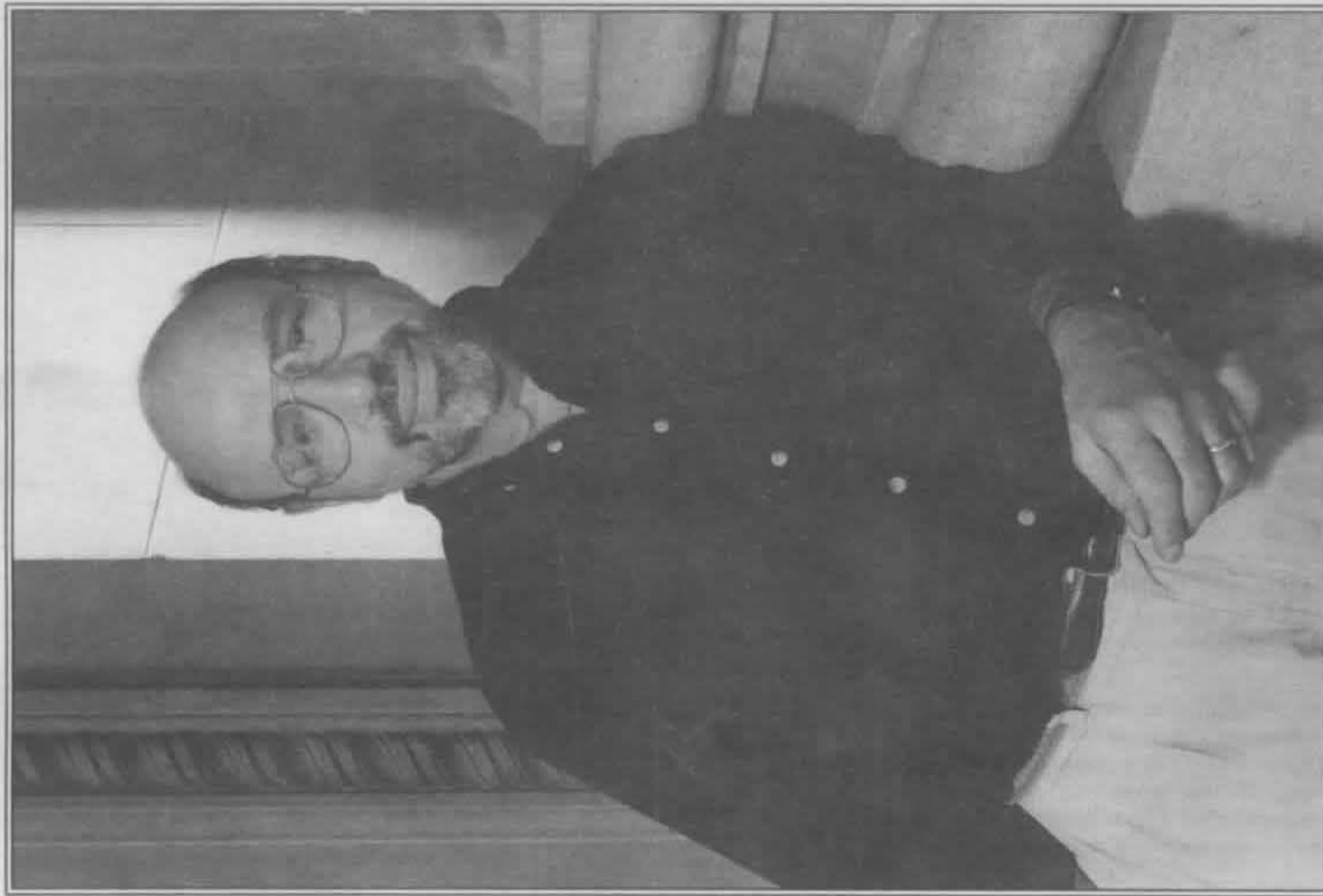
The first in a new series of candlelight dinner concerts sponsored by the St. Paul Student Center and St. Paul Dining Services will be held at 6:30 p.m. on Thursday, November 30 in the North Star Ballroom of the St. Paul Student Center. Pianist/singer/comedian Max Morath will provide the entertainment at the first concert. Future concerts will feature singer Dennis Spears, formerly of Moore by Four (January 18), the Aurora String Quartet (February 8), and the Pro Arte String Quartet (April 18). Dinners promise to be gourmet extravaganzas; the premier concert meal, for example, has a black and white theme, including black linguini with white clam sauce, white asparagus with black vinaigrette, sea scallops or chicken in black bean sauce, and poached pears with dark chocolate sauce. Series tickets are \$90, single tickets are \$26 and \$22; both can be ordered from the Northrop Auditorium ticket office by phone at 612/624-2345, fax at 612/626-1750, or mail at Northrop Auditorium, 84 Church St. S.E., Minneapolis, MN 55455.

### minnesota poverty

Financially, Minnesota households are doing better than the national average and better now than in 1980, according to a report by the University's Center for Urban and Regional Affairs. The report analyzed income and poverty across Minnesota in 1990, as well as changes in the previous decades. Among the less positive findings: an increase in the number of very poor households; men and women are working longer and harder to gain growths in income; the highest rate of poverty (19.5 percent) belongs to 18- to 20-year-olds—predominantly students and young people struggling to get started; and female poverty rates are double those of males during the retirement years.

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UNIVERSITY OF MINNESOTA



ROGER JONES | PAGE 8

# UPDATE

For Alumni,  
Faculty,  
and Staff

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